

Compilation of Changes to the CPC Scheme Between 2023.08 and 2024.01

Presentation Details

| | |
|---|--|
| Entries for new symbols and headings: | <i>Black text in italics</i> |
| Entries for existing symbols and headings | |
| —text insertions: | <i>Green text in italics</i> |
| —text deletions: | Red strikethrough text with grey background |
| Entries for deleted symbols and headings: | Black strikethrough text |

- In cases when the originating project cannot be found, "Unknown" is given for the Project information.
- Projects ending in "-F" indicate finalisation after reclassification was completed.

Project: MP12088 (A01B)

M A01B 79/00 Methods for working soil ~~(essentially requiring the use of particular machines, see the relevant groups for the machines)~~

Project: MP12088 (A01D)

M A01D 80/00 Parts or details of {, or accessories for,} haymakers ~~(parts or details specific for one type of machine, see the relevant groups for these machines)~~

M A01D 91/00 Methods for harvesting agricultural products ~~(essentially requiring the use of particular machines, see the relevant groups for the machines)~~

Project: RP0174-F (A01H)

M A01H 1/00 Processes for modifying genotypes {; Plants characterised by associated natural traits} ([A01H 4/00](#) takes precedence)

WARNING

Group A01H 1/00 is impacted by reclassification into groups A01H 1/02, A01H 1/021, A01H 1/022, A01H 1/023, A01H 1/024, A01H 1/026, A01H 1/04, A01H 1/045, A01H 1/09, A01H 1/10, A01H 1/101, A01H 1/102, A01H 1/103, A01H 1/104, A01H 1/105, A01H 1/106, A01H 1/107, A01H 1/108, A01H 1/109, A01H 1/12, A01H 1/1205, A01H 1/121, A01H 1/1215, A01H 1/122, A01H 1/1225, A01H 1/123, A01H 1/1235, A01H 1/124, A01H 1/1245, A01H 1/125, A01H 1/1255, A01H 1/126, A01H 1/1265, A01H 1/127, and A01H 1/129. All groups listed in this Warning should be considered in order to perform a complete search.

M A01H 1/02 • Methods or apparatus for hybridisation; Artificial pollination {; Fertility}

WARNING

Group A01H 1/02 is incomplete pending reclassification of documents from group A01H 1/00.

Group A01H 1/02 is also impacted by reclassification into groups A01H 1/021, A01H 1/022, A01H 1/023, A01H 1/024, and A01H 1/026.

All groups listed in this Warning should be considered in order to perform a complete search.

M A01H 1/021 • {Methods of breeding using interspecific crosses, i.e. interspecies crosses}

WARNING

Group A01H 1/021 is incomplete pending reclassification of documents from groups A01H 1/00 and A01H 1/02.

Groups A01H 1/00, A01H 1/02 and A01H 1/021 should be considered in order to perform a complete search.

- M A01H 1/022
- {Genic fertility modification, e.g. apomixis}
- WARNING**
Groups A01H 1/022, A01H 1/023, and A01H 1/024 are incomplete pending reclassification of documents from groups A01H 1/00 and A01H 1/02. All groups listed in this Warning should be considered in order to perform a complete search.
- M A01H 1/026
- {by treatment with chemicals}
- WARNING**
Group A01H 1/026 is incomplete pending reclassification of documents from groups A01H 1/00 and A01H 1/02. Groups A01H 1/00, A01H 1/02, and A01H 1/026 should be considered in order to perform a complete search.
- M A01H 1/04
- Processes of selection {involving genotypic or phenotypic markers; Methods of using phenotypic markers for selection}
- NOTE**
{This group covers the use of phenotypic markers for selection, insofar as the output or input traits are not covered by groups [A01H 1/10](#) - [A01H 1/129](#).}
- WARNING**
Group A01H 1/04 is incomplete pending reclassification of documents from group A01H 1/00. Group A01H 1/04 is also impacted by reclassification into group A01H 1/045. Groups A01H 1/00, A01H 1/04, and A01H 1/045 should be considered in order to perform a complete search.
- M A01H 1/045
- {using molecular markers}
- WARNING**
Group A01H 1/045 is incomplete pending reclassification of documents from groups A01H 1/00 and A01H 1/04. Groups A01H 1/00, A01H 1/04, and A01H 1/045 should be considered in order to perform a complete search.
- U A01H 1/06
- Processes for producing mutations, e.g. treatment with chemicals or with radiation (specific mutations prepared by genetic engineering on plant cell or plant tissues [C12N 15/00](#) {; process for producing transgenic plants [C12N 15/82](#)})
- M A01H 1/08
- Methods for producing changes in chromosome number
- WARNING**
Group A01H 1/08 is impacted by reclassification into group A01H 1/09. Groups A01H 1/08, and A01H 1/09 should be considered in order to perform a complete search.
- M A01H 1/09
- {Apparatus for producing changes in chromosome number}
- WARNING**
Group A01H 1/09 is incomplete pending reclassification of documents from group A01H 1/08. Groups A01H 1/08, and A01H 1/09 should be considered in order to perform a complete search.

- M A01H 1/10
- {Processes for modifying non-agronomic quality output traits, e.g. for industrial processing; Value added, non-agronomic traits}
- WARNING**
~~Groups A01H 1/10 – A01H 1/109 are incomplete pending reclassification of documents from group A01H 1/00.–~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~
- M A01H 1/12
- {Processes for modifying agronomic input traits, e.g. crop yield}
- WARNING**
~~Groups A01H 1/12 – A01H 1/129 are incomplete pending reclassification of documents from group A01H 1/00.–~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~
- U A01H 4/00**
- Plant reproduction by tissue culture techniques {; Tissue culture techniques therefor}**
- M A01H 4/001
- {Culture apparatus for tissue culture}
- WARNING**
~~Group A01H 4/001 is impacted by reclassification into group A01H 4/002.–~~
~~Groups A01H 4/001 and A01H 4/002 should be considered in order to perform a complete search.~~
- M A01H 4/002
- {Culture media for tissue culture}
- WARNING**
~~Group A01H 4/002 is incomplete pending reclassification of documents from group A01H 4/001.–~~
~~Groups A01H 4/001 and A01H 4/002 should be considered in order to perform a complete search.~~

Project: RP12210 (A01K)

- M A01K
- ANIMAL HUSBANDRY; ~~CARE OF BIRDS, FISHES, INSECTS~~AVICULTURE; APICULTURE; PISCICULTURE; FISHING; REARING OR BREEDING ANIMALS, NOT OTHERWISE PROVIDED FOR; NEW BREEDS OF ANIMALS**
- NOTE
- This subclass covers:
- equipment for the care, culture or rearing of all animals, or for obtaining their products, unless provided for elsewhere, e.g. milking [A01J](#), shoeing animals [A01L](#), veterinary devices [A61D](#), culture of animal cells [C12M](#), [C12N](#);
 - methods of breeding animals or new animal breeds.
- WARNING**
- In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.
- M A01K 67/00
- Rearing or breeding animals, not otherwise provided for; New *or modified* breeds of animals**
- NOTE
- In this group the following term is used with the meaning indicated:
- "breeding" means obtaining animals up to and including their birth or hatching.

- M A01K 67/02
- Breeding vertebrates
- NOTE
- ~~{Documents relating to new peptides or new DNA or its corresponding mRNA encoding for peptides, and their use for the obtention of transgenic animals, are classified in subclass C07K or in group C12N 9/00 according to the peptides, with the appropriate indexing codes}~~
- {Documents relating to new peptides or new DNA or its corresponding mRNA encoding for peptides and their use for the obtention of transgenic animals are classified in subclass C07K or in group C12N 9/00 according to the peptides, and are given the appropriate Indexing Codes.}*
- M A01K 67/027
- New *or modified* breeds of vertebrates
- NOTE
- ~~In group A01K 67/027, it is desirable to add the indexing codes of A01K 2227/00 and subgroups relating to animals characterised by species. In group A01K 67/027 it is desirable to add the indexing codes of A01K 2267/00 and subgroups relating to animals characterised by their purpose~~
- {In group A01K 67/027, it is desirable to add the Indexing Codes of A01K 2227/00 and subgroups relating to animals characterised by species and to add the Indexing Codes of A01K 2267/00 and subgroups relating to animals characterised by their purpose. In groups A01K 67/0275 - A01K 67/0278, A01K 67/0333 and subgroups thereof, it is also desirable to add the Indexing Codes of A01K 2217/00 and subgroups to characterise specific aspects of the genetically modified animals or the Indexing Codes of A01K 2267/00 and subgroups to characterise the purpose of the animals.}*
- M A01K 67/0271
- ~~{Chimeric animals}~~ *Chimeric vertebrates*, e.g. comprising exogenous cells}
- M A01K 67/0273
- ~~{Cloned animals}~~ *Cloned vertebrates*
- M A01K 67/0275
- ~~{Genetically modified vertebrates, e.g. transgenic}~~
- M A01K 67/0276
- • ~~{Knockout animals}~~ *Knock-out vertebrates*
- M A01K 67/0278
- • ~~{Humanized animals}~~ *Knock-in vertebrates*, e.g. *knockin}* *humanised vertebrates*

Project: MP12085 (A21B)

- M A21B
- BAKERS' OVENS; MACHINES OR EQUIPMENT FOR BAKING (domestic baking equipment A47J 37/00; ~~combustion apparatus F23; domestic stoves or ranges being wholly or partly ovens F24B, F24C)~~**
- WARNING
- ~~In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.~~
- U A21B 1/00
- Bakers' ovens**
- U A21B 1/02
- characterised by the heating arrangements
- U A21B 1/06
- • Ovens heated by radiators
- M A21B 1/22
- • • by electric radiators (A21B 2/00 takes precedence; ~~electric heating elements H05B)~~
- M A21B 1/40
- characterised by the means for regulating the temperature (~~temperature-sensitive elements G01K)~~
- M A21B 1/42
- characterised by the baking surfaces moving during the baking (~~conveying in general B65G)~~
- M A21B 1/52
- Portable ovens; Collapsible ovens (~~travelling or camp cookers A47J 33/00)~~

- U A21B 3/00** **Parts or accessories of ovens**
- M A21B 3/02 · Doors; Flap gates (~~general features of doors E06B~~)
- M A21B 3/18 · Discharging baked goods from tins (~~unpacking in general B65B 69/00~~)
- U A21B 5/00** **Baking apparatus for special goods; Other baking apparatus**
- U A21B 5/02 · Apparatus for baking hollow articles, waffles, pastry, biscuits, or the like
- M A21B 5/03 · · for baking pancakes (~~frying pans A47J 37/10~~)

Project: MP12212 (A24F)

- U A24F 40/00** **Electrically operated smoking devices; Component parts thereof; Manufacture thereof; Maintenance or testing thereof; Charging means specially adapted therefor**
- M A24F 40/65 · Devices with integrated communication means, e.g. ~~Wi-Fi~~ *wireless communication means*

Project: MP12212 (A43B)

- U A43B 3/00** **Footwear characterised by the shape or the use**
- U A43B 3/34 · with electrical or electronic arrangements
- WARNING
Group [A43B 3/34](#) is incomplete pending reclassification of documents from group [A43B 7/005](#).
Group [A43B 3/34](#) is also impacted by reclassification into groups [A43B 3/38](#), [A43B 3/40](#), [A43B 3/42](#), [A43B 3/44](#), [A43B 3/46](#), and [A43B 3/48](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M A43B 3/48 · · with transmitting devices, e.g. GSM or ~~WiFi~~ *Wi-Fi®*
- WARNING
Group [A43B 3/48](#) is incomplete pending reclassification of documents from group [A43B 3/34](#).
Groups [A43B 3/34](#) and [A43B 3/48](#) should be considered in order to perform a complete search.

Project: MP12088 (A44B)

- M A44B 1/00 **Buttons (~~setting on garments A41H 37/10; setting on footwear A43D 100/08; making buttons: see the relevant groups in the classes for making articles from particular materials~~)**

Project: MP12212 (A44B)

- M A44B 18/00 **Fasteners of the touch-and-close type; Making such fasteners (~~making pile fabrics D03, D04~~)**

Project: MP12218 (A47D)

- M A47D **FURNITURE SPECIALLY ADAPTED FOR CHILDREN (school benches or desks [A47B 39/00](#), [A47B 41/00](#))**
- WARNING
{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}
- M A47D 1/00 **Children's chairs (~~chairs generally A47C; vehicle seats for children B60N 2/26~~)**

M A47D 5/00 Dressing-tables {or diaper changing supports} for children ~~(chests of drawers A47B 67/00)~~

M A47D 7/00 Children's beds ~~(beds in general A47C)~~

Project: RP10461-F (A47D)

M A47D 7/005 · {dismountable}

WARNING

Group A47D 7/005 is impacted by reclassification into group A47D 9/008.
Groups A47D 7/005 and A47D 9/008 should be considered in order to perform a complete search.

M A47D 7/01 · with adjustable parts, e.g. for adapting the length to the growth of the children

WARNING

Group A47D 7/01 is impacted by reclassification into group A47D 9/012.
Groups A47D 7/01 and A47D 9/012 should be considered in order to perform a complete search.

M A47D 7/02 · · with side wall that can be lowered

WARNING

Group A47D 7/02 is impacted by reclassification into group A47D 9/012.
Groups A47D 7/02 and A47D 9/012 should be considered in order to perform a complete search.

M A47D 7/03 · · with adjustably-mounted mattresses

WARNING

Group A47D 7/03 is impacted by reclassification into group A47D 9/012.
Groups A47D 7/03 and A47D 9/012 should be considered in order to perform a complete search.

M A47D 7/04 · capable of being suspended from, or attached to, window frames or other articles

WARNING

Group A47D 7/04 is impacted by reclassification into group A47D 9/016.
Groups A47D 7/04 and A47D 9/016 should be considered in order to perform a complete search.

M A47D 9/00 **Cradles {; Bassinets}**

WARNING

Group A47D 9/00 is impacted by reclassification into groups A47D 9/008; A47D 9/012; A47D 9/016 and A47D 9/053.
All groups listed in this Warning should be considered in order to perform a complete search.

M A47D 9/005 · {foldable}

WARNING

Group A47D 9/005 is impacted by reclassification into groups A47D 9/008; A47D 9/012 and A47D 9/016.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A47D 9/008
- {dismountable}
- WARNING**
Group A47D 9/008 is incomplete pending reclassification of documents from groups A47D 7/005, A47D 9/00, A47D 9/005, A47D 9/02 and A47D 9/04. All groups listed in this Warning should be considered in order to perform a complete search.
- M A47D 9/012
- {with adjustable parts}
- WARNING**
Group A47D 9/012 is incomplete pending reclassification of documents from groups A47D 7/01, A47D 7/02, A47D 7/03, A47D 9/00, A47D 9/005, A47D 9/02 and A47D 9/04. All groups listed in this Warning should be considered in order to perform a complete search.
- M A47D 9/016
- {capable of being suspended from, or attached to, other articles or structures, e.g. adult's bed}
- WARNING**
Group A47D 9/016 is incomplete pending reclassification of documents from groups A47D 7/04, A47D 9/00, A47D 9/005, A47D 9/02 and A47D 9/04. All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP10461-F, MP12218 (A47D)

- M A47D 9/02
- with rocking mechanisms ~~(devices for moving perambulators to and from B62B 9/22)~~
- WARNING**
Group A47D 9/02 is impacted by reclassification into groups A47D 9/008, A47D 9/012, A47D 9/016, A47D 9/053 and A47D 9/057. All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP10461-F (A47D)

- M A47D 9/04
- with disconnectable rockers
- WARNING**
Group A47D 9/04 is impacted by reclassification into groups A47D 9/008, A47D 9/012, A47D 9/016, A47D 9/053 and A47D 9/057. All groups listed in this Warning should be considered in order to perform a complete search.
- M A47D 9/053
- {with curved rocking member}
- WARNING**
Group A47D 9/053 is incomplete pending reclassification of documents from groups A47D 9/00, A47D 9/02 and A47D 9/04. All groups listed in this Warning should be considered in order to perform a complete search.
- M A47D 9/057
- {driven by electric motors}
- WARNING**
Group A47D 9/057 is incomplete pending reclassification of documents from groups A47D 9/02 and A47D 9/04.

Groups A47D 9/02, A47D 9/04 and A47D 9/057 should be considered in order to perform a complete search.

Project: MP12218 (A47D)

- M A47D 11/00 Children's furniture convertible into other kinds of furniture, e.g. children's chairs or benches convertible into beds {or constructional play-furniture} **(convertible furniture in general A47B 85/00)**
- M A47D 13/00 Other nursery furniture **(auxiliary or portable toilet seats for children A47K 13/06)**

Project: RP10461-F (A47D)

- M A47D 13/02
- Baby-carriers; Carry-cots
- WARNING**
Group A47D 13/02 is impacted by reclassification into groups A47D 13/027 and A47D 13/029.
Groups A47D 13/02, A47D 13/027 and A47D 13/029 should be considered in order to perform a complete search.
- M A47D 13/025
- {for carrying children in seated position}
- WARNING**
Group A47D 13/025 is impacted by reclassification into groups A47D 13/027 and A47D 13/029.
Groups A47D 13/025, A47D 13/027 and A47D 13/029 should be considered in order to perform a complete search.
- M A47D 13/027
- {Baby-carriers with rigid frames}
- WARNING**
Group A47D 13/027 is incomplete pending reclassification of documents from groups A47D 13/02 and A47D 13/025.
Groups A47D 13/02, A47D 13/025 and A47D 13/027 should be considered in order to perform a complete search.
- M A47D 13/029
- {Baby-carriers with waist-belt only}
- WARNING**
Group A47D 13/029 is incomplete pending reclassification of documents from groups A47D 13/02 and A47D 13/025.
Groups A47D 13/02, A47D 13/025 and A47D 13/029 should be considered in order to perform a complete search.

Project: RP10461-F, MP12218 (A47D)

- M A47D 13/04
- Apparatus for helping babies to walk; Baby walkers **or strollers** **(wheeled walking aids for patients or disabled persons A61H 3/04)**
- WARNING**
Group A47D 13/04 is impacted by reclassification into group A47D 13/043.
Groups A47D 13/04 and A47D 13/043 should be considered in order to perform a complete search.

Project: RP10461-F (A47D)

- M A47D 13/043 • {Baby walkers with a seat}

WARNING

Group A47D 13/043 is incomplete pending reclassification of documents from group A47D 13/04.
Groups A47D 13/04 and A47D 13/043 should be considered in order to perform a complete search.

Project: MP12218 (A47D)

- M A47D 13/08 • Devices for use in guiding or supporting children, e.g. safety harnesses *harness*

Project: RP10461-F, MP12218 (A47D)

- M A47D 13/10 • Rocking-chairs (in general A47C 3/02; rocking horses A63G 15/00); {Indoor} swings *Swings* {(in general A63G 9/00)-}; Baby bouncers}

WARNING

Group A47D 13/10 is impacted by reclassification into group A47D 13/101.
Groups A47D 13/10 and A47D 13/101 should be considered in order to perform a complete search.

Project: RP10461-F (A47D)

- M A47D 13/101 • {Foldable rocking chairs}

WARNING

Group A47D 13/101 is incomplete pending reclassification of documents from groups A47D 13/10, A47D 13/102, A47D 13/105 and A47D 13/107.
All groups listed in this Warning should be considered in order to perform a complete search.

- M A47D 13/102 • {with curved rocking members resting on the ground}

WARNING

Group A47D 13/102 is impacted by reclassification into group A47D 13/101.
Groups A47D 13/102 and A47D 13/101 should be considered in order to perform a complete search.

- M A47D 13/105 • {pivotally mounted in a frame}

WARNING

Group A47D 13/105 is impacted by reclassification into group A47D 13/101.
Groups A47D 13/105 and A47D 13/101 should be considered in order to perform a complete search.

- M A47D 13/107 • {resiliently suspended or supported, e.g. baby bouncers}

WARNING

Group A47D 13/107 is impacted by reclassification into group A47D 13/101.
Groups A47D 13/107 and A47D 13/101 should be considered in order to perform a complete search.

Project: MP12218 (A47D)

- M A47D 15/00 **Accessories for children's furniture, e.g. safety belts *or baby-bottle holders* (~~holders for {baby bottles or} bottles for medicinal feeding A61J 9/06; safety belts or body harnesses, in general A62B 35/00; {infant exercisers attachable to play-pens, beds or cradles A63H 33/006}; safety belts or body harnesses in land vehicles B60R 22/00; harnessing in aircraft B64D 25/06~~)**

Project: RP12197 (A61B)

- U A61B 5/00 **Measuring for diagnostic purposes (radiation diagnosis [A61B 6/00](#); diagnosis by ultrasonic, sonic or infrasonic waves [A61B 8/00](#)); Identification of persons**

NOTE

In this group, the following term is used with the meaning indicated:
"measuring" covers also detecting or recording.

- U A61B 5/74 • {Details of notification to user or communication with user or patient (indicating measured values [G01D 7/00](#)); user input means (input or output arrangements for computers [G06F 3/00](#))}
- U A61B 5/742 • • {using visual displays ([A61B 5/339](#) takes precedence)}
- M A61B 5/7425 • • • {Displaying combinations of multiple images regardless of image source, e.g. displaying a reference anatomical image with a live image (geometric transforms for image registration ~~G06T 3/0068~~ [G06T 3/14](#); enhancement using image fusion [G06T 5/50](#); algorithms for registration of images [G06T 7/30](#))}

Project: RP12181 (A61B)

- M A61B 6/00 ***Apparatus or devices for radiation diagnosis*; Apparatus *or devices* for radiation diagnosis, ~~e.g.~~ combined with radiation therapy equipment (instruments measuring radiation intensity for application in the field of nuclear medicine, e.g. *in vivo* counting, [G01T 1/161](#); apparatus for taking X-ray photographs [G03B 42/02](#))**

NOTE

{In this group the following terms or expressions are used with the meaning indicated:

- "radiation" means ionising radiation, e.g. X rays or gamma rays, and does not cover other forms of radiation, e.g. optical

}

- M A61B 6/02 • ~~Devices~~ *Arrangements* for diagnosis sequentially in different planes; Stereoscopic radiation diagnosis
- M A61B 6/03 • • ~~Computerised tomographs~~ *Computed tomography [CT]* (echo-tomography [A61B 8/14](#))
- M A61B 6/10 • ~~Application or adaptation of safety means~~ *Safety means specially adapted therefor*
- M A61B 6/12 • ~~Devices~~ *Arrangements* for detecting or locating foreign bodies (~~A61B 6/02 takes precedence~~)
- D A61B 6/14 • Applications or adaptations for dentistry
<administratively transferred to [A61B 6/51](#)>
- D A61B 6/145 • • {by intraoral means}
<administratively transferred to [A61B 6/512](#)>

- M A61B 6/40 • ~~{with arrangements}~~ *Arrangements* for generating radiation specially adapted for radiation diagnosis}
- M A61B 6/42 • ~~{with arrangements}~~ *Arrangements* for detecting radiation specially adapted for radiation diagnosis}
- M A61B 6/46 • ~~{with special arrangements}~~ *Arrangements* for interfacing with the operator or the patient}
- M A61B 6/50 • *specially adapted for specific body parts; {Clinical applications specially adapted for specific clinical applications (dentistry A61B 6/14 takes precedence)}*
- M A61B 6/501 • • ~~{involving diagnosis of}~~ *for diagnosis of the* head, e.g. neuroimaging; *or* craniography}
- M A61B 6/502 • • ~~{involving for}~~ diagnosis of breast, i.e. mammography}
- M A61B 6/503 • • ~~{involving diagnosis of}~~ *for diagnosis of the* heart}
- M A61B 6/504 • • ~~{involving for}~~ diagnosis of blood vessels, e.g. by angiography}
- M A61B 6/505 • • ~~{involving for}~~ diagnosis of bone}
- M A61B 6/506 • • ~~{involving for}~~ diagnosis of nerves}
- M A61B 6/507 • • ~~{involving for}~~ determination of haemodynamic parameters, e.g. perfusion CT}
- U A61B 6/508 • • {for non-human patients}
- N A61B 6/51 • • *for dentistry*
- N A61B 6/512 • • • ~~{Intraoral means}~~
- M A61B 6/58 • {Testing, adjusting or calibrating ~~apparatus or devices for radiation diagnosis}~~ *thereof*
- M A61B 6/581 • • {Remote testing ~~of the apparatus or devices}~~

Project: RP12181 (A61C)

- U A61C 19/00 **Dental auxiliary appliances (dental chairs or accessories therefor, working stands whether or not combined with chairs [A61G 15/00](#))**
- M A61C 19/04 • Measuring instruments specially adapted for dentistry (~~{A61C 5/44~~ takes precedence; testing vitality of teeth ~~A61B 5/0534~~;} radiation diagnosis ~~A61B 6/00~~ *specially adapted for dentistry [A61B 6/51](#)*)

Project: RP12112 (A61F)

- M A61F 13/00 **Bandages or dressings (~~suspensory bandages [A61F 5/40](#); {contact-avoiding wound protectors [A61F 15/008](#); bandages or dressings with incorporated medicaments [A61L 15/44](#), [A61M 35/006](#); radioactive dressings [A61N 5/1029](#)}; Absorbent pads (chemical aspects of, or use of materials for, bandages, dressings or absorbent pads [A61L 15/00](#); {absorbent pads for tracheostomy [A61M 16/047](#)})~~**
- D A61F 13/00004 • {Non-adhesive dressings}
<administratively transferred to [A61F 13/01](#)>
- D A61F 13/00008 • • {characterized by the material}
<administratively transferred to [A61F 13/01008](#)>
- D A61F 13/00012 • • • {being made of natural material, e.g. cellulose-, protein-, collagen-based}
<administratively transferred to [A61F 13/01012](#)>
- D A61F 13/00017 • • • {synthetic, e.g. polymer based}
<administratively transferred to [A61F 13/01017](#)>
- D A61F 13/00021 • • {characterized by the structure of the dressing}
<administratively transferred to [A61F 13/01021](#)>

- D A61F 13/00025 . . . {~~made of a single layer~~}
<administratively transferred to [A61F 13/01025](#)>
- D A61F 13/00029 . . . {~~made of multiple layers~~}
<administratively transferred to [A61F 13/01029](#)>
- D A61F 13/00034 . . {~~characterized by a property~~}
<administratively transferred to [A61F 13/01034](#)>
- D A61F 13/00038 . . . {~~Flexibility, stretchability or elasticity~~}
<administratively transferred to [A61F 13/01038](#)>
- D A61F 13/00042 . . . {~~Absorbency~~}
<administratively transferred to [A61F 13/01042](#)>
- D A61F 13/00046 . . . {~~Air-vapor permeability~~}
<administratively transferred to [A61F 13/01046](#)>
- U A61F 13/00051 . {Accessories for dressings}
- D A61F 13/00068 . . {~~especially adapted for application or removal of fluid, e.g. irrigation or drainage of wounds, under-pressure wound-therapy (A61F 13/0216 takes precedence; drainage appliances for wounds in general A61M 27/00)~~}
<administratively transferred to [A61F 13/05](#)>
- U A61F 13/00987 . {Apparatus or processes for manufacturing non-adhesive dressings or bandages}
- U A61F 13/00991 . . {for treating webs, e.g. for moisturising, coating, impregnating or applying powder}
- U A61F 13/00995 . . . {for mechanical treatments}
- N A61F 13/01 . Non-adhesive bandages or dressings
- N A61F 13/01008 . . {characterised by the material}
- N A61F 13/01012 . . . {being made of natural material, e.g. cellulose-, protein-, collagen-based}
- N A61F 13/01017 . . . {synthetic, e.g. polymer based}
- N A61F 13/01021 . . {characterised by the structure of the dressing}
- N A61F 13/01025 . . . {made of a single layer}
- N A61F 13/01029 . . . {made of multiple layers}
- N A61F 13/01034 . . {characterised by a property}
- N A61F 13/01038 . . . {Flexibility, stretchability or elasticity}
- N A61F 13/01042 . . . {Absorbency}
- N A61F 13/01046 . . . {Air-vapor permeability}
- M A61F 13/02 . Adhesive ~~plasters~~~~bandages~~ or dressings (~~A61F 13/06 - A61F 13/15 take precedence; {for diagnosis, e.g. allergy test patches, A61B 10/0035}; surgical adhesives or cements A61L 24/00; {for transdermal drug administration A61M 35/00}~~)
- M A61F 13/0203 . . {~~having a fluid handling member~~} *with fluid retention members*
- M A61F 13/0206 . . . {~~the fluid handling member being absorbent fibrous layer~~} *with absorbent fibrous layers*, e.g. woven or ~~nonwoven absorbent pad, island dressings~~ *non-woven absorbent pads or island dressings*
- M A61F 13/0213 . . . {the fluid ~~handling~~~~retention~~ member being a layer of ~~hydrocolloid~~~~hydrocolloid~~, gel forming material}
- D A61F 13/0216 . . . {the fluid handling member being non-absorbent, e.g. for use with sub- or over-pressure therapy, wound drainage or wound irrigation systems}
<administratively transferred to [A61F 13/05](#)>

- M A61F 13/022 · · · {having more than one layer with different fluid **handlingretention** characteristics}
- M A61F 13/0223 · · · {characterized by parametric properties of the fluid **handlingretention** layer, e.g. absorbency, wicking capacity, liquid distribution}
- M A61F 13/023 · · {wound covering film layers without a fluid **handlingretention** layer}
- M A61F 13/0246 · · {characterised by the skin-~~adhering~~ layer}
- U A61F 13/04 · · Plaster of Paris bandages; Other stiffening bandages ([A61F 13/06](#) - [A61F 13/15](#) take precedence)
- U A61F 13/041 · · {Accessories for stiffening bandages, e.g. cast liners, heel-pieces}
- U A61F 13/048 · · · {Braces for connecting two cast parts, e.g. hinged cast braces (orthoses [A61F 5/0102](#))}
- N A61F 13/05 · · *specially adapted for use with sub-pressure or over-pressure therapy, wound drainage or wound irrigation, e.g. for use with negative-pressure wound therapy [NPWT]*

Project: MP12088 (A61J)

- M A61J 3/00 **Devices or methods specially adapted for bringing pharmaceutical products into particular physical or administering forms (**chemical aspects; see the relevant classes**)**

Project: MP11853 (A61K)

- U A61K 31/00 **Medicinal preparations containing organic active ingredients**

NOTES

1. {When classifying in groups [A61K 31/00](#) - [A61K 41/00](#) the symbol [A61K 2300/00](#) may be added, using Combination Sets, to indicate a mixture of active ingredients.}
2. {In the preparation of new organic compounds and their use in medicinal preparations, classification is only made in the relevant subclasses [C07C](#) - [C07J](#) according to the type of compound. However, the inventions dealing with medicinal preparations containing at least two active organic ingredients are always classified in this group in addition to the classification for the type of compounds in [C07C](#) - [C07J](#).}
3. {Attention is drawn to the notes in class [C07](#), particularly to the definition of steroids given in Note (1) following the title of [C07J](#) and to the definition of carbohydrates and sugars given in the notes following the title of [C07H](#).}
4. {According to the last place rule, organic active compounds forming salts with heavy metals should be classified in [A61K 33/24](#) - [A61K 33/38](#) and not in subgroups [A61K 31/28](#) - [A61K 31/32](#), [A61K 31/555](#) or [A61K 31/714](#). This does not apply to complexes, as apparent from the [A61K 31/00](#) scheme, wherein the complexes hemin and hematin are classified in [A61K 31/555](#) and cyanocobalamin in [A61K 31/714](#). If a complex is formed between two or more active compounds, then they are classified according to all compounds forming the complexes followed by the symbol [A61K 2300/00](#) (i.e. as a mixture of active organic compounds).}

- U A61K 31/185 · · Acids; Anhydrides, halides or salts thereof, e.g. sulfur acids, imidic, hydrazonic or hydroximic acids (hydroxamic acids [A61K 31/16](#); peroxy acids [A61K 31/327](#))

NOTE

Cyclic anhydrides are considered to be heterocyclic rings

- U A61K 31/19 · · Carboxylic acids, e.g. valproic acid (salicylic acid [A61K 31/60](#))
- U A61K 31/195 · · · having an amino group

- M A61K 31/197 the amino and the carboxyl groups being attached to the same acyclic carbon chain, e.g. gamma-aminobutyric acid [GABA], beta-alanine, epsilon-aminocaproic acid; *or* pantothenic acid (carnitine [A61K 31/205](#))
- M A61K 31/198 Alpha-*aminoacids**amino acids*, e.g. alanine; *edetac acids or edetic acid* [EDTA]; (betaine [A61K 31/205](#); proline [A61K 31/401](#); tryptophan [A61K 31/405](#); histidine [A61K 31/4172](#); peptides not degraded to individual *aminoacids**amino acids* [A61K 38/00](#))

Project: MP12087 (A61K)

- U A61K 31/33 . Heterocyclic compounds
- U A61K 31/395 . . having nitrogen as a ring hetero atom, e.g. guanethidine or rifamycins
- U A61K 31/495 . . . having six-membered rings with two {or more} nitrogen atoms as the only ring heteroatoms, e.g. piperazine {or tetrazines}{[A61K 31/48](#) takes precedence {; with three nitrogen atoms [A61K 31/53](#)}
- M A61K 31/496 Non-condensed piperazines containing further heterocyclic rings, e.g. rifampin, thiothixene *or sparfloxacin*

Project: MP11853 (A61K)

- U A61K 38/00 **Medicinal preparations containing peptides (peptides containing beta-lactam rings [A61K 31/00](#); cyclic dipeptides not having in their molecule any other peptide link than those which form their ring, e.g. piperazine-2,5-diones, [A61K 31/00](#); ergot alkaloids of the cyclic peptide type [A61K 31/48](#); containing macromolecular compounds having statistically distributed amino acid units [A61K 31/74](#); medicinal preparations containing antigens or antibodies [A61K 39/00](#); medicinal preparations characterised by the non-active ingredients, e.g. peptides as drug carriers, [A61K 47/00](#))**

NOTES

1. The terms or expressions used in this group follow exactly the definitions given in Note (1) following the title of subclass [C07K](#).
2. Preparations containing fragments of peptides or peptides modified by removal or addition of amino acids, by substitution of amino acids by others, or by combination of these modifications are classified as the preparations containing parent peptides. However, preparations containing fragments of peptides having only four or less amino acids are also classified in groups [A61K 38/05](#) - [A61K 38/07](#).
3. Preparations containing peptides prepared by recombinant DNA technology are not classified according to the host, but according to the original peptide expressed, e.g. preparations containing HIV peptide expressed in E. coli are classified with the preparations containing HIV peptides.
4. This group covers also medicinal preparation containing DNA or RNA encoding for peptides as active ingredient.
5. Documents relating to new peptides, e.g. enzymes, or new DNA or RNA encoding for peptides and their use in medicinal preparations are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their medical uses.

- U A61K 38/16 . Peptides having more than 20 amino acids; Gastrins; Somatostatins; Melanotropins; Derivatives thereof {(enzyme inhibitors [A61K 38/005](#))}
- U A61K 38/17 . . from animals; from humans {(enzyme inhibitors [A61K 38/005](#))}
- U A61K 38/22 . . . Hormones (derived from pro-opiomelanocortin, pro-enkephalin or prodynorphin [A61K 38/33](#), e.g. corticotropin [A61K 38/35](#))
- M A61K 38/25 Growth hormone-releasing factor [GH-RF] (~~Somatoliberein~~), *i.e.* *somatoliberein*

- M A61K 38/27 · · · Growth hormone [GH] (~~Somatotropin~~), *i.e. somatotropin*
- M A61K 38/29 · · · Parathyroid hormone (~~parathormone~~), *i.e. parathormone*; Parathyroid hormone-related peptides
- M A61K 38/30 · · · Insulin-like growth factors (~~Somatomedins~~), *i.e. somatomedins*, e.g. IGF-1, IGF-2 {(insulin-like growth factor binding protein [A61K 38/1754](#))}

Project: MP11792 (A61K)

- M A61K 48/00 Medicinal preparations containing genetic material which is inserted into cells of the living body to treat genetic diseases; Gene therapy**

NOTES

1. In this group the following expression is used with the meaning indicated: "gene therapy" means *in vivo* delivery of nucleic acids encoding for peptides by administration of these nucleic acids or by implanting cells transfected *ex vivo* with the nucleic acids encoding for the peptides.
2. Documents relating to new nucleic acids encoding for peptides, e.g. enzymes, and their use in gene therapy are classified in subclass C07K or in group C12N 9/00 according to the encoded peptides, with the appropriate indexing codes relating to gene therapy.
3. Documents relating to new vectors and their use in gene therapy are classified in groups C12N 15/85 – C12N 15/90 according to the vectors, and the appropriate indexing codes, including those relating to gene therapy.
4. Documents describing cells genetically modified to express a gene of interest and their use in gene therapy are classified in C12N 5/06 according to the cells, with the appropriate indexing codes relating to gene therapy.
5. Documents relating to new medical uses of peptides *per se*, which peptides may be encoded by nucleic acids, and wherein the nucleic acids may be administered directly or by implanting cells transfected *ex vivo* with the nucleic acids, are classified in the appropriate groups A61K 38/00 or A61K 39/00 according to the encoded peptides, with the indexing codes relating, *inter alia*, to gene therapy.

Project: Unknown (A61L)

- U A61L 2/00 Methods or apparatus for disinfecting or sterilising materials or objects other than foodstuffs or contact lenses; Accessories therefor (for contact lenses [A61L 12/00](#); atomisers for disinfecting agents [A61M](#); sterilisation of packages or package contents in association with packaging [B65B 55/00](#); treatment of water, waste water, sewage or sludge [C02F](#); disinfecting paper [D21H 21/36](#); disinfecting devices for water closets [E03D](#); articles having provision for disinfection, see the relevant subclasses for these articles, e.g. [H04R 1/12](#))**
- U A61L 2/02 · using physical phenomena
- U A61L 2/08 · · Radiation
- M A61L 2/10 · · · ~~Ultra-violet~~ *Ultraviolet* radiation
- U A61L 9/00 Disinfection, sterilisation or deodorisation of air (body deodorants [A61Q 15/00](#); purifying air by respirators [A62B](#), [A62D 9/00](#); separating dispersed particles from gases or vapours [B01D 45/00](#) - [B01D 51/00](#), [B03C 3/00](#); chemical or biological purification of waste gases [B01D 53/34](#); production of ozone [C01B 13/10](#); air-conditioning systems incorporating sterilisation [F24F 3/16](#), [F24F 8/20](#))**
- U A61L 9/16 · using physical phenomena
- U A61L 9/18 · · Radiation ([A61L 9/22](#) takes precedence)
- M A61L 9/20 · · · ~~Ultra-violet~~ *Ultraviolet* radiation

Project: MP12088 (A62C)

- U A62C 2/00 **Fire prevention or containment ([A62C 3/00](#) takes precedence; flame traps [A62C 4/00](#))**
- U A62C 2/06
 - Physical fire-barriers
- M A62C 2/065
 - {having as the main closure device materials, whose characteristics undergo an irreversible change under high temperatures, e.g. intumescent (~~intumescent materials forming part of the mechanism of another main closure device, see the relevant class~~)}

Project: Unknown (A63B)

- U A63B 2213/00 **Exercising combined with therapy**
- U A63B 2213/001
 - with radiation therapy
- M A63B 2213/002
 - · ~~Infra-red~~*Infrared*
- M A63B 2213/003
 - · ~~Ultra-violet~~*Ultraviolet*

Project: MP12212 (A63F)

- U A63F 9/00 **Games not otherwise provided for (aspects of games using an electronically generated display having two or more dimensions showing representations related to the game [A63F 13/00](#) {; miscellaneous sporting games [A63B 67/00](#)})**
- M A63F 9/32
 - Games with a collection of long sticks, e.g. ~~mikado~~*pick-up sticks* ([A63F 9/30](#) takes precedence)
- U A63F 13/00 **Video games, i.e. games using an electronically generated display having two or more dimensions {(gaming systems which provide a financial reward [G07F 17/32](#))}**
- U A63F 13/30
 - Interconnection arrangements between game servers and game devices; Interconnection arrangements between game devices; Interconnection arrangements between game servers
- U A63F 13/32
 - · using local area network [LAN] connections
- M A63F 13/327
 - · · using wireless networks, e.g. Wi-Fi® or piconet
- U A63F 13/35
 - · Details of game servers
- M A63F 13/355
 - · · Performing operations on behalf of clients with restricted processing capabilities, e.g. servers transform changing game scene into an ~~MPEG-encoded video~~ stream for transmitting to a mobile phone or a thin client

Project: Unknown (B01J)

- U B01J 19/00 **Chemical, physical or physico-chemical processes in general; Their relevant apparatus**
- U B01J 19/08
 - Processes employing the direct application of electric or wave energy, or particle radiation; Apparatus therefor (application of shock waves [B01J 3/08](#))
- U B01J 19/12
 - · employing electromagnetic waves
- U B01J 19/122
 - · · {Incoherent waves (gamma-radiation [B01J 19/082](#))}
- M B01J 19/123
 - · · · {~~Ultra-violet~~*Ultraviolet* light}
- M B01J 19/128
 - · · · {~~Infra-red~~*Infrared* light}

Project: RP12086 (B01J)

- U B01J 19/18
 - Stationary reactors having moving elements inside ([B01J 19/08](#), [B01J 19/26](#) take precedence)

- M B01J 19/1893 · · {Membrane reactors (~~membranes B01D 71/00~~; catalytic membranes ~~B01J 35/065~~ B01J 35/59; ~~membranes B01D 71/00~~)}

Project: MP12066 (B01J)

- M B01J 20/00 - **Solid sorbent compositions or filter aid compositions; Sorbents for chromatography; Catalysts**
B01J 38/00

NOTES

- In groups [B01J 20/00](#) - [B01J 31/00](#), metal salts having an anion composed of metal and oxygen only, e.g. molybdates, are considered as chemically bound mixtures of the component metal oxides.
- Attention is drawn to the definitions of groups of chemical elements following the title of section [C](#).
- In ~~group groups~~ [B01J 20/00](#) ~~and in each set of groups~~ [B01J 21/00](#)- [B01J 31/00](#) ~~and {B01J 33/00} - B01J 38/00~~, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
- Pure compounds or elements, or their recovery from solid sorbent compositions, filter aid compositions, or catalysts, are classified in the appropriate subclass for chemical compounds or elements. However, when it is explicitly stated that the pure compound or element, in a particular form, is especially useful as a solid sorbent, filter aid, or catalyst, it is further classified in group [B01J 20/00](#) or [B01J 35/00](#).
- {In groups [B01J 21/00](#) - [B01J 38/00](#), the following term is used with the meaning indicated:-
 - "catalyst" covers also a carrier-forming part of the catalyst.
 }
- {Classification of the:-
 - forms or physical properties;
 - preparation or activation;
 - regeneration or reactivation of catalysts according to more than one of main groups [B01J 21/00](#) - [B01J 31/00](#) is made in the following general groups:
 - ~~B01J 35/00 for such forms or physical properties;~~
 - ~~B01J 37/00 for such preparation or activation;~~
 - ~~B01J 38/00 for such regeneration or reactivation.~~
 - B01J 35/00 for such forms or physical properties;
 - B01J 37/00 for such preparation or activation;
 - B01J 38/00 for such regeneration or reactivation.
 }

Project: RP10478-F (B01J)

- U B01J 20/00 **Solid sorbent compositions or filter aid compositions; Sorbents for chromatography; Processes for preparing, regenerating or reactivating thereof**

- M B01J 20/281 · Sorbents specially adapted for preparative, analytical or investigative chromatography

NOTE

In groups [B01J 20/281](#) - [B01J 20/292](#) it is desirable to add indexing codes for aspects relating to sorbents specially adapted for preparative, analytical or investigative chromatography. The indexing codes are chosen from groups [B01J 2220/80](#) - [B01J 2220/86](#)

WARNING

~~Groups B01J 20/281 - B01J 20/29 are incomplete pending reclassification of documents from groups G01N 30/48, G01N 30/482 and G01N 2030/484.~~

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP12086 (B01J)

U B01J 21/00 Catalysts comprising the elements, oxides, or hydroxides of magnesium, boron, aluminium, carbon, silicon, titanium, zirconium, or hafnium

M B01J 21/18 · Carbon

WARNING

Group [B01J 21/18](#) is incomplete pending reclassification of documents from group [B01J 35/00](#).

Groups [B01J 35/00](#) and [B01J 21/18](#) should be considered in order to perform a complete search.

M B01J 29/00 Catalysts comprising molecular sieves {(molecular sieves per se [C01B](#))}

NOTES

1. In this group, the following term is used with the meaning indicated:

- "zeolites" means:

- i. crystalline aluminosilicates with base-exchange and molecular sieve properties, having three dimensional, microporous lattice framework structure of tetrahedral oxide units;
- ii. compounds isomorphous to those of the former category, wherein the aluminium or silicon atoms in the framework are partly or wholly replaced by atoms of other elements, e.g. by gallium, germanium, phosphorus or boron.

2. If metals are introduced into the framework of the molecular sieve already in the synthesis stage, [B01J 29/86](#) - [B01J 29/89](#) take precedence.

3. Mixtures of molecular sieves are classified in [B01J 29/005](#) or [B01J 29/80](#) and receive indexing codes chosen from groups [B01J 29/03](#) - [B01J 29/89](#) to identify the individual constituents of these mixtures

WARNING

Group [B01J 29/00](#) is incomplete pending reclassification of documents from group [B01J 35/00](#).

Groups [B01J 35/00](#) and [B01J 29/00](#) should be considered in order to perform a complete search.

Project: MP11853 (B01J)

U B01J 29/82 · Phosphates {([B01J 29/005](#) takes precedence)}

M B01J 29/83 · · Aluminophosphates (~~APC-compounds~~)[APC compounds]

U B01J 29/84 · · Aluminophosphates containing other elements, e.g. metals, boron

M B01J 29/85 · · · Silicoaluminophosphates (~~SAPC-compounds~~)[SAPC compounds]

Project: RP12086 (B01J)

C B01J 35/00 Catalysts, in general, characterised by their form or physical properties

WARNING

Group [B01J 35/00](#) is impacted by reclassification into groups [B01J 35/20](#), [B01J 35/70](#)-[B01J 35/77](#), [B01J 35/80](#) and [B01J 2235/00](#) - [B01J 2235/30](#).

All groups listed in this Warning should be considered in order to perform a complete search.

D B01J 35/0006 · {~~Catalysts containing parts with different compositions~~}
<administratively transferred to [B01J 35/19](#)>

- D B01J 35/0013 · {Colloids}
<administratively transferred to [B01J 35/23](#)>
- D B01J 35/002 · {Catalysts characterised by their physical properties}
<administratively transferred to [B01J 35/30](#)>
- D B01J 35/0026 · · {Density}
<administratively transferred to [B01J 35/31](#)>
- D B01J 35/0033 · · {Electric or magnetic properties}
<administratively transferred to [B01J 35/33](#)>
- D B01J 35/004 · · {Photocatalysts}
<administratively transferred to [B01J 35/39](#)>
- D B01J 35/0046 · · {Physical properties of the active metal ingredient}
<administratively transferred to [B01J 35/391](#)>
- D B01J 35/0053 · · · {metal surface area}
<administratively transferred to [B01J 35/392](#)>
- D B01J 35/006 · · · {metal crystallite size}
<administratively transferred to [B01J 35/393](#)>
- D B01J 35/0066 · · · {metal dispersion value, e.g. percentage or fraction}
<administratively transferred to [B01J 35/394](#)>
- D B01J 35/0073 · · {Distribution of the active metal ingredient}
<administratively transferred to [B01J 35/396](#)>
- D B01J 35/008 · · · {egg-shell like}
<administratively transferred to [B01J 35/397](#)>
- D B01J 35/0086 · · · {egg-yolk like}
<administratively transferred to [B01J 35/398](#)>
- D B01J 35/0093 · · · {homogeneous throughout the support particle}
<administratively transferred to [B01J 35/399](#)>
- D B01J 35/02 · Solids
<administratively transferred to [B01J 35/00](#) and [B01J 35/30](#)>
- D B01J 35/023 · · {Catalysts characterised by dimensions, e.g. grain size}
<administratively transferred to [B01J 35/40](#)>
- D B01J 35/026 · · {Form of the solid particles (B01J 35/08 takes precedence)}
<administratively transferred to [B01J 35/50](#)>
- D B01J 35/04 · · Foraminous structures, sieves, grids, honeycombs
<administratively transferred to [B01J 35/56](#)>
- D B01J 35/06 · · Fabrics or filaments
<administratively transferred to [B01J 35/58](#)>
- D B01J 35/065 · · · {Membranes}
<administratively transferred to [B01J 35/59](#)>
- D B01J 35/08 · · Spheres
<administratively transferred to [B01J 35/51](#)>
- D B01J 35/10 · · characterised by their surface properties or porosity
<administratively transferred to [B01J 35/60](#)>

- D B01J 35/1004 . . . {Surface area}
 - <administratively transferred to [B01J 35/61](#)>
- D B01J 35/1009 {less than 10 m²/g}
 - <administratively transferred to [B01J 35/612](#)>
- D B01J 35/1014 {10-100 m²/g}
 - <administratively transferred to [B01J 35/613](#)>
- D B01J 35/1019 {100-500 m²/g}
 - <administratively transferred to [B01J 35/615](#)>
- D B01J 35/1023 {500-1000 m²/g}
 - <administratively transferred to [B01J 35/617](#)>
- D B01J 35/1028 {more than 1000 m²/g}
 - <administratively transferred to [B01J 35/618](#)>
- D B01J 35/1033 . . . {Pore volume}
 - <administratively transferred to [B01J 35/63](#)>
- D B01J 35/1038 {less than 0.5 ml/g}
 - <administratively transferred to [B01J 35/633](#)>
- D B01J 35/1042 {0.5-1.0 ml/g}
 - <administratively transferred to [B01J 35/635](#)>
- D B01J 35/1047 {more than 1.0 ml/g}
 - <administratively transferred to [B01J 35/638](#)>
- D B01J 35/1052 . . . {Pore diameter}
 - <administratively transferred to [B01J 35/64](#)>
- D B01J 35/1057 {less than 2 nm}
 - <administratively transferred to [B01J 35/643](#)>
- D B01J 35/1061 {2-50 nm}
 - <administratively transferred to [B01J 35/647](#)>
- D B01J 35/1066 {50-500 nm}
 - <administratively transferred to [B01J 35/651](#)>
- D B01J 35/1071 {500-1000 nm}
 - <administratively transferred to [B01J 35/653](#)>
- D B01J 35/1076 {larger than 1000 nm}
 - <administratively transferred to [B01J 35/657](#)>
- D B01J 35/108 . . . {Pore distribution}
 - <administratively transferred to [B01J 35/66](#)>
- D B01J 35/1085 {monomodal}
 - <administratively transferred to [B01J 35/67](#)>
- D B01J 35/109 {bimodal}
 - <administratively transferred to [B01J 35/69](#)>
- D B01J 35/1095 {polymodal}
 - <administratively transferred to [B01J 35/695](#)>
- D B01J 35/12 . Liquids or melts
 - <administratively transferred to [B01J 35/27](#)>
- N B01J 35/19 . {Catalysts containing parts with different compositions}

- N B01J 35/20
- characterised by their non-solid state
- WARNING
Group [B01J 35/20](#) is incomplete pending reclassification of documents from group [B01J 35/00](#).
Groups [B01J 35/00](#) and [B01J 35/20](#) should be considered in order to perform a complete search.
- Q B01J 35/23
- • in a colloidal state
- WARNING
Group [B01J 35/23](#) is impacted by reclassification into group [B01J 35/45](#).
Groups [B01J 35/23](#) and [B01J 35/45](#) should be considered in order to perform a complete search.
- N B01J 35/27
- • in a liquid or molten state
- Q B01J 35/30
- characterised by their physical properties
- WARNING
Group [B01J 35/30](#) is impacted by reclassification into groups [B01J 35/34-B01J 35/38](#), [B01J 35/395](#), [B01J 35/70-B01J 35/77](#), [B01J 35/80](#) and [B01J 2235/00 - B01J 2235/30](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- Q B01J 35/31
- • Density
- WARNING
Group [B01J 35/31](#) is impacted by reclassification into groups [B01J 35/32](#), [B01J 35/70-B01J 35/77](#), [B01J 35/80](#) and [B01J 2235/00 - B01J 2235/30](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01J 35/32
- • • Bulk density
- WARNING
Group [B01J 35/32](#) is incomplete pending reclassification of documents from group [B01J 35/31](#).
Groups [B01J 35/31](#) and [B01J 35/32](#) should be considered in order to perform a complete search.
- N B01J 35/33
- • Electric or magnetic properties
- N B01J 35/34
- • Mechanical properties
- WARNING
Groups [B01J 35/34 - B01J 35/38](#) are incomplete pending reclassification of documents from groups [B01J 35/30](#) and [B01J 35/50](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01J 35/36
- • • Mechanical strength
- N B01J 35/37
- • • Crush or impact strength
- N B01J 35/38
- • • Abrasion or attrition resistance
- N B01J 35/39
- • Photocatalytic properties
- N B01J 35/391
- • {Physical properties of the active metal ingredient}
- N B01J 35/392
- • • {Metal surface area}

- Q B01J 35/393
- • • {Metal or metal oxide crystallite size}
- WARNING
Group [B01J 35/393](#) is impacted by reclassification into groups [B01J 35/73](#), [B01J 35/733](#), [B01J 35/735](#), [B01J 35/737](#) and [B01J 2235/00 - B01J 2235/30](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01J 35/394
- • • {Metal dispersion value, e.g. percentage or fraction}
- N B01J 35/395
- • • {Thickness of the active catalytic layer}
- WARNING
Group [B01J 35/395](#) is incomplete pending reclassification of documents from group [B01J 35/30](#).
Groups [B01J 35/30](#) and [B01J 35/395](#) should be considered in order to perform a complete search.
- N B01J 35/396
- • {Distribution of the active metal ingredient}
- N B01J 35/397
- • • {Egg shell like}
- N B01J 35/398
- • • {Egg yolk like}
- N B01J 35/399
- • • {homogeneously throughout the support particle}
- Q B01J 35/40
- characterised by dimensions, e.g. grain size (in a colloidal state [B01J 35/23](#); crystallite size [B01J 35/77](#))
- WARNING
Group [B01J 35/40](#) is impacted by reclassification into groups [B01J 35/45](#) and [B01J 35/77](#).
Groups [B01J 35/40](#), [B01J 35/45](#) and [B01J 35/77](#) should be considered in order to perform a complete search.
- N B01J 35/45
- • Nanoparticles
- WARNING
Group [B01J 35/45](#) is incomplete pending reclassification of documents from groups [B01J 35/23](#) and [B01J 35/40](#).
Groups [B01J 35/23](#), [B01J 35/40](#) and [B01J 35/45](#) should be considered in order to perform a complete search.
- Q B01J 35/50
- characterised by their shape or configuration
- WARNING
Group [B01J 35/50](#) is impacted by reclassification into groups [B01J 35/34](#) - [B01J 35/38](#), [B01J 35/505](#), [B01J 35/54](#), [B01J 35/55](#) and [B01J 2235/00 - B01J 2235/30](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01J 35/505
- • {with a non-spherical or unspecified core-shell structure}
- WARNING
Group [B01J 35/505](#) is incomplete pending reclassification of documents from group [B01J 35/50](#).
Groups [B01J 35/50](#) and [B01J 35/505](#) should be considered in order to perform a complete search.
- Q B01J 35/51
- • Spheres
- WARNING
Group [B01J 35/51](#) is impacted by reclassification into groups [B01J 35/52](#) and [B01J 35/53](#).

Groups [B01J 35/51](#), [B01J 35/52](#) and [B01J 35/53](#) should be considered in order to perform a complete search.

- N [B01J 35/52](#) • • • Hollow spheres
WARNING
Group [B01J 35/52](#) is incomplete pending reclassification of documents from group [B01J 35/51](#).
Groups [B01J 35/51](#) and [B01J 35/52](#) should be considered in order to perform a complete search.
- N [B01J 35/53](#) • • • with a core-shell structure
WARNING
Group [B01J 35/53](#) is incomplete pending reclassification of documents from group [B01J 35/51](#).
Groups [B01J 35/51](#) and [B01J 35/53](#) should be considered in order to perform a complete search.
- N [B01J 35/54](#) • • Bars or plates
WARNING
Group [B01J 35/54](#) is incomplete pending reclassification of documents from group [B01J 35/50](#).
Groups [B01J 35/50](#) and [B01J 35/54](#) should be considered in order to perform a complete search.
- N [B01J 35/55](#) • • Cylinders or rings
WARNING
Group [B01J 35/55](#) is incomplete pending reclassification of documents from group [B01J 35/50](#).
Groups [B01J 35/50](#) and [B01J 35/55](#) should be considered in order to perform a complete search.
- Q [B01J 35/56](#) • • Foraminous structures having flow-through passages or channels, e.g. grids or three-dimensional monoliths
WARNING
Group [B01J 35/56](#) is impacted by reclassification into group [B01J 35/57](#).
Groups [B01J 35/56](#) and [B01J 35/57](#) should be considered in order to perform a complete search.
- N [B01J 35/57](#) • • • Honeycombs
WARNING
Group [B01J 35/57](#) is incomplete pending reclassification of documents from group [B01J 35/56](#).
Groups [B01J 35/56](#) and [B01J 35/57](#) should be considered in order to perform a complete search.
- N [B01J 35/58](#) • • Fabrics or filaments
- N [B01J 35/59](#) • • • Membranes
- N [B01J 35/60](#) • characterised by their surface properties or porosity
- N [B01J 35/61](#) • • Surface area
- N [B01J 35/612](#) • • • {less than 10 m²/g}
- N [B01J 35/613](#) • • • {10-100 m²/g}
- N [B01J 35/615](#) • • • {100-500 m²/g}
- N [B01J 35/617](#) • • • {500-1000 m²/g}

- N B01J 35/618 . . . {more than 1000 m²/g}
- N B01J 35/63 . . . Pore volume
- N B01J 35/633 . . . {less than 0.5 ml/g}
- N B01J 35/635 . . . {0.5-1.0 ml/g}
- N B01J 35/638 . . . {more than 1.0 ml/g}
- N B01J 35/64 . . . Pore diameter
- N B01J 35/643 . . . {less than 2 nm}
- N B01J 35/647 . . . {2-50 nm}
- N B01J 35/651 . . . {50-500 nm}
- N B01J 35/653 . . . {500-1000 nm}
- N B01J 35/657 . . . {larger than 1000 nm}
- N B01J 35/66 . . . Pore distribution
- N B01J 35/67 . . . monomodal
- N B01J 35/69 . . . bimodal
- N B01J 35/695 . . . {polymodal}
- N B01J 35/70 . . . characterised by their crystalline properties, e.g. semi-crystalline (catalysts comprising carbon [B01J 21/18](#); molecular sieves [B01J 29/00](#))

WARNING

Groups [B01J 35/70](#) and [B01J 35/77](#) are incomplete pending reclassification of documents from groups [B01J 35/00](#), [B01J 35/30](#) and [B01J 35/31](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N B01J 35/73 . . . having a two-dimensional layered crystalline structure, e.g. layered double hydroxide [LDH]

WARNING

Group [B01J 35/73](#) is incomplete pending reclassification of documents from groups [B01J 35/00](#), [B01J 35/30](#), [B01J 35/31](#) and [B01J 35/393](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N B01J 35/733 . . . {Perovskite-type}

WARNING

Group [B01J 35/733](#) is incomplete pending reclassification of documents from groups [B01J 35/00](#), [B01J 35/30](#), [B01J 35/31](#) and [B01J 35/393](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N B01J 35/735 . . . {Pyrochlore-type A₂B₂O₇}

WARNING

Group [B01J 35/735](#) is incomplete pending reclassification of documents from groups [B01J 35/00](#), [B01J 35/30](#), [B01J 35/31](#) and [B01J 35/393](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N B01J 35/737 . . . {Hexaaluminate-type AB₁₂O₁₉}

WARNING

Group [B01J 35/737](#) is incomplete pending reclassification of documents from groups [B01J 35/00](#), [B01J 35/30](#), [B01J 35/31](#) and [B01J 35/393](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N* B01J 35/77
- • Compounds characterised by their crystallite size
- WARNING
Group [B01J 35/77](#) is incomplete pending reclassification of documents from groups [B01J 35/00](#), [B01J 35/30](#), [B01J 35/31](#) and [B01J 35/40](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N* B01J 35/80
- characterised by their amorphous structures
- WARNING
Group [B01J 35/80](#) is incomplete pending reclassification of documents from groups [B01J 35/00](#), [B01J 35/30](#) and [B01J 35/31](#). All groups listed in this Warning should be considered in order to perform a complete search.

Project: Unknown (B01J)

- U B01J 2219/00** **Chemical, physical or physico-chemical processes in general; Their relevant apparatus**
- U B01J 2219/00274
- Sequential or parallel reactions; Apparatus and devices for combinatorial chemistry or for making arrays; Chemical library technology
- U B01J 2219/00277
- • Apparatus
- U B01J 2219/00351
- • • Means for dispensing and evacuation of reagents
- M B01J 2219/00378
- • • • ~~Piezo-electric~~*Piezoelectric* or ink jet dispensers
- U B01J 2219/00781
- Aspects relating to microreactors
- U B01J 2219/00925
- • Irradiation
- U B01J 2219/00934
- • • Electromagnetic waves
- M B01J 2219/00945
- • • • ~~Infra-red~~*Infrared* light

Project: RP12086 (B01J)

- U B01J 2231/00** **Catalytic reactions performed with catalysts classified in [B01J 31/00](#)**
- NOTE
In this group indexing is done according to the specific catalytic reaction. In case of multiple catalytic activities only those are indexed which are specifically exemplified, i.e. by ways of worked examples, specific claims or explicit alternatives therein.
- U B01J 2231/70
- Oxidation reactions, e.g. epoxidation, (di)hydroxylation, dehydrogenation and analogues
- U B01J 2231/76
- • Dehydrogenation (transfer-dehydrogenation of CH-XH [B01J 2231/641](#); transfer-dehydrogenation of -CHRCHR- via C-H activation [B01J 2231/46](#))
- U B01J 2231/766
- • • of -CH-CH- or -C=C- to -C=C- or -C-C- triple bond species
- N B01J 2235/00** **Indexing scheme associated with group [B01J 35/00](#), related to the analysis techniques used to determine the catalysts form or properties**
- WARNING
Groups [B01J 2235/00](#), [B01J 2235/05](#), [B01J 2235/10](#), [B01J 2235/15](#) and [B01J 2235/30](#) are incomplete pending reclassification of documents from groups [B01J 35/00](#), [B01J 35/30](#), [B01J 35/31](#), [B01J 35/393](#) and [B01J 35/50](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N* B01J 2235/05
- Nuclear magnetic resonance [NMR]

- N B01J 2235/10 · Infrared [IR]
- N B01J 2235/15 · X-ray diffraction
- N B01J 2235/30 · Scanning electron microscopy; Transmission electron microscopy

Project: MP12185 (B06B)

- U B06B 1/00 **Methods or apparatus for generating mechanical vibrations of infrasonic, sonic, or ultrasonic frequency**
- U B06B 1/10 · making use of mechanical energy ([B06B 1/18](#), [B06B 1/20](#) take precedence)
- M B06B 1/16 · operating with systems involving rotary unbalanced masses ~~(({electrical motors using rotary unbalanced masses in general H02K 7/061})~~

Project: RP12190 (B08B)

- C B08B 1/00 **Cleaning by methods involving the use of tools, ~~brushes, or analogous members (B08B 3/12, B08B 6/00 {, B08B 7/02}, B08B 9/00 take precedence~~ cleaning hollow articles by methods or apparatus specially adapted thereto [B08B 9/00](#))**

WARNING

Group B08B 1/00 is impacted by reclassification into groups [B08B 1/14](#), [B08B 1/143](#), [B08B 1/145](#), [B08B 1/16](#), [B08B 1/165](#) and [B08B 1/40](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- D B08B 1/001 · {characterised by the type of cleaning tool}
<administratively transferred to [B08B 1/10](#)>
- D B08B 1/002 · {Brushes}
<administratively transferred to [B08B 1/12](#)>
- D B08B 1/003 · {Swabs}
<administratively transferred to [B08B 1/145](#)>
- D B08B 1/005 · {Scrapers}
<administratively transferred to [B08B 1/165](#)>
- D B08B 1/006 · {Wipes}
<administratively transferred to [B08B 1/143](#)>
- D B08B 1/007 · {having means to clean the cleaning members before, during or after use}
<administratively transferred to [B08B 1/50](#)>
- D B08B 1/008 · {using translating operative members}
<administratively transferred to [B08B 1/30](#)>
- D B08B 1/02 · Cleaning travelling work, e.g. a web, articles on a conveyor
<administratively transferred to [B08B 1/20](#)>
- D B08B 1/04 · using rotary operative members (B08B 1/02 takes precedence)
<administratively transferred to [B08B 1/32](#)>
- Q B08B 1/10 · characterised by the type of cleaning tool
WARNING
*Group [B08B 1/10](#) is impacted by reclassification into groups [B08B 1/14](#), [B08B 1/143](#), [B08B 1/145](#), [B08B 1/16](#), [B08B 1/165](#) and [B08B 1/40](#).
All groups listed in this Warning should be considered in order to perform a complete search.*
- N B08B 1/12 · Brushes

- N B08B 1/14
- • Wipes; Absorbent members, e.g. swabs or sponges (with integrated means for dispensing fluids [B08B 1/40](#))
- WARNING
Groups [B08B 1/14](#), [B08B 1/143](#) and [B08B 1/145](#) are incomplete pending reclassification of documents from groups [B08B 1/00](#) and [B08B 1/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N B08B 1/143
- • • {Wipes}
- N B08B 1/145
- • • {Swabs}
- N B08B 1/16
- • Rigid blades, e.g. scrapers; Flexible blades, e.g. wipers
- WARNING
Groups [B08B 1/16](#) and [B08B 1/165](#) are incomplete pending reclassification of documents from groups [B08B 1/00](#) and [B08B 1/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N B08B 1/165
- • • {Scrapers}
- N B08B 1/20
- Cleaning of moving articles, e.g. of moving webs or of objects on a conveyor
- N B08B 1/30
- by movement of cleaning members over a surface
- Q B08B 1/32
- • using rotary cleaning members
- WARNING
Group [B08B 1/32](#) is impacted by reclassification into groups [B08B 1/34](#) and [B08B 1/36](#).
Groups [B08B 1/32](#), [B08B 1/34](#) and [B08B 1/36](#) should be considered in order to perform a complete search.
- N B08B 1/34
- • • rotating about an axis parallel to the surface
- N B08B 1/36
- • • rotating about an axis orthogonal to the surface
- N B08B 1/40
- Cleaning tools with integrated means for dispensing fluids, e.g. water, steam or detergents (cleaning by the force of jets or sprays [B08B 3/02](#))
- WARNING
Group [B08B 1/40](#) is incomplete pending reclassification of documents from groups [B08B 1/00](#) and [B08B 1/10](#).
Groups [B08B 1/00](#), [B08B 1/10](#) and [B08B 1/40](#) should be considered in order to perform a complete search.
- Q B08B 1/50
- involving cleaning of the cleaning members
- WARNING
Group [B08B 1/50](#) is impacted by reclassification into groups [B08B 1/52](#) and [B08B 1/54](#).
Groups [B08B 1/50](#), [B08B 1/52](#) and [B08B 1/54](#) should be considered in order to perform a complete search.
- N B08B 1/52
- • using fluids
- WARNING
Group [B08B 1/52](#) is incomplete pending reclassification of documents from group [B08B 1/50](#).
Groups [B08B 1/50](#) and [B08B 1/52](#) should be considered in order to perform a complete search.

N B08B 1/54

- using mechanical tools

WARNING

Group [B08B 1/54](#) is incomplete pending reclassification of documents from group [B08B 1/50](#).

Groups [B08B 1/50](#) and [B08B 1/54](#) should be considered in order to perform a complete search.

Project: MP12067 (B09B)

M B09B

DISPOSAL OF SOLID WASTE *NOT OTHERWISE PROVIDED FOR***NOTES**

1. This subclass covers only single or combined *operations*, e.g. multistage; *operations operations*, not fully classifiable in a single other subclass.

2. In this subclass, the following terms or expressions are *added/used* with the meanings indicated:-

- "disposal" means the discarding, e.g. dumping, or destroying of waste or its transformation into something useful or harmless;
- "solid waste" includes waste which, although it has liquid content, is for practical purposes handled as solid.

3. Attention is drawn to the following places:

| | |
|------------------------------|---|
| A23J 1/16 | Obtaining proteins from waste water of starch manufacturing plants of like wastes |
| A23K 10/26; A23K 10/37 | Animal feeding-stuffs from waste products of animal origin or of plant origin |
| A23K 10/38 | Animal feeding-stuffs from distillers' or brewers' waste |
| A23K 10/28 | Animal feeding-stuffs from waste dairy products |
| A23K 10/20 | Animal feeding-stuffs from kitchen waste |
| A43B 1/12 | Footwear made of rubber waste |
| A61L 11/00 | Disinfection or sterilisation methods specially adapted for refuse |
| A62D 3/00 | Chemical means for combatting harmful chemical agents; processes for making harmful chemical agents harmless |
| B01D 53/34 {B02C 18/0084} | Chemical purification of smoke or fumes, e.g. flue gas Disintegrating by knives or other cutting or tearing members, which chop material into fragments, specially adapted for disintegrating garbage, waste or sewage |
| B03B 7/00 | Combinations of wet processes or apparatus with other processes or apparatus, e.g. for dressing ores or garbage |
| B03B 9/06 | General arrangement of separating plant, e.g. flow sheets, specially adapted for refuse |
| B05B 12/16; B05B 14/00 | Control of spray area of spraying plant, e.g. masking, side shields; Means for collection or re-use of excess material |
| B08B 15/00 | Prevent escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area |
| B22F 8/00 | Manufacture of articles from scrap or waste metal particles |
| B23D 25/14 | Machines or arrangements for shearing stock while the latter is travelling otherwise than in the direction of the cut without regard to the exact dimensions of the resulting material, e.g. for cutting up scrap |
| B24B 55/12 | Devices for recovering materials from grinding or polishing |
| B27B 33/20 | Edge trimming saw blades or tools combined with means to disintegrate waste |

| | |
|----------------------------|---|
| B29B 17/00 | Recovery of plastics or other constituents of waste material containing plastics |
| B30B 9/32 | Presses for consolidating scrap metal or for compacting used cars |
| B62D 67/00 | Systematic disassembly of vehicles for recovery of salvageable components, e.g. for recycling |
| B63B 17/06 {B63J 4/006} | Refuse discharge from vessels, e.g. for ash Arrangements of installation for treating waste water or sewage on vessels |
| B63J 4/00 | Arrangements of installations for treating waste water or sewage on vessels |
| B65F 1/00 | Refuse receptacles |
| B65F 3/00 | Vehicles particularly adapted for collecting refuse |
| B65F 5/00 | Gathering or removal of refuse otherwise than by receptacles or vehicles |
| B65F 7/00 | Cleaning or disinfecting devices combined with refuse receptacles or refuse vehicles |
| C03C 1/00 | Ingredients generally applicable to manufacture of glasses, glazes or vitreous enamels |
| C04B 7/24 | Hydraulic cements from oil shales, residues or waste other than slag |
| C04B 11/26 | Calcium sulfate cements from phosphogypsum or from waste, e.g. purification products of smoke |
| C04B 18/04 | Waste materials or refuse used as fillers for mortars, concrete, artificial stone or the like |
| {C04B 22/0006} | Waste inorganic materials used as active ingredients for mortars, concrete, artificial stone or the like |
| {C04B 24/001} | Waste organic materials used as active ingredients for mortars, concrete, artificial stone or the like |
| C04B 33/132 | Waste materials or refuse used as compounding for clay-wares |
| C05F 9/00 | Fertilisers made from household or town refuse |
| C08B 16/00 | Regeneration of cellulose |
| C08J 11/00 | Recovery of waste materials of macromolecular substances |
| C08L 17/00 | Compositions of reclaimed rubber |
| C09K 11/01 | Recovery of luminescent materials |
| C10B 53/00 | Destructive distillation, specially adapted for particular solid raw materials or solid raw materials in special form |
| C10B 57/00 | Other processes not covered before; Features of destructive distillation processes in general |
| C10G 1/10 | Production of liquid hydrocarbon mixtures from rubber or rubber waste |
| C10L 5/46 | Solid fuels essentially based on sewage, house or town refuse |
| C10L 5/48 | Solid fuels essentially based on industrial residues and waste materials |
| C10M 175/02 | Working-up used lubricants based on mineral oils |
| C11B 13/00 | Recovery of fats, fatty oils, or fatty acids from waste materials |
| C11D 19/00 | Recovery of glycerol from a saponification liquor |
| C12F 3/00 | Recovery of by-products |
| C12F 3/08 | Recovery of alcohol from press residues or other waste material |
| C12P 7/08 | Biochemical production of ethanol from waste |

| | |
|------------|--|
| G22B 7/00 | Working-up raw materials other than ores, e.g. scrap, to produce non-ferrous metals or compounds thereof |
| G22B 19/28 | Obtaining zinc or zinc oxide from muffle furnace residues |
| G22B 19/30 | Obtaining zinc or zinc oxide from metallic residues or scrap |
| G22B 25/06 | Obtaining tin from scrap |
| G25D 13/24 | Regeneration of process liquids used in electrophoretic coatings |
| G25D 21/16 | Regeneration of process solutions used in electrolytic coating |
| D01B | Mechanical treatment of natural fibrous or filamentary material to obtain fibres or filaments, e.g. for spinning |
| D01C 5/00 | Carbonising rags to recover animal fibres |
| D01F 13/00 | Recovery of starting material, waste material or solvents during the manufacture of artificial filaments or the like |
| D01G 11/00 | Disintegrating fibre-containing articles to obtain fibres for re-use |
| D01H 11/00 | Arrangements for confining or removing dust, fly, or the like |
| D06L 1/10 | Regeneration of used chemical baths used for dry-cleaning or washing fibres, fabrics or the like |
| D21B 1/08 | Dry treatment of waste paper or rags for making paper or for the production of cellulose |
| D21B 1/32 | Defibrating waste paper |
| D21C 5/02 | Processes for obtaining cellulose by working-up waste paper |
| D21C 11/14 | Regeneration of pulp liquors by wet combustion |
| D21F 1/66 | Re-use of pulp water in wet end machines for making continuous webs of paper |
| D21H 17/01 | Waste products added to the pulp or used in paper-impregnating material |
| E03F | Sewers, Cesspools |
| E04F 17/10 | Arrangements in building for the disposal of refuse |
| F23B 5/00 | Combustion apparatus arrangements for burning uncombusted material from primary combustion |
| F23G | Consuming waste products by combustion |
| F23J | Removal or treatment of combustion products or combustion residues |
| G03C 11/24 | Removing emulsion from waste photographic material |
| G03G 21/10 | Collecting or recycling waste developer used in electrography, electrophotography, magnetography |
| G21F 9/28 | Treating radioactively contaminated solids |
| H01B 15/00 | Apparatus or processes for salvaging material from electric cables |
| H01J 9/52 | Recovery of material from discharge tubes or lamps |
| H01M 6/52 | Reclaiming serviceable parts of waste cells or batteries |
| H01M 10/54 | Reclaiming serviceable parts of waste accumulators |

4-3. In this subclass, it is desirable to add the indexing codes of group {[B09B 2101/00](#)}.

U B09B 3/00

Destroying solid waste or transforming solid waste into something useful or harmless

WARNING

Group [B09B 3/00](#) is incomplete pending reclassification of documents from groups [B09B 3/0066](#) and [B09B 3/0075](#).

Group [B09B 3/00](#) is also impacted by reclassification into groups [B09B 3/30](#), [B09B 3/32](#), [B09B 3/35](#), [B09B 3/38](#), [B09B 3/50](#), [B09B 3/60](#), [B09B 3/65](#) and [B09B 3/70](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M B09B 3/70
- Chemical treatment, e.g. pH adjustment or oxidation (involving an extraction step [B09B 3/80](#); ~~processes for making harmful chemical substances harmless by effecting a chemical change in the substances A62D 3/00~~)

WARNING

Group [B09B 3/70](#) is incomplete pending reclassification of documents from groups [B09B 3/00](#), [B09B 3/0066](#), [B09B 3/0075](#), [B09B 3/80](#) and [B09B 5/00](#). All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP12088 (B21B)

- M B21B 13/00
- Metal-rolling stands, i.e. an assembly composed of a stand frame, rolls, and accessories ([B21B 17/00](#) - [B21B 23/00](#) take precedence; ~~details, component parts, accessories, auxiliary means, procedures in connection with metal rolling, see the relevant groups~~)

Project: MP12088 (B22C)

- M B22C 9/00
- Moulds or cores (uniquely adapted to particular casting processes [B22D](#)); Moulding processes (~~processes involving the use of particular moulding machines, see the relevant groups for these machines~~)

Project: MP12088 (B22D)

- M B22D 35/00
- Equipment for conveying molten metal into beds or moulds ([B22D 37/00](#) - [B22D 41/00](#) take precedence; ~~specially adapted to particular processes or machines, see the relevant groups~~)
- M B22D 37/00
- Controlling or regulating the pouring of molten metal from a casting melt-holding vessel (~~{[B22D 11/18](#) takes precedence,}~~ [B22D 39/00](#), [B22D 41/00](#) take precedence; ~~specially adapted to particular processes or machines, see the relevant groups of this subclass~~)
- M B22D 39/00
- Equipment for supplying molten metal in rations (~~specially adapted to particular processes or machines, see the relevant groups of this subclass~~)

Project: MP12088 (B23B)

- U B23B 3/00
- General-purpose turning-machines or devices, e.g. centre lathes with feed rod and lead screw; Sets of turning-machines
- M B23B 3/06
- Turning-machines or devices characterised only by the special arrangement of constructional units ([B23Q 37/00](#) takes precedence; ~~structural features of details, see the relevant groups~~; such features of general applicability [B23Q](#))

Project: MP12088 (B23D)

- M B23D 21/00
- Machines or devices for shearing or cutting tubes (~~by sawing, see the relevant groups for sawing machines or sawing devices~~; as additional equipment for deep-drawing presses [B21D 24/16](#))
- U B23D 73/00
- Making files or rasps
- M B23D 73/04
- Methods or machines for the manufacture of files or rasps (~~non-mechanical methods, see the relevant classes~~)

Project: MP12088 (B23F)

M B23F 23/00 Accessories or equipment combined with or arranged in, or specially designed to form part of, gear-cutting machines (~~tool-guiding mechanisms; see the relevant groups for making gear teeth~~; accessories or equipment not restricted to gear-cutting machines [B23Q](#))

Project: MP12088 (B23P)

M B23P 6/00 Restoring or reconditioning objects (straightening or restoring form of sheet metal, metal rods, metal tubes, metal profiles, or specific articles made therefrom [B21D 1/00](#), [B21D 3/00](#); repairing defective or damaged objects by casting techniques [B22D 19/10](#); ~~procedures or apparatus covered by a single other subclass; see the relevant subclass~~)

Project: MP12088 (B23Q)

M B23Q 39/00 Metal-working machines incorporating a plurality of sub-assemblies, each capable of performing a metal-working operation ([B23Q 33/00](#), [B23P 23/00](#) take precedence; ~~if the operations are similar and the kind of operation is essential, see the relevant subclass for the operation~~)

Project: MP12088 (B24B)

M B24B 1/00 Processes of grinding or polishing; Use of auxiliary equipment in connection with such processes (~~processes characterised by the use of special machines or devices; see the relevant places for those machines or devices~~)

Project: MP12088 (B28B)

M B28B SHAPING CLAY OR OTHER CERAMIC COMPOSITIONS; SHAPING SLAG; SHAPING MIXTURES CONTAINING CEMENTITIOUS MATERIAL, e.g. PLASTER (foundry moulding [B22C](#); working stone or stone-like material [B28D](#); shaping of substances in a plastic state, in general [B29C](#); making layered products not composed wholly of these substances [B32B](#); ~~shaping in situ; see the relevant classes of section E~~)

NOTE

In this subclass, the following term is used with the meaning indicated:

- "the material" means:
 - a. clay or other ceramic compositions;
 - b. slag;
 - c. mixtures with water-setting properties given by clay, cementitious material, or slag.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[B28B 23/08](#) covered by [B28B 21/60](#), [B28B 23/06](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M B28B 5/00 Producing shaped articles from the material in moulds or on moulding surfaces, carried or formed by, in, or on conveyors irrespective of the manner of shaping (~~shaping aspects see the relevant groups~~)

- M B28B 13/00** Feeding the unshaped material to moulds or apparatus for producing shaped articles; Discharging shaped articles from such moulds or apparatus (~~feeding or discharging devices incorporated in, or operatively associated with, a particular type of shaping apparatus, or specially designed to supply materials to a particular type of shaping apparatus, see the relevant groups for the apparatus~~)
- M B28B 17/00** Details of, or accessories for, apparatus for shaping the material; Auxiliary measures taken in connection with such shaping (moulds [B28B 7/00](#); after-treatment [B28B 11/00](#); feeding or discharging [B28B 13/00](#); arrangements for embedding elements in the material [B28B 23/00](#); ~~details, accessories, or auxiliary measures special to any one type of shaping, machine or method of shaping, see the relevant groups for such machines or methods~~)
- M B28B 19/00** Machines or methods for applying the material to surfaces to form a permanent layer thereon (making shaped articles on mandrels [B28B 1/30](#); applying liquids or other fluent materials to surfaces in general [B05C](#); glazing or engobing [C04B](#); ~~applying the material to walls or other fixed structures, see the relevant classes of section E~~)

Project: Unknown (B29C)

- U B29C 66/00** {General aspects of processes or apparatus for joining preformed parts (means for handling the parts to be joined [B29C 65/78](#); testing the joint [B29C 65/82](#))}
- U B29C 66/01** · {General aspects dealing with the joint area or with the area to be joined ([B29C 65/76](#), [B29C 65/82](#) take precedence)}
- U B29C 66/05** · · {Particular design of joint configurations}
- NOTE**
In this group the possible supplementary joining material, e.g. adhesive or adhesive tape, is not taken into account for the joint configuration. The use of supplementary joining material, e.g. adhesive or adhesive tape, has to be additionally classified as such, e.g. in [B29C 65/48](#) and subgroups or [B29C 65/50](#) and subgroups
- WARNING**
Group [B29C 66/05](#) and subgroups are not complete, pending a reorganisation; see also [B29C 65/00](#) and its subgroups
- U B29C 66/303** · · · {the joint involving an anchoring effect ([B29C 66/341](#), [B29C 65/56](#) and subgroups take precedence)}
- M B29C 66/3032** · · · · {making use of ~~protusions~~*protrusions* or cavities belonging to at least one of the parts to be joined ([B29C 66/3034](#) takes precedence)}
- M B29C 66/30321** · · · · · {making use of ~~protusions~~*protrusions* belonging to at least one of the parts to be joined}

Project: RP12211 (B32B)

- T B32B 1/00** Layered products having a ~~general shape other than plane~~*non-planar shape*
- NOTE**
For classification of a product in this group, surface unevennesses or non-uniformities and the shape of individual layers are ignored.
- D B32B 1/02** · Receptacles {, i.e. rigid containers}, e.g. tanks
<administratively transferred to [B32B 1/00](#)>

- D B32B 1/04 · characterised by feature of form at particular places, e.g. in edge regions {(not used)}
<administratively transferred to [B32B 1/00](#)>
- D B32B 1/06 · characterised by fillings or added members in hollow portions {(not used)}
<administratively transferred to [B32B 1/00](#)>
- U B32B 1/08 · Tubular products
- M B32B 3/00** **Layered products comprising a layer with external or internal discontinuities or unevennesses, or a layer of non-planar form *shape* (fibrous or filamentary layer [B32B 5/02](#); particulate layer [B32B 5/16](#); foamed layer [B32B 5/18](#)); Layered products *comprising a layer* having particular features of form (~~receptacles or tubular products [B32B 1/00](#)~~)**

Project: Unknown (B41F)

- U B41F 23/00** **Devices for treating the surfaces of sheets, webs, or other articles in connection with printing**
- U B41F 23/04 · by heat drying, by cooling, by applying powders {([B41F 23/005](#) takes precedence)}
- U B41F 23/0403 · · {Drying webs ([B41F 23/0486](#) takes precedence)}
- U B41F 23/0406 · · · {by radiation ([B41F 23/0436](#) takes precedence)}
- M B41F 23/0409 · · · · {~~Ultra-violet~~ *Ultraviolet* dryers}
- M B41F 23/0413 · · · · {~~Infra-red~~ *Infrared* dryers}

Project: Unknown (B41M)

- U B41M 5/00** **Duplicating or marking methods; Sheet materials for use therein (by using light-sensitive materials [G03](#); electrography, magnetography [G03G](#) ; repeatedly usable boards or tablets for writing or drawing [B43L 1/00](#))**
- U B41M 5/26 · Thermography ([B41M 5/20](#), [B41M 5/24](#) take precedence); {Marking by high energetic means, e.g. laser otherwise than by burning, and characterised by the material used ([B23K](#) takes precedence; thermographic or photothermographic systems using noble metal compounds [G03C 1/494](#))}
- U B41M 5/40 · · characterised by the base {backcoat}, intermediate, or covering layers, {e.g. for thermal transfer dye-donor or dye-receiver sheets}; Heat, radiation filtering or absorbing means or layers; combined with other image registration layers or compositions; Special originals for reproduction by thermography {(macromolecular ink- or dye-receptive coatings [B41M 5/52](#))}
- U B41M 5/46 · · · characterised by the light-to-heat converting means; characterised by the heat or radiation filtering or absorbing means or layers
- M B41M 5/465 · · · · {~~Infra-red~~ *Infrared* radiation-absorbing materials, e.g. dyes, metals, silicates, C black}

Project: RP0686-F (B60C)

- U B60C 5/00** **Inflatable pneumatic tyres or inner tubes ([B60C 1/00](#), [B60C 9/00](#) - [B60C 17/00](#) take precedence)**
- M B60C 5/002 · {filled at least partially with foam material}

WARNING

Group B60C 5/002 is impacted by reclassification into groups B60C 7/101, B60C 7/1015 and B60C 7/121.
Groups B60C 5/002, B60C 7/101, B60C 7/1015 and B60C 7/121 should be considered in order to perform a complete search.

| | | |
|---|-------------|--|
| U | B60C 7/00 | Non-inflatable or solid tyres (B60C 1/00 takes precedence) |
| M | B60C 7/10 | <ul style="list-style-type: none"> • characterised by means for increasing resiliency <p>WARNING Group B60C 7/10 is impacted by reclassification into groups B60C 7/101 and B60C 7/121. Groups B60C 7/10, B60C 7/101 and B60C 7/121 should be considered in order to perform a complete search.</p> |
| M | B60C 7/101 | <ul style="list-style-type: none"> • {Tyre casings enclosing a distinct core, e.g. foam (enclosed chambers defined by a distinct core B60C 7/121)} <p>WARNING Group B60C 7/101 is incomplete pending reclassification of documents from groups B60C 5/002, B60C 7/10, B60C 7/102, B60C 7/12, B60C 7/125 and B60C 17/065. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| M | B60C 7/1015 | <ul style="list-style-type: none"> • • {using foam material} <p>WARNING Group B60C 7/1015 is incomplete pending reclassification of documents from groups B60C 5/002 and B60C 7/105. Groups B60C 5/002, B60C 7/105 and B60C 7/1015 should be considered in order to perform a complete search.</p> |
| M | B60C 7/102 | <ul style="list-style-type: none"> • {Tyres built-up with separate rubber parts} <p>WARNING Group B60C 7/102 is impacted by reclassification into groups B60C 7/101 and B60C 7/121. Groups B60C 7/102, B60C 7/101 and B60C 7/121 should be considered in order to perform a complete search.</p> |
| M | B60C 7/105 | <ul style="list-style-type: none"> • {using foam material (B60C 7/1015 takes precedence)} <p>WARNING Group B60C 7/105 is impacted by reclassification into group B60C 7/1015. Groups B60C 7/105 and B60C 7/1015 should be considered in order to perform a complete search.</p> |
| M | B60C 7/12 | <ul style="list-style-type: none"> • using enclosed chambers, e.g. gas-filled <p>WARNING Group B60C 7/12 is impacted by reclassification into groups B60C 7/101 and B60C 7/121. Groups B60C 7/12, B60C 7/101 and B60C 7/121 should be considered in order to perform a complete search.</p> |
| M | B60C 7/121 | <ul style="list-style-type: none"> • • {enclosed chambers defined by a distinct core} <p>WARNING Group B60C 7/121 is incomplete pending reclassification of documents from groups B60C 5/002, B60C 7/10, B60C 7/102, B60C 7/12 and B60C 7/125. All groups listed in this Warning should be considered in order to perform a complete search.</p> |

- M B60C 7/125 · · · {enclosed chambers defined between rim and tread}
- WARNING**
Group B60C 7/125 is impacted by reclassification into groups B60C 7/101 and B60C 7/121.
Groups B60C 7/125, B60C 7/101 and B60C 7/121 should be considered in order to perform a complete search.
- U B60C 17/00 **Tyres characterised by means enabling restricted operation in damaged or deflated condition; Accessories therefor**
- U B60C 17/04 · utilising additional non-inflatable supports which become load-supporting in emergency
- U B60C 17/06 · · resilient
- M B60C 17/065 · · · {made-up of foam inserts (tyres filled with foam [B60C 5/002](#))}
- WARNING**
Group B60C 17/065 is impacted by reclassification into group B60C 7/101. Groups B60C 17/065 and B60C 7/101 should be considered in order to perform a complete search.

Project: Unknown (B60C)

- U B60C 23/00 **Devices for measuring, signalling, controlling, or distributing tyre pressure or temperature, specially adapted for mounting on vehicles; Arrangement of tyre inflating devices on vehicles, e.g. of pumps or of tanks; Tyre cooling arrangements**
- U B60C 23/02 · Signalling devices actuated by tyre pressure {(hand-held tyre pressure gauges [G01L 17/00](#))}
- U B60C 23/04 · · mounted on the wheel or tyre
- U B60C 23/0408 · · · {transmitting the signals by non-mechanical means from the wheel or tyre to a vehicle body mounted receiver}
- U B60C 23/041 · · · · {Means for supplying power to the signal- transmitting means on the wheel}
- M B60C 23/0411 · · · · · {~~Piezo-electric~~*Piezoelectric* generators}

Project: RP12183 (B60K)

- M B60K 35/00 - B60K 37/00 ***Instruments specially adapted for vehicles or dashboards; Arrangement of adaptations of instruments specially for instruments or dashboards in or on vehicles; Dashboards***
- C B60K 35/00 ***Instruments specially adapted for vehicles; Arrangement of adaptations of instruments instruments in or on vehicles (arrangements on dashboard B60K 37/02)***

NOTE

{In this group, it is desirable to add the indexing codes of [B60K 2360/20](#) - [B60K 2360/48](#), [B60K 2360/60](#) - [B60K 2360/62](#) and [B60K 2360/92](#) - [B60K 2360/96](#)}

WARNING

Group [B60K 35/00](#) is impacted by reclassification into groups [B60K 35/10](#), [B60K 35/20](#) - [B60K 35/29](#), [B60K 35/40](#) - [B60K 35/425](#), [B60K 35/50](#) - [B60K 35/53](#), [B60K 35/55](#), [B60K 35/60](#), [B60K 35/65](#) - [B60K 35/658](#), [B60K 35/70](#), [B60K 35/80](#) - [B60K 35/81](#), [B60K 35/85](#) and [B60K 35/90](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B60K 35/10
- Input arrangements, i.e. from user to vehicle, associated with vehicle functions or specially adapted therefor
- NOTE
{In this group, it is desirable to add the indexing codes of [B60K 2360/11](#) - [B60K 2360/149](#)}
- WARNING
Group [B60K 35/10](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).
Groups [B60K 35/00](#) and [B60K 35/10](#) should be considered in order to perform a complete search.
- N B60K 35/20
- Output arrangements, i.e. from vehicle to user, associated with vehicle functions or specially adapted therefor
- NOTE
{In the groups [B60K 35/20](#) – [B60K 35/22](#) and [B60K 35/26](#), it is desirable to add the indexing codes of [B60K 2360/151](#) - [B60K 2360/1526](#)}
- WARNING
Groups [B60K 35/20](#), [B60K 35/21](#), [B60K 35/211](#), [B60K 35/212](#), [B60K 35/213](#), [B60K 35/214](#), [B60K 35/215](#), [B60K 35/22](#), [B60K 35/223](#), [B60K 35/25](#), [B60K 35/26](#), [B60K 35/265](#), [B60K 35/28](#), [B60K 35/285](#) and [B60K 35/29](#) are incomplete pending reclassification of documents from group [B60K 35/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B60K 35/21
- • using visual output, e.g. blinking lights or matrix displays
- N B60K 35/211
- • • {producing three-dimensional [3D] effects, e.g. stereoscopic images}
- N B60K 35/212
- • • {displaying on manual operation elements, e.g. on a knob}
- N B60K 35/213
- • • {Virtual instruments}
- N B60K 35/214
- • • {Variable gauge scales, e.g. scale enlargement to adapt to maximum driving speed}
- N B60K 35/215
- • • characterised by the combination of multiple visual outputs, e.g. combined instruments with analogue meters and additional displays
- N B60K 35/22
- • • Display screens
- N B60K 35/223
- • • • {Flexible displays}
- Q B60K 35/23
- • • Head-up displays [HUD] (optical aspects of head-up displays [G02B 27/01](#))
- WARNING
Group [B60K 35/23](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).
Group [B60K 35/23](#) is also impacted by reclassification into groups [B60K 35/231](#), [B60K 35/232](#), [B60K 35/233](#), [B60K 35/234](#) and [B60K 35/235](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B60K 35/231
- • • characterised by their arrangement or structure for integration into vehicles
- WARNING
Group [B60K 35/231](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 35/23](#).
Groups [B60K 35/00](#), [B60K 35/23](#) and [B60K 35/231](#) should be considered in order to perform a complete search.

- N B60K 35/232
- • • controlling the projection distance of virtual images depending on the condition of the vehicle or the driver
- WARNING
Group [B60K 35/232](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 35/23](#).
Groups [B60K 35/00](#), [B60K 35/23](#) and [B60K 35/232](#) should be considered in order to perform a complete search.
- N B60K 35/233
- • • controlling the size or position in display areas of virtual images depending on the condition of the vehicle or the driver
- WARNING
Group [B60K 35/233](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 35/23](#).
Groups [B60K 35/00](#), [B60K 35/23](#) and [B60K 35/233](#) should be considered in order to perform a complete search.
- N B60K 35/234
- • • controlling the brightness, colour or contrast of virtual images depending on the driving conditions or on the condition of the vehicle or the driver
- WARNING
Group [B60K 35/234](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#), [B60K 35/23](#) and [B60K 2360/349](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B60K 35/235
- • • with means for detecting the driver's gaze direction or eye points
- WARNING
Group [B60K 35/235](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#), [B60K 35/23](#) and [B60K 2360/149](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B60K 35/25
- • using haptic output
- N B60K 35/26
- • using acoustic output
- N B60K 35/265
- • • {Voice}
- N B60K 35/28
- • characterised by the type of the output information, e.g. video entertainment or vehicle dynamics information; characterised by the purpose of the output information, e.g. for attracting the attention of the driver
- NOTE
{In this group, it is desirable to add the indexing codes of [B60K 2360/16](#) - [B60K 2360/179](#)}
- N B60K 35/285
- • • {for improving awareness by directing driver's gaze direction or eye points}
- N B60K 35/29
- • Instruments characterised by the way in which information is handled, e.g. showing information on plural displays or prioritising information according to driving conditions
- NOTE
{In this group, it is desirable to add the indexing codes of [B60K 2360/18](#) - [B60K 2360/199](#)}
- N B60K 35/40
- Instruments specially adapted for improving the visibility thereof to the user, e.g. fogging prevention or anti-reflection arrangements
- WARNING
Groups [B60K 35/40](#) - [B60K 35/425](#) are incomplete pending reclassification of documents from group [B60K 35/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B60K 35/405 • • {Fogging prevention}
- N B60K 35/415 • • {Glare prevention}
- N B60K 35/425 • • {Anti-reflection arrangements}
- Q B60K 35/50 • Instruments characterised by their means of attachment to or integration in the vehicle ([B60K 35/231](#) takes precedence)

NOTE

{In this group, it is desirable to add the indexing codes of [B60K 2360/816](#) - [B60K 2360/834](#)}

WARNING

Group [B60K 35/50](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 35/60](#).

Group [B60K 35/50](#) is also impacted by reclassification into groups [B60K 37/00](#), [B60K 37/10](#) and [B60K 37/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- Q B60K 35/53 • • Movable instruments, e.g. slidable

WARNING

Group [B60K 35/53](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).

Group [B60K 35/53](#) is also impacted by reclassification into group [B60K 35/55](#).

Groups [B60K 35/00](#), [B60K 35/53](#) and [B60K 35/55](#) should be considered in order to perform a complete search.

- N B60K 35/55 • Instruments with parts that can change their shape or position to configure an active screen, e.g. by folding or by rolling

WARNING

Group [B60K 35/55](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 35/53](#).

Groups [B60K 35/00](#), [B60K 35/53](#) and [B60K 35/55](#) should be considered in order to perform a complete search.

- Q B60K 35/60 • Instruments characterised by their location or relative disposition in or on vehicles (arrangements of lighting devices on dashboards [B60Q 3/10](#))

NOTE

{In this group, it is desirable to add the indexing codes of [B60K 2360/77](#) - [B60K 2360/797](#)}

WARNING

Group [B60K 35/60](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).

Group [B60K 35/60](#) is also impacted by reclassification into groups [B60K 35/50](#) and [B60K 37/00](#) - [B60K 37/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B60K 35/65
- Instruments specially adapted for specific vehicle types or users, e.g. for left- or right-hand drive
- NOTE
{In the groups [B60K 35/65](#) - [B60K 35/658](#), it is desirable to add the indexing codes of [B60K 2360/731](#) - [B60K 2360/741](#)}
- WARNING
Groups [B60K 35/65](#), [B60K 35/652](#), [B60K 35/654](#), [B60K 35/656](#) and [B60K 35/658](#) are incomplete pending reclassification of documents from group [B60K 35/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B60K 35/652
- • {for left- or right-hand drive}
- N B60K 35/654
- • {the user being the driver}
- N B60K 35/656
- • {the user being a passenger}
- N B60K 35/658
- • {the instruments being ergonomically adjustable to the user}
- N B60K 35/70
- Instrument provisions for avoiding injuries to vehicle occupants in case of accidents
- WARNING
Group [B60K 35/70](#) is incomplete pending reclassification of documents from groups [B60K 35/00](#) and [B60K 2360/652](#).
Groups [B60K 35/00](#), [B60K 2360/652](#) and [B60K 35/70](#) should be considered in order to perform a complete search.
- N B60K 35/80
- Arrangements for controlling instruments
- NOTE
{In this group, it is desirable to add the indexing codes of [B60K 2360/55](#) - [B60K 2360/577](#)}
- WARNING
Groups [B60K 35/80](#) and [B60K 35/81](#) are incomplete pending reclassification of documents from group [B60K 35/00](#).
Groups [B60K 35/00](#), [B60K 35/80](#) and [B60K 35/81](#) should be considered in order to perform a complete search.
- N B60K 35/81
- • for controlling displays
- N B60K 35/85
- Arrangements for transferring vehicle- or driver-related data
- NOTE
{In this group, it is desirable to add the indexing codes of [B60K 2360/583](#) – [B60K 2360/595](#)}
- WARNING
Group [B60K 35/85](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).
Groups [B60K 35/00](#) and [B60K 35/85](#) should be considered in order to perform a complete search.
- N B60K 35/90
- Calibration of instruments, e.g. setting initial or reference parameters; Testing of instruments, e.g. detecting malfunction
- WARNING
Group [B60K 35/90](#) is incomplete pending reclassification of documents from group [B60K 35/00](#).
Groups [B60K 35/00](#) and [B60K 35/90](#) should be considered in order to perform a complete search.

C B60K 37/00**Dashboards (as road-vehicle superstructure sub-unit units
B62D B62D 25/14)****NOTE**

{In this group, it is desirable to add the indexing codes of [B60K 2360/40](#) - [B60K 2360/48](#), [B60K 2360/65](#) - [B60K 2360/6992](#) and [B60K 2360/84](#)}

WARNING

Group [B60K 37/00](#) is incomplete pending reclassification of documents from groups [B60K 35/50](#) and [B60K 35/60](#).

Group [B60K 37/00](#) is also impacted by reclassification into groups [B60K 37/10](#) and [B60K 37/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- D B60K 37/02
- Arrangement of instruments (arrangement of lighting devices for dashboards B60Q 3/10)
 - <administratively transferred to [B60K 35/60](#)>
- D B60K 37/04
- Arrangement of fittings on dashboard (of instruments B60K 37/02)
 - <administratively transferred to [B60K 35/50](#)>
- D B60K 37/06
- • of controls, e.g. controls knobs
 - <administratively transferred to [B60K 35/10](#)>
- N B60K 37/10
- Arrangements for attaching the dashboard to the vehicle
- WARNING**
- Group [B60K 37/10](#) is incomplete pending reclassification of documents from groups [B60K 35/50](#), [B60K 35/60](#) and [B60K 37/00](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N B60K 37/20
- Dashboard panels
- WARNING**
- Group [B60K 37/20](#) is incomplete pending reclassification of documents from groups [B60K 35/50](#), [B60K 35/60](#) and [B60K 37/00](#).
- All groups listed in this Warning should be considered in order to perform a complete search.

**N B60K 2360/00 -
B60K 2360/00****Details of instruments or dashboards****N B60K 2360/00****Indexing scheme associated with groups [B60K 35/00](#) or [B60K 37/00](#) relating to details of instruments or dashboards**

- N B60K 2360/11
- Instrument graphical user interfaces or menu aspects
- N B60K 2360/111
- • for controlling multiple devices
- N B60K 2360/113
- • Scrolling through menu items
- N B60K 2360/115
- • Selection of menu items
- N B60K 2360/117
- • Cursors
- N B60K 2360/119
- • Icons
- N B60K 2360/122
- Instrument input devices with reconfigurable control functions, e.g. reconfigurable menus
- N B60K 2360/126
- Rotatable input devices for instruments
- N B60K 2360/128
- Axially displaceable input devices for instruments
- N B60K 2360/131
- Pivotal input devices for instruments

- N B60K 2360/133 · Multidirectional input devices for instruments
- N B60K 2360/135 · · Joysticks
- N B60K 2360/137 · · Jog-dials
- N B60K 2360/139 · Clusters of instrument input devices
- N B60K 2360/141 · Activation of instrument input devices by approaching fingers or pens
- N B60K 2360/143 · Touch sensitive instrument input devices
- N B60K 2360/1434 · · Touch panels
- N B60K 2360/1438 · · Touch screens
- N B60K 2360/1442 · · · Emulation of input devices
- N B60K 2360/1446 · · Touch switches
- N B60K 2360/145 · Instrument input by combination of touch screen and hardware input devices
- N B60K 2360/146 · Instrument input by gesture
- N B60K 2360/1464 · · 3D-gesture
- N B60K 2360/1468 · · Touch gesture
- N B60K 2360/1472 · · · Multi-touch gesture
- N B60K 2360/1476 · · · Handwriting
- N B60K 2360/148 · Instrument input by voice
- Q B60K 2360/149 · Instrument input by detecting viewing direction not otherwise provided for

WARNING

Group [B60K 2360/149](#) is impacted by reclassification into group [B60K 35/235](#). Groups [B60K 2360/149](#) and [B60K 35/235](#) should be considered in order to perform a complete search.

- N B60K 2360/151 · Instrument output devices for configurable output
- N B60K 2360/1515 · · Reconfigurable dials
- N B60K 2360/1523 · Matrix displays
- N B60K 2360/1526 · Dual-view displays
- N B60K 2360/16 · Type of output information
- N B60K 2360/161 · · Explanation of functions, e.g. instructions
- N B60K 2360/162 · · Visual feedback on control action
- N B60K 2360/163 · · Language
- N B60K 2360/164 · · Infotainment
- N B60K 2360/165 · · Videos and animations
- N B60K 2360/166 · · Navigation
- N B60K 2360/167 · · Vehicle dynamics information
- N B60K 2360/168 · · Target or limit values
- N B60K 2360/169 · · Remaining operating distance or charge
- N B60K 2360/171 · · Vehicle or relevant part thereof displayed
- N B60K 2360/172 · · Driving mode indication
- N B60K 2360/173 · · Reversing assist
- N B60K 2360/174 · · Economic driving
- N B60K 2360/175 · · Autonomous driving
- N B60K 2360/176 · · Camera images
- N B60K 2360/177 · · Augmented reality
- N B60K 2360/178 · · Warnings

- N B60K 2360/179 · · Distances to obstacles or vehicles
 - N B60K 2360/18 · Information management
 - N B60K 2360/182 · · Distributing information between displays
 - N B60K 2360/184 · · Displaying the same information on different displays
 - N B60K 2360/186 · · Displaying information according to relevancy
 - N B60K 2360/1868 · · · according to driving situations
 - N B60K 2360/1876 · · · according to vehicle situations
 - N B60K 2360/188 · · Displaying information using colour changes
 - N B60K 2360/191 · · Highlight information
 - N B60K 2360/195 · · Blocking or enabling display functions
 - N B60K 2360/197 · · Blocking or enabling of input functions
 - N B60K 2360/199 · · for avoiding maloperation
 - N B60K 2360/20 · Optical features of instruments
 - N B60K 2360/21 · · using cameras
 - N B60K 2360/23 · · using reflectors
 - N B60K 2360/25 · · using filters
 - N B60K 2360/27 · · using semi-transparent optical elements
 - N B60K 2360/28 · · · for instruments which are not visible when inactive
 - N B60K 2360/29 · · Holographic features
 - N B60K 2360/31 · · Virtual images
 - N B60K 2360/33 · · Illumination features
 - N B60K 2360/331 · · · Electroluminescent elements
 - N B60K 2360/332 · · · Light emitting diodes
 - N B60K 2360/333 · · · Lasers
 - N B60K 2360/334 · · · Projection means
 - N B60K 2360/336 · · · Light guides
 - N B60K 2360/338 · · · Light strips
 - N B60K 2360/339 · · · Translucent dashboard skins
 - N B60K 2360/34 · · · Backlit symbols
 - N B60K 2360/341 · · · Illumination of dials
 - N B60K 2360/343 · · · Illumination of matrix displays
 - N B60K 2360/344 · · · · for additionally illuminating mechanical elements, e.g. pointers or control knobs
 - N B60K 2360/345 · · · Illumination of controls
 - N B60K 2360/347 · · · Optical elements for superposition of display information
 - Q B60K 2360/349 · · · Adjustment of brightness
- WARNING
Group [B60K 2360/349](#) is impacted by reclassification into group [B60K 35/234](#).
Groups [B60K 2360/349](#) and [B60K 35/234](#) should be considered in order to perform a complete search.
- N B60K 2360/40 · Hardware adaptations for dashboards or instruments
 - N B60K 2360/42 · · Circuit board features
 - N B60K 2360/46 · · Electrical connections
 - N B60K 2360/47 · · · using wireless power transfer or transmission.

- N B60K 2360/48 . . . Sensors
- N B60K 2360/55 . Remote control arrangements
- N B60K 2360/56 . . . using mobile devices
- N B60K 2360/563 Vehicle displaying mobile device information
- N B60K 2360/566 Mobile devices displaying vehicle information
- N B60K 2360/569 Vehicle controlling mobile device functions
- N B60K 2360/573 Mobile devices controlling vehicle functions
- N B60K 2360/577 Mirror link with mobile devices
- N B60K 2360/583 . Data transfer between instruments
- N B60K 2360/586 . Wired data transfers
- N B60K 2360/589 . Wireless data transfers
- N B60K 2360/5894 . . . SIM cards
- N B60K 2360/5899 . . . Internet
- N B60K 2360/5905 . . . Wi-fi
- N B60K 2360/5911 . . . Bluetooth
- N B60K 2360/5915 . . . Inter vehicle communication
- N B60K 2360/592 . Data transfer involving external databases
- N B60K 2360/595 . Data transfer involving internal databases
- N B60K 2360/60 . Structural details of dashboards or instruments
- N B60K 2360/61 . . . Specially adapted for utility vehicles
- N B60K 2360/62 . . . Anti-theft arrangements
- N B60K 2360/65 . . . Features of dashboards
- Q B60K 2360/652 Crash protection features

WARNING

Group [B60K 2360/652](#) is impacted by reclassification into group [B60K 35/70](#).

Groups [B60K 2360/652](#) and [B60K 35/70](#) should be considered in order to perform a complete search.

- N B60K 2360/658 Dashboard parts used as air ducts
- N B60K 2360/66 . . . Projection screens or combiners
- N B60K 2360/68 . . . Features of instruments
- N B60K 2360/682 Arrangements to cover or hide instruments
- N B60K 2360/685 Instruments movable with steering column
- N B60K 2360/688 Frames or decorative parts
- N B60K 2360/691 Housings
- N B60K 2360/692 Sealings
- N B60K 2360/693 Cover plate features
- N B60K 2360/695 Dial features
- N B60K 2360/698 Pointers of combined instruments
- N B60K 2360/6985 with only part of pointer being visible
- N B60K 2360/6992 Light conducting pointers
- N B60K 2360/731 . Instruments adaptations for specific vehicle types or users by comprising user programmable systems
- N B60K 2360/741 . Instruments adapted for user detection
- N B60K 2360/77 . Instrument locations other than the dashboard

- N B60K 2360/771 . . on the ceiling
- N B60K 2360/774 . . on or in the centre console
- N B60K 2360/777 . . on or in sun visors
- N B60K 2360/779 . . on or in rear view mirrors
- N B60K 2360/782 . . on the steering wheel
- N B60K 2360/785 . . on or in relation to the windshield or windows
- N B60K 2360/788 . . on or in side pillars
- N B60K 2360/791 . . on or in the transmission tunnel or parking brake lever
- N B60K 2360/794 . . on or in doors
- N B60K 2360/797 . . at the vehicle exterior
- N B60K 2360/816 . Fastening of displays or touch screens
- N B60K 2360/822 . Adjustment of instruments during mounting
- N B60K 2360/828 . Mounting or fastening exchangeable modules
- N B60K 2360/834 . . Docking arrangements
- N B60K 2360/84 . Mounting of dashboard components
- N B60K 2360/92 . Manufacturing of instruments
- N B60K 2360/96 . . by assembling
- D B60K 2370/00 - **Arrangement or mounting of propulsion units in vehicles (of control devices for such units B60K 26/00; elastic mountings per se F16F; propulsion units or their control per se, see the relevant classes)**
- D B60K 2370/00 **Details of arrangements or adaptations of instruments specially adapted for vehicles, not covered by groups B60K 35/00, B60K 37/00**
- <administratively transferred to [B60K 2360/00](#) ADD>
- D B60K 2370/10 . Input devices or features thereof
<administratively transferred to [B60K 35/10](#) INV>
- D B60K 2370/11 . . Graphical user interfaces or menu aspects
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/11](#) ADD>
- D B60K 2370/111 . . . for controlling multiple devices
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/111](#) ADD>
- D B60K 2370/113 . . . Scrolling through menu items
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/113](#) ADD>
- D B60K 2370/115 . . . Selection of menu items
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/115](#) ADD>
- D B60K 2370/117 . . . Cursors
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/117](#) ADD>
- D B60K 2370/119 . . . Icons
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/119](#) ADD>
- D B60K 2370/12 . Input devices or input features
<administratively transferred to [B60K 35/10](#) INV>
- D B60K 2370/122 . . . with reconfigurable control functions, e.g. reconfigurable menus
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/122](#) ADD>
- D B60K 2370/126 . . . Rotatable input devices
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/126](#) ADD>

- D B60K 2370/128 . . . Axially displaceable input devices
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/128](#) ADD>
- D B60K 2370/131 . . . Pivotal input devices
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/131](#) ADD>
- D B60K 2370/133 . . . Multidirectional input devices
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/133](#) ADD>
- D B60K 2370/135 . . . Joysticks
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/135](#) ADD>
- D B60K 2370/137 . . . Jog dials
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/137](#) ADD>
- D B60K 2370/139 . . . Clusters of input devices
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/139](#) ADD>
- D B60K 2370/141 . . . Activation by approaching fingers or pens
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/141](#) ADD>
- D B60K 2370/143 . . . Touch sensitive input devices
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/143](#) ADD>
- D B60K 2370/1434 . . . Touch panels
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/1434](#) ADD>
- D B60K 2370/1438 . . . Touch screens
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/1438](#) ADD>
- D B60K 2370/1442 . . . Emulation of input devices
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/1442](#) ADD>
- D B60K 2370/1446 . . . Touch switches
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/1446](#) ADD>
- D B60K 2370/145 . . . Input by combination of touch screen and hardware input devices
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/145](#) ADD>
- D B60K 2370/146 . . . Input by gesture
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/146](#) ADD>
- D B60K 2370/1464 . . . 3D gesture
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/1464](#) ADD>
- D B60K 2370/1468 . . . Touch gesture
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/1468](#) ADD>
- D B60K 2370/1472 . . . Multi-touch gesture
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/1472](#) ADD>
- D B60K 2370/1476 . . . Handwriting
<administratively transferred to [B60K 35/10](#) INV and [B60K 2360/1476](#) ADD>

- D B60K 2370/148
 - • • Input by voice
 - <administratively transferred to [B60K 35/10](#) INV and [B60K 2360/148](#) ADD>
- D B60K 2370/149
 - • • Input by detecting viewing direction
 - <administratively transferred to [B60K 35/10](#) INV and [B60K 2360/149](#) ADD>
- D B60K 2370/15
 - Output devices or features thereof
 - <administratively transferred to [B60K 35/20](#) INV>
- D B60K 2370/151
 - • Reconfigurable output
 - <administratively transferred to [B60K 35/20](#) INV and [B60K 2360/151](#) ADD>
- D B60K 2370/1515
 - • • Reconfigurable dials
 - <administratively transferred to [B60K 35/20](#) INV and [B60K 2360/1515](#) ADD>
- D B60K 2370/152
 - • Displays
 - <administratively transferred to [B60K 35/22](#) INV>
- D B60K 2370/1523
 - • • Matrix displays
 - <administratively transferred to [B60K 35/22](#) INV and [B60K 2360/1523](#) ADD>
- D B60K 2370/1526
 - • • Dual-view displays
 - <administratively transferred to [B60K 35/22](#) INV and [B60K 2360/1526](#) ADD>
- D B60K 2370/1529
 - • • Head-up displays
 - <administratively transferred to [B60K 35/23](#) INV>
- D B60K 2370/1531
 - • • Three-dimensional displays
 - <administratively transferred to [B60K 35/211](#) INV>
- D B60K 2370/1533
 - • • Flexible displays
 - <administratively transferred to [B60K 35/223](#) INV>
- D B60K 2370/1534
 - • • Simultaneous multiple use of display matrix, e.g. to display information and to illuminate pointer
 - <administratively transferred to [B60K 2360/344](#) ADD>
- D B60K 2370/1537
 - • • Displays on a manual operation element
 - <administratively transferred to [B60K 35/212](#) INV>
- D B60K 2370/154
 - • Combined instruments with analogue meters and additional displays
 - <administratively transferred to [B60K 35/215](#) INV>
- D B60K 2370/155
 - • Virtual instruments
 - <administratively transferred to [B60K 35/213](#) INV>
- D B60K 2370/156
 - • Variable gauge scales
 - <administratively transferred to [B60K 35/214](#) INV>
- D B60K 2370/157
 - • Acoustic output
 - <administratively transferred to [B60K 35/26](#) INV>
- D B60K 2370/1575
 - • • Voice
 - <administratively transferred to [B60K 35/265](#) INV>
- D B60K 2370/158
 - • Haptic output
 - <administratively transferred to [B60K 35/25](#) INV>
- D B60K 2370/16
 - Type of information
 - <administratively transferred to [B60K 35/28](#) INV and [B60K 2360/16](#) ADD>

- D B60K 2370/161
 - • Explanation of functions, e.g. instructions
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/161](#) ADD>
- D B60K 2370/162
 - • Visual feedback on control action
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/162](#) ADD>
- D B60K 2370/163
 - • Language
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/163](#) ADD>
- D B60K 2370/164
 - • Infotainment
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/164](#) ADD>
- D B60K 2370/165
 - • Videos and animations
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/165](#) ADD>
- D B60K 2370/166
 - • Navigation
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/166](#) ADD>
- D B60K 2370/167
 - • Vehicle dynamics information
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/167](#) ADD>
- D B60K 2370/168
 - • Target or limit values
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/168](#) ADD>
- D B60K 2370/169
 - • Remaining operating distance or charge
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/169](#) ADD>
- D B60K 2370/171
 - • Vehicle or relevant part thereof displayed
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/171](#) ADD>
- D B60K 2370/172
 - • Driving mode indication
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/172](#) ADD>
- D B60K 2370/173
 - • Reversing assist
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/173](#) ADD>
- D B60K 2370/174
 - • Economic driving
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/174](#) ADD>
- D B60K 2370/175
 - • Autonomous driving
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/175](#) ADD>
- D B60K 2370/176
 - • Camera images
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/176](#) ADD>
- D B60K 2370/177
 - • Augmented reality
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/177](#) ADD>
- D B60K 2370/178
 - • Warnings
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/178](#) ADD>
- D B60K 2370/179
 - • Distances to obstacles or vehicles
<administratively transferred to [B60K 35/28](#) INV and [B60K 2360/179](#) ADD>
- D B60K 2370/18
 - • Information management
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/18](#) ADD>
- D B60K 2370/182
 - • Distributing information between displays
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/182](#) ADD>
- D B60K 2370/184
 - • Displaying the same information on different displays
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/184](#) ADD>

- D B60K 2370/186
- • Displaying Information according to relevancy
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/186](#) ADD>
- D B60K 2370/1868
- • • according to driving situations
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/1868](#) ADD>
- D B60K 2370/1876
- • • according to vehicle situations
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/1876](#) ADD>
- D B60K 2370/188
- • Displaying information using colour changes
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/188](#) ADD>
- D B60K 2370/191
- • Highlight information
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/191](#) ADD>
- D B60K 2370/193
- • for improving awareness
<administratively transferred to [B60K 35/28](#) INV>
- D B60K 2370/194
- • • by directing line of sight
<administratively transferred to [B60K 35/285](#) INV>
- D B60K 2370/195
- • Blocking or enabling display functions
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/195](#) ADD>
- D B60K 2370/197
- • Blocking or enabling of input functions
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/197](#) ADD>
- D B60K 2370/199
- • for avoiding maloperation
<administratively transferred to [B60K 35/29](#) INV and [B60K 2360/199](#) ADD>
- D B60K 2370/20
- Optical features of instruments
<administratively transferred to [B60K 2360/20](#) ADD>
- D B60K 2370/21
- • using cameras
<administratively transferred to [B60K 2360/21](#) ADD>
- D B60K 2370/23
- • using reflectors
<administratively transferred to [B60K 2360/23](#) ADD>
- D B60K 2370/25
- • using filters
<administratively transferred to [B60K 2360/25](#) ADD>
- D B60K 2370/27
- • using semi-transparent optical elements
<administratively transferred to [B60K 2360/27](#) ADD>
- D B60K 2370/28
- • • for instruments which are not visible when inactive
<administratively transferred to [B60K 2360/28](#) ADD>
- D B60K 2370/29
- • Holographic features
<administratively transferred to [B60K 2360/29](#) ADD>
- D B60K 2370/31
- • Virtual images
<administratively transferred to [B60K 2360/31](#) ADD>
- D B60K 2370/33
- • Illumination features
<administratively transferred to [B60K 2360/33](#) ADD>
- D B60K 2370/331
- • • Electroluminescent elements
<administratively transferred to [B60K 2360/331](#) ADD>

- D B60K 2370/332 . . . Light-emitting diodes
<administratively transferred to [B60K 2360/332](#) ADD>
- D B60K 2370/333 . . . Lasers
<administratively transferred to [B60K 2360/333](#) ADD>
- D B60K 2370/334 . . . Projection means
<administratively transferred to [B60K 2360/334](#) ADD>
- D B60K 2370/336 . . . Light guides
<administratively transferred to [B60K 2360/336](#) ADD>
- D B60K 2370/338 . . . Light strips
<administratively transferred to [B60K 2360/338](#) ADD>
- D B60K 2370/339 . . . Translucent dashboard skins
<administratively transferred to [B60K 37/20](#) INV and [B60K 2360/339](#) ADD>
- D B60K 2370/34 . . . Backlit symbols
<administratively transferred to [B60K 2360/34](#) ADD>
- D B60K 2370/341 . . . Illumination of dials
<administratively transferred to [B60K 2360/341](#) ADD>
- D B60K 2370/343 . . . Illumination of matrix displays
<administratively transferred to [B60K 2360/343](#) ADD>
- D B60K 2370/345 . . . Illumination of controls
<administratively transferred to [B60K 2360/345](#) ADD>
- D B60K 2370/347 . . . Optical elements for superposition of display information
<administratively transferred to [B60K 2360/347](#) ADD>
- D B60K 2370/349 . . . Adjustment of brightness
<administratively transferred to [B60K 2360/349](#) ADD>
- D B60K 2370/35 . . . Fogging prevention
<administratively transferred to [B60K 35/405](#) INV>
- D B60K 2370/37 . . . Glare prevention
<administratively transferred to [B60K 35/415](#) INV>
- D B60K 2370/39 . . . Anti-reflection arrangements
<administratively transferred to [B60K 35/425](#) INV>
- D B60K 2370/40 . . . Hardware adaptations for dashboards or instruments
<administratively transferred to [B60K 2360/40](#) ADD>
- D B60K 2370/42 . . . Circuit board features
<administratively transferred to [B60K 2360/42](#) ADD>
- D B60K 2370/44 . . . Wiring harness
- D B60K 2370/46 . . . Electrical connections
<administratively transferred to [B60K 2360/46](#) ADD>
- D B60K 2370/47 . . . using wireless power transfer or transmission.
<administratively transferred to [B60K 2360/47](#) ADD>
- D B60K 2370/48 . . . Sensors
<administratively transferred to [B60K 2360/48](#) ADD>
- D B60K 2370/50 . . . Control arrangements; Data network features
<administratively transferred to [B60K 35/80](#) INV>

- D B60K 2370/52
 - • Control of displays
<administratively transferred to [B60K 35/81](#) INV>
- D B60K 2370/55
 - • Remote controls
<administratively transferred to [B60K 35/80](#) INV and [B60K 2360/55](#) ADD>
- D B60K 2370/56
 - • • using mobile devices
<administratively transferred to [B60K 35/80](#) INV and [B60K 2360/56](#) ADD>
- D B60K 2370/563
 - • • • Vehicle displaying mobile device information
<administratively transferred to [B60K 35/80](#) INV and [B60K 2360/563](#) ADD>
- D B60K 2370/566
 - • • • Mobile devices displaying vehicle information
<administratively transferred to [B60K 35/80](#) INV and [B60K 2360/566](#) ADD>
- D B60K 2370/569
 - • • • Vehicle controlling mobile device functions
<administratively transferred to [B60K 35/80](#) INV and [B60K 2360/569](#) ADD>
- D B60K 2370/573
 - • • • Mobile devices controlling vehicle functions
<administratively transferred to [B60K 35/80](#) INV and [B60K 2360/573](#) ADD>
- D B60K 2370/577
 - • • • Mirror link with mobile devices
<administratively transferred to [B60K 35/80](#) INV and [B60K 2360/577](#) ADD>
- D B60K 2370/58
 - • Data transfers
<administratively transferred to [B60K 35/85](#) INV>
- D B60K 2370/583
 - • • between instruments
<administratively transferred to [B60K 35/85](#) INV and [B60K 2360/583](#) ADD>
- D B60K 2370/586
 - • • Wired data transfers
<administratively transferred to [B60K 35/85](#) INV and [B60K 2360/586](#) ADD>
- D B60K 2370/589
 - • • Wireless
<administratively transferred to [B60K 35/85](#) INV and [B60K 2360/589](#) ADD>
- D B60K 2370/5894
 - • • • SIM cards
<administratively transferred to [B60K 35/85](#) INV and [B60K 2360/5894](#) ADD>
- D B60K 2370/5899
 - • • • Internet
<administratively transferred to [B60K 35/85](#) INV and [B60K 2360/5899](#) ADD>
- D B60K 2370/5905
 - • • • Wi-fi
<administratively transferred to [B60K 35/85](#) INV and [B60K 2360/5905](#) ADD>
- D B60K 2370/5911
 - • • • Bluetooth
<administratively transferred to [B60K 35/85](#) INV and [B60K 2360/5911](#) ADD>
- D B60K 2370/5915
 - • • • Inter vehicle communication
<administratively transferred to [B60K 35/85](#) INV and [B60K 2360/5915](#) ADD>
- D B60K 2370/592
 - • • External database involved
<administratively transferred to [B60K 35/85](#) INV and [B60K 2360/592](#) ADD>

- D B60K 2370/595
 - • • Internal database involved
 - <administratively transferred to [B60K 35/85](#) INV and [B60K 2360/595](#) ADD>
- D B60K 2370/60
 - Structural details of dashboards or instruments
 - <administratively transferred to [B60K 2360/60](#) ADD>
- D B60K 2370/61
 - • Specially adapted for utility vehicles
 - <administratively transferred to [B60K 2360/61](#) ADD>
- D B60K 2370/62
 - • Anti-theft arrangements
 - <administratively transferred to [B60K 2360/62](#) ADD>
- D B60K 2370/63
 - • Crash protection features
 - <administratively transferred to [B60K 2360/652](#) ADD>
- D B60K 2370/65
 - • Features of dashboards
 - <administratively transferred to [B60K 2360/65](#) ADD>
- D B60K 2370/654
 - • • Dashboard panels
 - <administratively transferred to [B60K 37/20](#) INV>
- D B60K 2370/658
 - • • Dashboard parts used as air ducts
 - <administratively transferred to [B60K 2360/658](#) ADD>
- D B60K 2370/66
 - • Projection screens or combiners
 - <administratively transferred to [B60K 2360/66](#) ADD>
- D B60K 2370/67
 - • Foldable or movable displays
 - <administratively transferred to [B60K 35/22](#) INV and [B60K 35/53](#) INV>
- D B60K 2370/68
 - • Features of instruments
 - <administratively transferred to [B60K 2360/68](#) ADD>
- D B60K 2370/682
 - • • Arrangements to cover or hide instruments
 - <administratively transferred to [B60K 2360/682](#) ADD>
- D B60K 2370/685
 - • • Instruments movable with steering column
 - <administratively transferred to [B60K 35/53](#) INV and [B60K 2360/685](#) ADD>
- D B60K 2370/688
 - • • Frames or decorative parts
 - <administratively transferred to [B60K 2360/688](#) ADD>
- D B60K 2370/691
 - • • Housings
 - <administratively transferred to [B60K 2360/691](#) ADD>
- D B60K 2370/692
 - • • Sealings
 - <administratively transferred to [B60K 2360/692](#) ADD>
- D B60K 2370/693
 - • • Cover plate features
 - <administratively transferred to [B60K 2360/693](#) ADD>
- D B60K 2370/695
 - • • Dial features
 - <administratively transferred to [B60K 2360/695](#) ADD>
- D B60K 2370/698
 - • • Pointers of combined instruments
 - <administratively transferred to [B60K 2360/698](#) ADD>
- D B60K 2370/6985
 - • • • with only part of pointer being visible
 - <administratively transferred to [B60K 2360/6985](#) ADD>
- D B60K 2370/6992
 - • • • Light conducting pointers
 - <administratively transferred to [B60K 2360/6992](#) ADD>
- D B60K 2370/70
 - Arrangements of instruments in the vehicle

- D B60K 2370/73
 - • with special adaptation to the user or to the vehicle
 - <administratively transferred to [B60K 35/65](#) INV>
- D B60K 2370/731
 - • • user programmable systems
 - <administratively transferred to [B60K 35/65](#) INV and [B60K 2360/731](#) ADD>
- D B60K 2370/733
 - • • Left or right steering
 - <administratively transferred to [B60K 35/652](#) INV>
- D B60K 2370/736
 - • • the user being the driver
 - <administratively transferred to [B60K 35/654](#) INV>
- D B60K 2370/739
 - • • the user being the passenger
 - <administratively transferred to [B60K 35/656](#) INV>
- D B60K 2370/741
 - • • User detection
 - <administratively transferred to [B60K 35/65](#) INV and [B60K 2360/741](#) ADD>
- D B60K 2370/744
 - • • Position adjustable by user
 - <administratively transferred to [B60K 35/658](#) INV>
- D B60K 2370/77
 - • characterised by locations other than the dashboard
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/77](#) ADD>
- D B60K 2370/771
 - • • on the ceiling
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/771](#) ADD>
- D B60K 2370/774
 - • • on or in the centre console
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/774](#) ADD>
- D B60K 2370/777
 - • • on or in sun visors
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/777](#) ADD>
- D B60K 2370/779
 - • • on or in rear view mirrors
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/779](#) ADD>
- D B60K 2370/782
 - • • on the steering wheel
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/782](#) ADD>
- D B60K 2370/785
 - • • on or in relation to the windshield or windows
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/785](#) ADD>
- D B60K 2370/788
 - • • on or in side pillars
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/788](#) ADD>
- D B60K 2370/791
 - • • on or in the transmission tunnel or parking brake lever
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/791](#) ADD>
- D B60K 2370/794
 - • • on or in doors
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/794](#) ADD>
- D B60K 2370/797
 - • • At the vehicle exterior
 - <administratively transferred to [B60K 35/60](#) INV and [B60K 2360/797](#) ADD>
- D B60K 2370/80
 - Mounting or fastening arrangements; Mounting or fastening processes
- D B60K 2370/81
 - • Fastening of instruments, e.g. to dashboard
 - <administratively transferred to [B60K 35/50](#) INV>
- D B60K 2370/816
 - • • Fastening of displays or touch screens
 - <administratively transferred to [B60K 35/50](#) INV and [B60K 2360/816](#) ADD>
- D B60K 2370/822
 - • • Adjustment of instruments during mounting
 - <administratively transferred to [B60K 35/50](#) INV and [B60K 2360/822](#) ADD>

- D B60K 2370/828 . . . Exchangeable modules
<administratively transferred to [B60K 35/50](#) INV and [B60K 2360/828](#) ADD>
- D B60K 2370/834 . . . Docking
<administratively transferred to [B60K 35/50](#) INV and [B60K 2360/834](#) ADD>
- D B60K 2370/84 . . Mounting of dashboard components
<administratively transferred to [B60K 2360/84](#) ADD>
- D B60K 2370/87 . . Fixation of dashboard to vehicle structure
<administratively transferred to [B60K 37/10](#) INV>
- D B60K 2370/90 . Calibration, testing or manufacturing aspects
- D B60K 2370/91 . . Assembly of instruments
<administratively transferred to [B60K 2360/96](#) ADD>
- D B60K 2370/92 . . Calibration of instruments
<administratively transferred to [B60K 35/90](#) INV>
- D B60K 2370/95 . . Testing of instruments
<administratively transferred to [B60K 35/90](#) INV>
- D B60K 2370/98 . . Manufacturing of instruments
<administratively transferred to [B60K 2360/92](#) ADD>
- N B60K 2700/00 - Control mechanisms or devices
B60K 2704/00**

Project: RP10402-F (B60Q)

- U B60Q 1/00 Arrangement of optical signalling or lighting devices, the mounting or supporting thereof or circuits therefor (for lighting vehicle interior [B60Q 3/00](#))**
- U B60Q 1/02 . the devices being primarily intended to illuminate the way ahead or to illuminate other areas of way or environments
- U B60Q 1/04 . . the devices being headlights
- M B60Q 1/0491 . . . {Shock absorbing devices therefor}
- WARNING**
Group B60Q 1/0491 is impacted by reclassification into group B60Q 1/0495.
Groups B60Q 1/0491 and B60Q 1/0495 should be considered in order to perform a complete search.
- M B60Q 1/0495 {Frangible brackets}
- WARNING**
Group B60Q 1/0495 is incomplete pending reclassification of documents from group B60Q 1/0491.
Groups B60Q 1/0491 and B60Q 1/0495 should be considered in order to perform a complete search.
- M B60Q 1/24 . . for lighting other areas than only the way ahead
- WARNING**
Group B60Q 1/24 is impacted by reclassification into groups B60Q 1/245, B60Q 1/247 and B60Q 1/249.
All groups listed in this Warning should be considered in order to perform a complete search.

- M B60Q 1/245
- • • {Searchlights, e.g. adjustable from within the vehicle (adjustable headlights [B60Q 1/06](#))}
- WARNING**
Group B60Q 1/245 is incomplete pending reclassification of documents from group B60Q 1/24.
Groups B60Q 1/24 and B60Q 1/245 should be considered in order to perform a complete search.
- M B60Q 1/247
- • • {for illuminating the close surroundings of the vehicle, e.g. to facilitate entry or exit (for reverse drive [B60Q 1/22](#); by opening a side door [B60Q 1/323](#))}
- WARNING**
Group B60Q 1/247 is incomplete pending reclassification of documents from group B60Q 1/24.
Groups B60Q 1/24 and B60Q 1/247 should be considered in order to perform a complete search.
- M B60Q 1/249
- • • {for illuminating the field of view of a sensor or camera}
- WARNING**
Group B60Q 1/249 is incomplete pending reclassification of documents from group B60Q 1/24.
Groups B60Q 1/24 and B60Q 1/249 should be considered in order to perform a complete search.
- U B60Q 1/26
- the devices being primarily intended to indicate the vehicle, or parts thereof, or to give signals, to other traffic
- M B60Q 1/30
- • for indicating rear of vehicle, e.g. by means of reflecting surfaces
- WARNING**
Group B60Q 1/30 is impacted by reclassification into groups B60Q 1/301, B60Q 1/3015, B60Q 1/303 and B60Q 1/304.
All groups listed in this Warning should be considered in order to perform a complete search.
- M B60Q 1/301
- • • {by means of surfaces, e.g. metal plate, reflecting the light of an external light source}
- WARNING**
Groups B60Q 1/301 and B60Q 1/3015 are incomplete pending reclassification of documents from group B60Q 1/30.
Groups B60Q 1/30, B60Q 1/301 and B60Q 1/3015 should be considered in order to perform a complete search.
- M B60Q 1/303
- • • {Rear fog lamps}
- WARNING**
Group B60Q 1/303 is incomplete pending reclassification of documents from group B60Q 1/30.
Groups B60Q 1/30 and B60Q 1/303 should be considered in order to perform a complete search.
- M B60Q 1/304
- • • {Adaptations of signalling devices having a part on the vehicle body and another on the boot door}
- WARNING**
Group B60Q 1/304 is incomplete pending reclassification of documents from group B60Q 1/30.
Groups B60Q 1/30 and B60Q 1/304 should be considered in order to perform a complete search.

- U B60Q 1/32
- for indicating vehicle sides {, e.g. clearance lights}
- M B60Q 1/323
- • {on or for doors (illuminated exterior door handles [B60Q 1/2669](#); illuminated door locks [E05B 17/10](#))}
- WARNING**
Group B60Q 1/323 is impacted by reclassification into groups B60Q 1/324 and B60Q 1/325.
Groups B60Q 1/323, B60Q 1/324 and B60Q 1/325 should be considered in order to perform a complete search.
- M B60Q 1/324
- • • {for signalling that a door is open or intended to be opened}
- WARNING**
Group B60Q 1/324 is incomplete pending reclassification of documents from group B60Q 1/323.
Groups B60Q 1/323 and B60Q 1/324 should be considered in order to perform a complete search.
- M B60Q 1/325
- • • {on or for running boards or steps}
- WARNING**
Group B60Q 1/325 is incomplete pending reclassification of documents from group B60Q 1/323.
Groups B60Q 1/323 and B60Q 1/325 should be considered in order to perform a complete search.
- U B60Q 1/34
- for indicating change of drive direction ([B60Q 1/22](#) takes precedence)
- M B60Q 1/38
- • using immovably-mounted light sources, e.g. fixed flashing lamps
- WARNING**
Group B60Q 1/38 is impacted by reclassification into group B60Q 1/381.
Groups B60Q 1/38 and B60Q 1/381 should be considered in order to perform a complete search.
- M B60Q 1/381
- • • {with several light sources activated in sequence, e.g. to create a sweep effect}
- WARNING**
Group B60Q 1/381 is incomplete pending reclassification of documents from group B60Q 1/38.
Groups B60Q 1/38 and B60Q 1/381 should be considered in order to perform a complete search.
- M B60Q 1/50
- for indicating other intentions or conditions, e.g. request for waiting or overtaking
- WARNING**
Group B60Q 1/50 is impacted by reclassification into groups B60Q 1/503, B60Q 1/5035, B60Q 1/5037, B60Q 1/507, B60Q 1/508, B60Q 1/509, B60Q 1/543, B60Q 1/544, B60Q 1/545, B60Q 1/547 and B60Q 1/549.
All groups listed in this Warning should be considered in order to perform a complete search.
- M B60Q 1/503
- • {using luminous text or symbol displays in or on the vehicle, e.g. static text}
- WARNING**
Group B60Q 1/503 is incomplete pending reclassification of documents from group B60Q 1/50.
Group B60Q 1/503 is also impacted by reclassification into groups B60Q 1/5035 and B60Q 1/5037.

All groups listed in this Warning should be considered in order to perform a complete search.

M B60Q 1/5035

- • • {electronic displays}

WARNING

Groups B60Q 1/5035 and B60Q 1/5037 are incomplete pending reclassification of documents from groups B60Q 1/50 and B60Q 1/503. All groups listed in this warning should be considered in order to perform a complete search.

M B60Q 1/507

- • • {specific to autonomous vehicles}

WARNING

Group B60Q 1/507 is incomplete pending reclassification of documents from group B60Q 1/50. Groups B60Q 1/50 and B60Q 1/507 should be considered in order to perform a complete search.

M B60Q 1/508

- • • {specific to vehicles driving in fleets or convoys}

WARNING

Group B60Q 1/508 is incomplete pending reclassification of documents from group B60Q 1/50. Groups B60Q 1/50 and B60Q 1/508 should be considered in order to perform a complete search.

M B60Q 1/509

- • • {specific to unauthorised use, e.g. for indicating stolen vehicles or infringements of traffic rules}

WARNING

Group B60Q 1/509 is incomplete pending reclassification of documents from group B60Q 1/50. Groups B60Q 1/50 and B60Q 1/509 should be considered in order to perform a complete search.

M B60Q 1/525

- • • {automatically indicating risk of collision between vehicles in traffic or with pedestrians, e.g. after risk assessment using the vehicle sensor data}

WARNING

Group B60Q 1/525 is impacted by reclassification into group B60Q 1/535. Groups B60Q 1/525 and B60Q 1/535 should be considered in order to perform a complete search.

M B60Q 1/535

- • • {to prevent rear-end collisions, e.g. by indicating safety distance at the rear of the vehicle}

WARNING

Group B60Q 1/535 is incomplete pending reclassification of documents from group B60Q 1/525. Groups B60Q 1/525 and B60Q 1/535 should be considered in order to perform a complete search.

M B60Q 1/543

- • • {for indicating other states or conditions of the vehicle (indicating taxis' state of hire or fare [G07B 13/045](#))}

WARNING

Group B60Q 1/543 is incomplete pending reclassification of documents from group B60Q 1/50. Groups B60Q 1/50 and B60Q 1/543 should be considered in order to perform a complete search.

- M B60Q 1/544
- • • {for indicating other states or conditions of the vehicle occupants, e.g. for indicating disabled occupants}
- WARNING
Group B60Q 1/544 is incomplete pending reclassification of documents from group B60Q 1/50. Groups B60Q 1/50 and B60Q 1/544 should be considered in order to perform a complete search.
- M B60Q 1/545
- • • {for indicating other traffic conditions, e.g. fog, heavy traffic}
- WARNING
Group B60Q 1/545 is incomplete pending reclassification of documents from group B60Q 1/50. Groups B60Q 1/50 and B60Q 1/545 should be considered in order to perform a complete search.
- M B60Q 1/547
- • • {for issuing requests to other traffic participants; for confirming to other traffic participants they can proceed, e.g. they can overtake}
- WARNING
Group B60Q 1/547 is incomplete pending reclassification of documents from group B60Q 1/50. Groups B60Q 1/50 and B60Q 1/547 should be considered in order to perform a complete search.
- M B60Q 1/549
- • • {for expressing greetings, gratitude or emotions}
- WARNING
Group B60Q 1/549 is incomplete pending reclassification of documents from group B60Q 1/50. Groups B60Q 1/50 and B60Q 1/549 should be considered in order to perform a complete search.
- U B60Q 3/00**
- Arrangement of lighting devices for vehicle interiors; Lighting devices specially adapted for vehicle interiors**
- U B60Q 3/20
- for lighting specific fittings of passenger or driving compartments; mounted on specific fittings of passenger or driving compartments (lighting for dashboards [B60Q 3/10](#))
- M B60Q 3/225
- • Small compartments, e.g. glove compartments
- WARNING
Group B60Q 3/225 is impacted by reclassification into group B60Q 3/229. Groups B60Q 3/225 and B60Q 3/229 should be considered in order to perform a complete search.
- M B60Q 3/229
- • • {Cup holders}
- WARNING
Group B60Q 3/229 is incomplete pending reclassification of documents from group B60Q 3/225. Groups B60Q 3/225 and B60Q 3/229 should be considered in order to perform a complete search.
- M B60Q 3/70
- characterised by the purpose
- WARNING
Group B60Q 3/70 is impacted by reclassification into groups B60Q 3/731 and B60Q 3/735.

Groups B60Q 3/70, B60Q 3/731 and B60Q 3/735 should be considered in order to perform a complete search.

- M B60Q 3/731
- {for autonomous vehicle travel}

WARNING

Groups B60Q 3/731 and B60Q 3/735 are incomplete pending reclassification of documents from group B60Q 3/70.
Groups B60Q 3/70, B60Q 3/731 and B60Q 3/735 should be considered in order to perform a complete search.

- M B60Q 2400/00
- Special features or arrangements of exterior signal lamps for vehicles**

WARNING

Group B60Q 2400/00 is impacted by reclassification into groups B60Q 2400/10 and B60Q 2400/50.
Groups B60Q 2400/00, B60Q 2400/10 and B60Q 2400/50 should be considered in order to perform a complete search.

- M B60Q 2400/10
- Electro- or photo- luminescent surfaces, e.g. signalling by way of electroluminescent strips or panels

WARNING

Group B60Q 2400/10 is incomplete pending reclassification of documents from group B60Q 2400/00.
Groups B60Q 2400/00 and B60Q 2400/10 should be considered in order to perform a complete search.

- M B60Q 2400/50
- Projected symbol or information, e.g. onto the road or car body

WARNING

Group B60Q 2400/50 is incomplete pending reclassification of documents from group B60Q 2400/00.
Groups B60Q 2400/00 and B60Q 2400/50 should be considered in order to perform a complete search.

- M B60Q 2500/00
- Special features or arrangements of vehicle interior lamps**

WARNING

Group B60Q 2500/00 is impacted by reclassification into group B60Q 2500/30.
Groups B60Q 2500/00 and B60Q 2500/30 should be considered in order to perform a complete search.

- M B60Q 2500/30
- Arrangements for illuminating different zones in the vehicle, e.g. front/rear, different seats

WARNING

Group B60Q 2500/30 is incomplete pending reclassification of documents from group B60Q 2500/00.
Groups B60Q 2500/00 and B60Q 2500/30 should be considered in order to perform a complete search.

- M B60Q 2900/00
- Features of lamps not covered by other groups in [B60Q](#)**

WARNING

Group B60Q 2900/00 is impacted by reclassification into groups B60Q 2900/40 and B60Q 2900/50.
Groups B60Q 2900/00, B60Q 2900/40 and B60Q 2900/50 should be considered in order to perform a complete search.

- M B60Q 2900/40
- Several lamps activated in sequence, e.g. sweep effect, progressive activation

WARNING

Group B60Q 2900/40 is incomplete pending reclassification of documents from group B60Q 2900/00.
Groups B60Q 2900/00 and B60Q 2900/40 should be considered in order to perform a complete search.

- M B60Q 2900/50
- Arrangements to reconfigure features of lighting or signalling devices, or to choose from a list of pre-defined settings

WARNING

Group B60Q 2900/50 is incomplete pending reclassification of documents from group B60Q 2900/00.
Groups B60Q 2900/00 and B60Q 2900/50 should be considered in order to perform a complete search.

Project: MP12088 (B60T)

- U B60T 1/00
- Arrangements of braking elements, i.e. of those parts where braking effect occurs {specially for vehicles}**

- U B60T 1/02
- acting by retarding wheels

- M B60T 1/10
- by utilising wheel movement for accumulating energy, e.g. driving air compressors ~~(using propulsion unit as braking means, see the relevant class)~~

Project: RP11518 (B60W)

- U B60W 10/00
- Conjoint control of vehicle sub-units of different type or different function (for propulsion of purely electrically-propelled vehicles with power supplied within the vehicle [B60L 50/00](#) - [B60L 58/00](#))**

NOTE

When classifying in this group, each controlled sub-unit must be separately identified by a classification in a relevant place in this group.

WARNING

Group [B60W 10/00](#) is incomplete pending reclassification of documents from groups [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U B60W 10/02
- including control of driveline clutches

WARNING

Group [B60W 10/02](#) is incomplete pending reclassification of documents from groups [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U B60W 10/023
- {Fluid clutches}

WARNING

Group [B60W 10/023](#) is incomplete pending reclassification of documents from groups [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#). Group [B60W 10/023](#) is also impacted by reclassification into groups [B60W 10/024](#) and [B60W 10/026](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- D B60W 10/0235
- • • {of bridging or lock-up clutches}
- WARNING
Group ~~B60W 10/0235~~ is incomplete pending reclassification of documents from groups ~~B60W 10/026~~, ~~G05D 1/0061~~, ~~G05D 1/0088~~, ~~G05D 1/021~~, ~~G05D 1/0214~~, ~~G05D 1/0221~~, and ~~G05D 1/0223~~. All groups listed in this Warning should be considered in order to perform a complete search.
- <administratively transferred to [B60W 10/026](#)>
- U B60W 10/024
- • {including control of torque converters}
- WARNING
Group [B60W 10/024](#) is incomplete pending reclassification of documents from groups [B60W 10/023](#), [B60W 10/026](#), [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#). All groups listed in this Warning should be considered in order to perform a complete search
- M B60W 10/026
- • • {of lock-up clutches}
- WARNING
Group [B60W 10/026](#) is incomplete pending reclassification of documents from groups [B60W 10/023](#), [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#).
Group [B60W 10/026](#) is also impacted by reclassification into ~~groups~~*group* ~~B60W 10/0235~~ and [B60W 10/024](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- M B60W 30/00
- Purposes of road vehicle drive control systems not related to the control of a particular sub-unit, e.g. of systems using conjoint control of vehicle sub-units ~~(, or advanced driver assistance systems for ensuring comfort, stability and safety or drive control systems for propelling or retarding the vehicle (anti-lock brake systems [ABS] B60T 8/00))~~**
- WARNING
Groups [B60W 30/00](#) - [B60W 2030/206](#) are incomplete pending reclassification of documents from groups [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#). All groups listed in this Warning should be considered in order to perform a complete search.
- M B60W 30/06
- Automatic manoeuvring for parking ~~(controlling only the steering B62D 15/0285)~~
- U B60W 40/00
- Estimation or calculation of {non-directly measurable} driving parameters for road vehicle drive control systems not related to the control of a particular sub unit, {e.g. by using mathematical models}**
- WARNING
Groups [B60W 40/00](#) - [B60W 2040/1392](#) are incomplete pending reclassification of documents from groups [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#). All groups listed in this Warning should be considered in order to perform a complete search.
- U B60W 40/08
- related to drivers or passengers
- M B60W 2040/0809
- • {Driver authorisation; Driver ~~identical~~*identity* check}

- U B60W 50/00** **Details of control systems for road vehicle drive control not related to the control of a particular sub-unit {, e.g. process diagnostic or vehicle driver interfaces}**
- WARNING**
- Groups [B60W 50/00](#) - [B60W 50/16](#) are incomplete pending reclassification of documents from groups [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- U B60W 2050/0062 · {Adapting control system settings}
 - M B60W 2050/0063 · {Manual parameter input, manual setting means, manual initialising or calibrating means ~~{for vehicle control input means, control panels see B60K 37/00}~~}
 - U B60W 50/08 · Interaction between the driver and the control system
 - U B60W 50/14 · · Means for informing the driver, warning the driver or prompting a driver intervention
 - M B60W 2050/143 · · · {Alarm means ~~{B60W 50/16 takes precedence}~~}

Project: RP12199 (B60W)

- U B60W 60/00** **Drive control systems specially adapted for autonomous road vehicles**
- WARNING**
- Groups [B60W 60/00](#) - [B60W 60/007](#) are incomplete pending reclassification of documents from groups [B60K 28/00](#) - [B60K 28/165](#), [B60W 30/12](#), [B60W 30/16](#), [B60W 30/162](#), [B60W 30/165](#), [B60W 30/17](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- M B60W 60/005 · {Handover processes (~~between vehicles and remote control entities G05D 1/0011~~ *Handing over between remote control and on-board control or handing over between remote control arrangements G05D 1/227*)}
 - M B60W 60/007 · {Emergency override (~~remote control G05D 1/0011~~ *Handing over between remote control and on-board control or handing over between remote control arrangements G05D 1/227*)}

Project: RP11518 (B60W)

- N B60W 2300/00 - B60W 2900/00** **Indexing scheme relating to vehicle control covered by groups [B60W 10/00](#) - [B60W 60/007](#).**
- U B60W 2300/00** **Indexing codes relating to the type of vehicle**
- WARNING**
- Groups [B60W 2300/00](#) - [B60W 2300/50](#) are incomplete pending reclassification of documents from groups [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- M B60W 2300/105 · · ~~Ambulances~~ *Emergency vehicles, e.g. ambulances*
 - U B60W 2300/12 · Trucks; Load vehicles
 - U B60W 2300/125 · · Heavy duty trucks
 - D B60W 2300/126 · · · Multi-axles trucks
- <administratively transferred to [B60W 2300/147](#) ADD>

| | | |
|----------|---------------------|--|
| M | B60W 2300/14 | <ul style="list-style-type: none"> • Trailers, e.g. full trailers, caravans <i>Tractor-trailers, i.e. combinations of a towing vehicle and one or more towed vehicles, e.g. caravans (relation between towing and towed vehicle B60Y 2300/28); Road trains</i> |
| U | B60W 2300/145 | <ul style="list-style-type: none"> • • Semi-trailers |
| N | B60W 2300/147 | <ul style="list-style-type: none"> • • Road trains |
| D | B60W 2300/16 | <ul style="list-style-type: none"> • Cranes |
| U | B60W 2300/17 | <ul style="list-style-type: none"> • Construction vehicles, e.g. graders, excavators |
| N | B60W 2300/175 | <ul style="list-style-type: none"> • • Skid-steer loaders |
| D | B60W 2300/30 | <ul style="list-style-type: none"> • Toys |
| D | B60W 2300/32 | <ul style="list-style-type: none"> • Amphibious vehicles |
| M | B60W 2300/34 | <ul style="list-style-type: none"> • Compact city vehicles, <i>e.g., microcars or kei cars</i> |
| D | B60W 2300/38 | <ul style="list-style-type: none"> • Wheelchairs; Perambulators |
| D | B60W 2300/42 | <ul style="list-style-type: none"> • Loading ramps |
| D | B60W 2300/43 | <ul style="list-style-type: none"> • Snowmobile |
| D | B60W 2300/45 | <ul style="list-style-type: none"> • Skid-steer <p><administratively transferred to B60W 2300/175 ADD></p> |
| D | B60W 2300/48 | <ul style="list-style-type: none"> • Low or lowerable bed vehicles |
| U | B60W 2420/00 | <p>Indexing codes relating to the type of sensors based on the principle of their operation</p> <p>WARNING</p> <p>Groups B60W 2420/00 - B60W 2420/905 are incomplete pending reclassification of documents from groups G05D 1/0061, G05D 1/0088, G05D 1/021, G05D 1/0214, G05D 1/0221, and G05D 1/0223.</p> <p>All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| M | B60W 2420/40 | <ul style="list-style-type: none"> • Photo-or light, <i>light or radio wave</i> sensitive means, e.g. infrared sensors |
| U | B60W 2420/403 | <ul style="list-style-type: none"> • • Image sensing, e.g. optical camera |
| U | B60W 2420/406 | <ul style="list-style-type: none"> • • Fiber optic sensor |
| N | B60W 2420/408 | <ul style="list-style-type: none"> • • Radar; Laser, e.g. lidar |
| D | B60W 2420/42 | <ul style="list-style-type: none"> • Image sensing, e.g. optical camera <p><administratively transferred to B60W 2420/403 ADD></p> |
| D | B60W 2420/52 | <ul style="list-style-type: none"> • Radar, Lidar <p><administratively transferred to B60W 2420/408 ADD></p> |
| D | B60W 2420/62 | <ul style="list-style-type: none"> • Laser <p><administratively transferred to B60W 2420/408 ADD></p> |
| U | B60W 2552/00 | <p>Input parameters relating to infrastructure</p> <p>WARNING</p> <p>Group B60W 2552/00 is incomplete pending reclassification of documents from groups B60K 28/00 - B60K 28/165, G05D 1/0061, G05D 1/0088, G05D 1/021, G05D 1/0214, G05D 1/0221, and G05D 1/0223. Group B60W 2552/00 is also impacted by reclassification into groups B60W 2552/00 - B60W 2552/53.</p> <p>All groups listed in this Warning should be considered in order to perform a complete search.</p> |

- M B60W 2552/05
- Type of road, *e.g. motorways, local streets, paved or unpaved roads*
- WARNING
Group [B60W 2552/05](#) is incomplete pending reclassification of documents from groups [B60K 28/00](#) - [B60K 28/165](#), [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#). Group [B60W 2552/05](#) is also impacted by reclassification into groups [B60W 2552/05](#) and [B60W 2552/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- M B60W 2552/15
- Road slope, *i.e. the inclination of a road segment in the longitudinal direction*
- M B60W 2552/20
- Road profile, *i.e. the change in elevation or curvature of a plurality of continuous road segments*
- M B60W 2552/35
- Road bumpiness, e.g. ~~pavement or~~ potholes
- U B60W 2556/00**
- Input parameters relating to data**
- WARNING
Groups [B60W 2556/00](#) – [B60W 2556/40](#) are incomplete pending reclassification of documents from groups [B60K 28/00](#) - [B60K 28/165](#), [B60W 30/12](#), [B60W 30/16](#), [B60W 30/162](#), [B60W 30/165](#), [B60W 30/17](#), [B60W 30/182](#), [B60W 50/082](#), [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#). All groups listed in this Warning should be considered in order to perform a complete search.
- U B60W 2556/45
- External transmission of data to or from the vehicle
- WARNING
Groups [B60W 2556/45](#) - [B60W 2556/65](#) are incomplete pending reclassification of documents from groups [B60K 28/00](#) - [B60K 28/165](#), [B60W 30/12](#), [B60W 30/16](#), [B60W 30/162](#), [B60W 30/165](#), [B60W 30/17](#), [B60W 30/182](#), [B60W 50/082](#), [G05D 1/0061](#), [G05D 1/0088](#), [G05D 1/021](#), [G05D 1/0214](#), [G05D 1/0221](#), and [G05D 1/0223](#). All groups listed in this Warning should be considered in order to perform a complete search.
- T B60W 2556/50
- ~~for navigation systems~~ of positioning data, *e.g. GPS [Global Positioning System] data*
- D B60W 2556/60
- ~~using satellite communication~~
<administratively transferred to [B60W 2556/50](#) ADD>

Project: Unknown (B60Y)

- U B60Y 2400/00** **Special features of vehicle units**
- U B60Y 2400/20
- Energy converters
- M B60Y 2400/209
- ~~Piezo-electric~~ *Piezoelectric* elements

Project: RP10482, MP12068 (B61L)

M B61L GUIDING RAILWAY TRAFFIC; ENSURING THE SAFETY OF RAILWAY TRAFFIC (~~power supply lines for electrically-propelled vehicles B60M; vehicle signalling in general B60Q; brakes or auxiliary equipment B61H, B61K; point or crossing construction E01B; insulated rail joints E01B 11/54; optical devices in general G02; controlling in general G05; electric communication technique H04~~)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme:

Project: MP12068 (B61L)

M B61L 1/00 Devices along the route controlled by interaction with the vehicle or ~~vehicle train, (e.g. pedals)~~ **train** (detonators [B61L 5/20](#); operation of points or signals by passage of the vehicle [B61L 11/00](#), [B61L 13/00](#); ~~central traffic control systems controlled by train B61L 27/04~~; operation of gates, or gates and signals, by approaching vehicle [B61L 29/18](#))

M B61L 1/14 · Devices for indicating the passing of the end of the vehicle or ~~vehicle~~ train

Project: RP10482 (B61L)

M B61L 1/16 · Devices for counting axles; Devices for counting vehicles (~~counting moving objects in general G06M~~)

M B61L 1/18 · Railway track circuits (~~automatically-operated track circuits specially adapted for section blocking for controlling traffic B61L 23/00~~; rail joints [E01B 11/00](#), e.g. [insulated rail joints E01B 11/54](#))

M B61L 1/20 · Safety arrangements for preventing or indicating malfunction of the device, e.g. by leakage current, by lightning ~~{{remote indicating means for abnormal operations conditions G08B 21/00, G08B 23/00; detectors for indicating the overheating of axle bearings B61K 9/00}}~~

Project: MP12068 (B61L)

M B61L 3/00 Devices along the route for controlling devices on the vehicle or ~~vehicle train, e.g. to release brake,~~ **or** to operate a warning signal

Project: RP10482 (B61L)

D B61L 3/002 · {Recorders on the vehicle}

<administratively transferred to [B61L 15/0094](#)>

D B61L 3/004 · {Memory means reproducing during the running of the vehicle or vehicle train, e.g. smart cards}

<administratively transferred to [B61L 15/0092](#)>

D B61L 3/006 · {On-board optimisation of vehicle or vehicle train operation (track-side optimisation of operation B61L 27/16)}

<administratively transferred to [B61L 15/0058](#)>

D B61L 3/008 · {On-board target speed calculation or supervision (track-side control of safe travel B61L 27/20; speed control circuitry B60L 3/08; speed control of electric drives B60L 15/20)}

<administratively transferred to [B61L 15/0062](#)>

U B61L 3/02 · at selected places along the route, e.g. intermittent control {simultaneous mechanical and electrical control}

- M B61L 3/06 · · controlling by electromagnetic or particle radiation, e.g. by light beam ~~(using radio-waves B61L-3/12)~~

Project: MP12068 (B61L)

- U B61L 3/08 · · controlling electrically
- M B61L 3/10 · · · using current passing between devices along the route and devices on the vehicle *or* train

Project: RP10482 (B61L)

- U B61L 3/12 · · · using magnetic or electrostatic induction; using radio waves
- M B61L 3/125 · · · · {using short-range radio transmission ~~(long-range radio transmission B61L-15/0027, B61L-27/70)~~}

Project: MP12068 (B61L)

- U B61L 3/16 · Continuous control along the route
- M B61L 3/18 · · using electric current passing between devices along the route and devices on the vehicle *or* ~~vehicle~~ train

Project: RP10482 (B61L)

- M B61L 3/20 · · · employing different frequencies or coded pulse groups {, e.g. using currents carried by traction current ~~(operating and signalling systems using network power supply H02J-13/00)~~}
- M B61L 5/00** **Local operating mechanisms for points or track-mounted scotch-blocks ~~(track-mounted scotch-blocks per se B61K)~~; Visible or audible signals; Local operating mechanisms for visible or audible signals (B61L 11/00 takes precedence)**
- M B61L 5/12 · Visible signals ~~{{(signalling means on the vehicle B61L-15/00; signalling means for classification yards, or the like, with multiple indicating means B61L-17/023; signalling means for road crossings B61L-29/24; lighting in general F21; visible signalling arrangements in general G08B-5/00)}~~
- M B61L 5/14 · · Form signals, e.g. semaphore arms ~~{{(illumination for points, form signals B61L-9/00)}~~
- U B61L 5/18 · · Light signals; Mechanisms associated therewith, e.g. blinders
- M B61L 5/189 · · · {using flashing light sources ~~(visible signalling in general using flashing light sources G08B-5/38; thermal switches operating intermittently H01H-61/06; H01H-61/08)}~~
- M B61L 7/00** **Remote control of local operating means for points, signals, or ~~trackmounted~~ *track-mounted* scotch-blocks (B61L 11/00 takes, B61L 13/00 take precedence; interlocking arrangements B61L 19/00; ~~transmission per se, see the relevant classes~~)**
- M B61L 7/02 · ~~using mechanical transmission;~~ *using mechanical transmission*, e.g. wire, lever
- M B61L 9/00** **Illumination specially adapted for points, form signals, or gates ~~(lighting in general F21)~~**
- U B61L 11/00** **Operation of points from the vehicle or by the passage of the vehicle**
- U B61L 13/00** **Operation of signals from the vehicle or by the passage of the vehicle**
- M B61L 13/02 · using mechanical interaction between vehicle and track ~~{{(pedals B61L-1/00)}~~

Project: MP12068 (B61L)

- M B61L 15/00** Indicators provided on the vehicle or **vehicle**-train for signalling purposes ~~{~~; **On-board control or communication systems}**
- M B61L 15/0018 • {Communication with or on the vehicle or ~~vehicle-train-train~~}(line transmission systems ~~H04B-3/00~~)}

Project: RP10482 (B61L)

- M B61L 15/0045 • {Destination indicators, identification panels or distinguishing signs on the vehicles ~~(displaying in general G09F)~~}
- U B61L 15/0054 • {Train integrity supervision, e.g. end-of-train [EOT] devices}
- N B61L 15/0058 • {On-board optimisation of vehicle or vehicle train operation}
- N B61L 15/0062 • {On-board target speed calculation or supervision}
- M B61L 15/0063 • {Multiple on-board control systems, e.g. "2 out of 3"-systems ~~(trackside multiple control systems B61L-27/30)~~}
- M B61L 15/0072 • {On-board train data handling ~~(trackside train data handling B61L-27/40)~~}
- M B61L 15/0081 • {On-board diagnosis or maintenance ~~(trackside diagnosis or maintenance B61L-27/50)~~}
- U B61L 15/009 • {On-board display devices}
- N B61L 15/0092 • {Memory means reproducing during the running of the vehicle or vehicle train, e.g. smart cards}
- N B61L 15/0094 • {Recorders on the vehicle}
- M B61L 17/00** **Switching systems for classification yards** ~~(rail brakes B61K)~~
- M B61L 19/00** **Arrangements for interlocking between points and signals by means of a single interlocking device** {, e.g. central control ~~(remote control B61L-7/00; station block arrangements B61L-21/00)~~}
- U B61L 19/02 • Interlocking devices having mechanical or fluid-pressure operation
- M B61L 19/04 • • ~~Detail-Details~~, e.g. hand lever, back-signalling device
- M B61L 21/00** **Station blocking between signal boxes in one yard** ~~(interlocking between points and signals by means of a single interlocking device B61L-19/00)~~
- M B61L 21/04 • Electrical locking and release of the route; Electrical repeat locks ~~((central interlocking B61L-19/00))~~
- M B61L 21/10 • Arrangements for trains which are closely following one another ~~(automatic central traffic control systems B61L-27/04)~~

Project: MP12068 (B61L)

- M B61L 23/00** **Control, warning**; or like safety means along the route or between vehicles or **vehicle**-trains

Project: RP10482 (B61L)

- M B61L 23/002 • {Control or safety means for heart-points and crossings of aerial railways, funicular rack-railway ~~(points or safety systems for model railways A63H; points, crossings or hearts for aerial railway, funicular rack railway E01B-25/12)~~}
- M B61L 23/08 • for controlling traffic in one direction only ~~(station blocking between signal boxes in one yard B61L-21/00)~~
- M B61L 23/22 • for controlling traffic in two directions over the same pair of rails ~~(station blocking between signal boxes in one yard B61L-21/00)~~
- U B61L 23/30 • • using automatic section blocking
- M B61L 23/32 • • • with provision for the blocking ~~or~~of passing sidings

Project: MP12068 (B61L)

- M B61L 23/34 · ~~Control, warnings or like safety means~~for indicating the distance between vehicles or ~~vehicle~~-trains by the transmission of signals therebetween
- M B61L 25/00 Recording or indicating positions or identities of vehicles or ~~vehicle~~ trains or setting of track apparatus**
- M B61L 25/02 · Indicating or recording positions or identities of vehicles or ~~vehicle~~-trains
- M B61L 25/023 · · {Determination of driving direction of vehicle or ~~vehicle~~-train}

Project: RP10482 (B61L)

- U B61L 27/00 Central railway traffic control systems; Trackside control; Communication systems specially adapted therefor**
- C B61L 27/04 · Automatic systems, e.g. controlled by train; Change-over to manual control

WARNING

Group [B61L 27/04](#) is impacted by reclassification into group [B61L 99/002](#). All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP12068 (B61L)

- U B61L 27/10 · Operations, e.g. scheduling or time tables
- M B61L 27/16 · · Trackside optimisation of vehicle or ~~vehicle~~-train operation
- M B61L 27/20 · Trackside control of safe travel of vehicle or ~~vehicle~~-train, e.g. braking curve calculation
- U B61L 27/50 · Trackside diagnosis or maintenance, e.g. software upgrades
- M B61L 27/57 · · for vehicles or ~~vehicle~~-trains, e.g. trackside supervision of train conditions
- U B61L 29/00 Safety means for rail/road crossing traffic**
- U B61L 29/08 · Operation of gates; Combined operation of gates and signals
- M B61L 29/18 · · Operation by approaching rail vehicle or ~~rail-vehicle~~-train
- U B61L 29/24 · Means for warning road traffic that a gate is closed or closing, or that rail traffic is approaching, e.g. for visible or audible warning
- M B61L 29/246 · · {Signals or brake- or lighting devices mounted on the road vehicle and controlled from the vehicle ~~or~~ train}

Project: RP10482 (B61L)

- C B61L 99/00 Subject matter not provided for in other groups of this subclass**

WARNING

Group [B61L 99/00](#) is impacted by reclassification into group [B61L 99/002](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N B61L 99/002 · {Autonomous vehicles, i.e. under distributed traffic control}
- WARNING**
- Group [B61L 99/002](#) is incomplete pending reclassification of documents from groups [B61L 27/04](#) and [B61L 99/00](#). All groups listed in this Warning should be considered in order to perform a complete search.*

- N** B61L 2201/00 - B61L 2210/00 *Indexing scheme associated with groups [B61L 1/00](#) – [B61L 99/00](#) relating to control methods, communication or navigation systems for railway traffic, features of light signals or vehicle systems.*
- U** B61L 2205/00 **Communication or navigation systems for railway traffic**
- M B61L 2205/02 · Global system for mobile communication - railways (~~[GSM-R]~~)
- M B61L 2205/04 · Satellite based navigation systems, e.g. ~~GPS~~*global positioning system [GPS]*
- U** B61L 2207/00 **Features of light signals**
- M B61L 2207/02 · using light-emitting diodes (~~LEDs~~)*[LEDs]*
- U** B61L 2210/00 **Vehicle systems**
- M B61L 2210/04 · Magnetic elevation vehicles (~~maglev~~)*[maglev]*

Project: RP12215 (B62D)

- M** B62D 49/00 **Tractors (of walk type [B62D 51/04](#); endless-track features [B62D 55/00](#) {~~;~~ [tractors for handling aircraft B64F 1/22](#); transport specially adapted for underground galleries [E21F 13/02](#))**

Project: MP12088 (B63B)

- U** B63B 21/00 **Tying-up; Shifting, towing, or pushing equipment; Anchoring (of buoys [B63B 22/04](#);) dynamic anchoring [B63H 25/00](#) {; equipment for shipping on coasts, in harbours or on other fixed marine structures, e.g. for landing purposes, [E02B](#))**
- WARNING
- Group [B63H 21/00](#) is no longer used for classification of adaptations of ropes, hawsers, or the like, or parts thereof. Documents are in the process of being reorganised to [B63B 21/20](#)
- U** B63B 21/56 · Towing or pushing equipment (tugs [B63B 35/66](#); towing arrangements for water sports use [B63B 34/60](#))
- M** B63B 21/64 · Equipment for towing or pushing vessels by vehicles or beings moving forward on ground-based paths along water-way (boat-hooks or the like [B63B 21/54](#); ~~shore- or ground-based equipment per se, e.g. vehicles, rails, see the relevant classes~~)

Project: MP12088 (B63G)

- U** B63G 8/00 **Underwater vessels, e.g. submarines; {Equipment specially adapted therefor}(submarine hulls [B63B 3/13](#); diving chambers with mechanical link, e.g. cable, to a base [B63C 11/34](#); divers' sleds [B63C 11/46](#); torpedoes [F42B 19/00](#))**
- M** B63G 8/08 · Propulsion ({schnorkels [B63G 8/36](#); ~~marine propulsion or steering in general B63H~~;) nuclear propulsion [B63H 21/18](#); ~~propulsion power plants or units per se {F01--F04}~~; submerged exhausting apparatus [F01N 13/12](#))

Project: RP12203 (B64D)

- M** B64D **EQUIPMENT FOR FITTING IN OR TO AIRCRAFT; FLIGHT SUITS; PARACHUTES; ~~ARRANGEMENTS~~*ARRANGEMENT* OR MOUNTING OF POWER PLANTS OR PROPULSION TRANSMISSIONS IN AIRCRAFT**
- WARNINGS
1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
[B64D 15/18](#) covered by [B64D 15/16](#)

| | | |
|-----------------------------|------------|----------------------------|
| B64D 25/102 | covered by | B64D 25/10 |
| B64D 25/105 | covered by | B64D 25/10 |
| B64D 25/108 | covered by | B64D 25/10 |
| B64D 25/11 | covered by | B64D 25/10 |
| B64D 25/112 | covered by | B64D 25/10 |
| B64D 25/115 | covered by | B64D 25/10 |
| B64D 25/118 | covered by | B64D 25/10 |

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- M B64D 27/00** Arrangement or mounting of power ~~plant~~**plants** in aircraft; Aircraft characterised ~~thereby by the type or position of power plants~~**(attitude, flight direction, or altitude control of aircraft by jet reaction B64C)**
- C B64D 27/02
- Aircraft characterised by the type or position of power ~~plant~~**plants** (~~fuselages or wings adapted for mounting power plant B64C~~**fuselages specially adapted for mounting power plants B64C 1/16; wings specially adapted for power plants B64C 3/32**)
- WARNING**
Group [B64D 27/02](#) is impacted by reclassification into groups [B64D 27/026](#), [B64D 27/33](#), [B64D 27/357](#), [B64D 27/359](#), [B64D 31/16](#), [B64D 31/18](#) and [B64D 35/021](#) - [B64D 35/025](#). All groups listed in this Warning should be considered in order to perform a complete search.
- D B64D 2027/026
- {~~comprising different types of power plants, e.g. combination of an electric motor and a gas-turbines~~
- <administratively transferred to [B64D 27/026](#) INV>
- N B64D 27/026
- {~~comprising different types of power plants, e.g. combination of a piston engine and a gas-turbine (Hybrid electric aircraft [B64D 27/33](#))~~
- WARNING**
Group [B64D 27/026](#) is incomplete pending reclassification of documents from group [B64D 27/02](#). Groups [B64D 27/026](#) and [B64D 27/02](#) should be considered in order to perform a complete search.
- U B64D 27/04
- of piston type
- M B64D 27/06
- • within, or attached to ~~wing, wings~~
- M B64D 27/08
- • within, or attached to ~~fuselage, fuselages~~
- M B64D 27/10
- of gas-turbine type (~~B64D 27/16 takes precedence~~**jet aircraft [B64D 27/16](#)**)
- M B64D 27/12
- • within, or attached to ~~wing, wings~~
- M B64D 27/14
- • within, or attached to ~~fuselage, fuselages~~
- U B64D 27/16
- of jet type
- M B64D 27/18
- • within, or attached to ~~wing, wings~~
- M B64D 27/20
- • within, or attached to ~~fuselage, fuselages~~
- C B64D 27/24
- using steam, ~~electricity~~, or spring force (~~B64D 27/16 takes precedence~~**jet aircraft [B64D 27/16](#)**)
- WARNING**
Group [B64D 27/24](#) is impacted by reclassification into groups [B64D 27/30](#), [B64D 27/31](#), [B64D 27/32](#), [B64D 27/33](#), [B64D 27/34](#), [B64D 27/35](#), [B64D 27/351](#), [B64D 27/353](#), [B64D 27/355](#), [B64D 27/357](#), [B64D 27/359](#), [B64D 31/16](#), [B64D 31/18](#) and [B64D 35/021](#) - [B64D 35/025](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- D B64D 27/26
 - Aircraft characterised by construction of power-plant mounting
<administratively transferred to [B64D 27/40](#)>
- D B64D 2027/262
 - {Engine support arrangements or elements}
<administratively transferred to [B64D 27/40](#) INV>
- D B64D 2027/264
 - • {comprising box like supporting frames}
<administratively transferred to [B64D 27/402](#) INV>
- D B64D 2027/266
 - • {comprising suspension arrangements for supporting vertical loads}
<administratively transferred to [B64D 27/404](#) INV>
- D B64D 2027/268
 - • {comprising thrust links}
<administratively transferred to [B64D 27/406](#) INV>
- N B64D 27/30
 - • Aircraft characterised by electric power plants
WARNING
Groups [B64D 27/30](#), [B64D 27/31](#), [B64D 27/32](#), [B64D 27/34](#), [B64D 27/35](#), [B64D 27/351](#) and [B64D 27/355](#) are incomplete pending reclassification of documents from group [B64D 27/24](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64D 27/31
 - • • within, or attached to, wings
- N B64D 27/32
 - • • within, or attached to, fuselages
- N B64D 27/33
 - • • Hybrid electric aircraft
WARNING
Group [B64D 27/33](#) is incomplete pending reclassification of documents from groups [B64D 27/02](#) and [B64D 27/24](#).
Groups [B64D 27/33](#), [B64D 27/02](#) and [B64D 27/24](#) should be considered in order to perform a complete search.
- N B64D 27/34
 - • • All-electric aircraft
- N B64D 27/35
 - • • Arrangements for on-board electric energy production, distribution, recovery or storage
- N B64D 27/351
 - • • • using energy recovery
- Q B64D 27/353
 - • • • using solar cells
WARNING
Group [B64D 27/353](#) is incomplete pending reclassification of documents from group [B64D 27/24](#).
Group [B64D 27/353](#) is also impacted by reclassification into group [B64U 50/31](#).
Groups [B64D 27/353](#), [B64D 27/24](#) and [B64U 50/31](#) should be considered in order to perform a complete search.
- N B64D 27/355
 - • • • using fuel cells
- N B64D 27/357
 - • • • using batteries
WARNING
Group [B64D 27/357](#) is incomplete pending reclassification of documents from groups [B64D 27/02](#) and [B64D 27/24](#).
Groups [B64D 27/357](#), [B64D 27/02](#), [B64D 27/24](#) should be considered in order to perform a complete search.

- N B64D 27/359
- • • using capacitors
- WARNING
Group [B64D 27/359](#) is incomplete pending reclassification of documents from groups [B64D 27/02](#) and [B64D 27/24](#).
Groups [B64D 27/359](#), [B64D 27/02](#) and [B64D 27/24](#) should be considered in order to perform a complete search.
- Q B64D 27/40
- Arrangements for mounting power plants in aircraft
- WARNING
Group [B64D 27/40](#) is impacted by reclassification into groups [B64D 27/402](#), [B64D 27/404](#) and [B64D 27/406](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64D 27/402
- {comprising box like supporting frames, e.g. pylons or arrangements for embracing the power plant}
- WARNING
Group [B64D 27/402](#) is incomplete pending reclassification of documents from group [B64D 27/40](#).
Groups [B64D 27/402](#) and [B64D 27/40](#) should be considered in order to perform a complete search.
- N B64D 27/404
- {Suspension arrangements specially adapted for supporting vertical loads}
- WARNING
Group [B64D 27/404](#) is incomplete pending reclassification of documents from group [B64D 27/40](#).
Groups [B64D 27/404](#) and [B64D 27/40](#) should be considered in order to perform a complete search.
- N B64D 27/406
- {Suspension arrangements specially adapted for supporting thrust loads, e.g. thrust links}
- WARNING
Group [B64D 27/406](#) is incomplete pending reclassification of documents from group [B64D 27/40](#).
Groups [B64D 27/406](#) and [B64D 27/40](#) should be considered in order to perform a complete search.
- C B64D 31/00
- Power plant control systems; Arrangement thereof of power plant control systems in aircraft**~~(F02 takes precedence) flying controls B64C)~~
- WARNING
Group [B64D 31/00](#) is impacted by reclassification into groups [B64D 31/16](#) and [B64D 31/18](#).
Groups [B64D 31/00](#), [B64D 31/16](#) and [B64D 31/18](#) should be considered in order to perform a complete search.
- U B64D 31/02
- Initiating means
- C B64D 31/06
- • actuated automatically
- WARNING
Group [B64D 31/06](#) is impacted by reclassification into group [B64D 31/09](#).
Groups [B64D 31/06](#) and [B64D 31/09](#) should be considered in order to perform a complete search.
- M B64D 31/08
- • for keeping cruising speed constant ~~(conjoint control of power plant and propeller B64C)~~

- N B64D 31/09
- • • in response to power plant failure
- WARNING
Group [B64D 31/09](#) is incomplete pending reclassification of documents from group [B64D 31/06](#).
Groups [B64D 31/09](#) and [B64D 31/06](#) should be considered in order to perform a complete search.
- M B64D 31/10
- • • for preventing asymmetric thrust ~~upon failure of one power plant~~
- U B64D 31/14
- Transmitting means between initiating means and power plants
- N B64D 31/16
- for electric power plants
- WARNING
Groups [B64D 31/16](#) and [B64D 31/18](#) are incomplete pending reclassification of documents from groups [B64D 27/02](#), [B64D 27/24](#) and [B64D 31/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64D 31/18
- • for hybrid-electric power plants
- M B64D 35/00**
- Transmitting power from power ~~plant~~plants to propellers or rotors; Arrangements of transmissions (~~propellers or rotors per se, helicopter transmissions B64C~~)**
- C B64D 35/02
- ~~characterised by the type of power plant~~ specially adapted for specific power plants
- WARNING
Group [B64D 35/02](#) is impacted by reclassification into groups [B64D 35/021](#), [B64D 35/022](#), [B64D 35/023](#), [B64D 35/024](#), [B64D 35/025](#) and [B64D 35/026](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64D 35/021
- • for electric power plants
- WARNING
Groups [B64D 35/021](#), [B64D 35/022](#), [B64D 35/023](#), [B64D 35/024](#) and [B64D 35/025](#) are incomplete pending reclassification of documents from groups [B64D 27/02](#), [B64D 27/24](#) and [B64D 35/02](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64D 35/022
- • • of hybrid-electric type
- N B64D 35/023
- • • • of series-parallel type
- N B64D 35/024
- • • • of series type
- N B64D 35/025
- • • • of parallel type
- N B64D 35/026
- • • the electric power plant being integral with the propeller or rotor
- WARNING
Group [B64D 35/026](#) is incomplete pending reclassification of documents from group [B64D 35/02](#).
Groups [B64D 35/026](#) and [B64D 35/02](#) should be considered in order to perform a complete search.
- D B64D 2211/00**
- Arrangements of solar panels on aircraft**
<administratively transferred to [B64D 27/353](#) INV>

Project: RP12215 (B64F)

| | | |
|---|------------|---|
| C | B64F 1/00 | <p>Ground or aircraft-carrier-deck installations (specially adapted for captive aircraft B64F 3/00)</p> <p><u>WARNING</u> Group B64F 1/00 is impacted by reclassification into groups B64F 1/223, B64F 1/225, B64F 1/227, B64F 1/228 and B64F 1/35. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| M | B64F 1/02 | <ul style="list-style-type: none"> • Arresting gear for arresting aircraft, e.g. nets or cables; Liquid barriers |
| C | B64F 1/04 | <ul style="list-style-type: none"> • Launching or towing gear for launching aircraft <p><u>WARNING</u> Group B64F 1/04 is impacted by reclassification into groups B64F 1/223, B64F 1/224, B64F 1/225, B64F 1/226, B64F 1/227 and B64F 1/228. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| C | B64F 1/10 | <ul style="list-style-type: none"> • using self-propelled vehicles <p><u>WARNING</u> Group B64F 1/10 is impacted by reclassification into groups B64F 1/223, B64F 1/225, B64F 1/227 and B64F 1/228. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| M | B64F 1/12 | <ul style="list-style-type: none"> • Anchoring for anchoring aircraft |
| C | B64F 1/22 | <ul style="list-style-type: none"> • installed for handling aircraft for taxiing aids B64F 1/002 <p><u>WARNING</u> Group B64F 1/22 is impacted by reclassification into groups B64F 1/223, B64F 1/225, B64F 1/226 and B64F 1/227. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| M | B64F 1/221 | <ul style="list-style-type: none"> • {specially adapted for handling seaplanes} |
| M | B64F 1/222 | <ul style="list-style-type: none"> • {for storing aircraft, e.g. in hangars} |
| N | B64F 1/223 | <ul style="list-style-type: none"> • for towing aircraft <p><u>WARNING</u> Groups B64F 1/223, B64F 1/225 and B64F 1/227 are incomplete pending reclassification of documents from groups B64F 1/00, B64F 1/04, B64F 1/10 and B64F 1/22. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| T | B64F 1/224 | <ul style="list-style-type: none"> • {Towing bars} <p><u>WARNING</u> Group B64F 1/224 is incomplete pending reclassification of documents from group B64F 1/04. Groups B64F 1/04 and B64F 1/224 should be considered in order to perform a complete search.</p> |
| T | B64F 1/225 | <ul style="list-style-type: none"> • {Towing trucks} Vehicles specially adapted therefor, e.g. aircraft tow tractors |

- N B64F 1/226
- • • {hand manipulated, e.g. hand carts or motorised walk-type tractors}
- WARNING
Group [B64F 1/226](#) is incomplete pending reclassification of documents from groups [B64F 1/04](#) and [B64F 1/22](#).
Groups [B64F 1/04](#), [B64F 1/22](#) and [B64F 1/226](#) should be considered in order to perform a complete search.
- T B64F 1/227
- • • ~~{adapted for directly connecting~~for direct connection to aircraft, e.g. ~~trucks without tow-bars~~tow tractors without towing bars
- T B64F 1/228
- • • ~~{remotely controlled, or autonomously operated}~~remotely controlled; operating autonomously
- WARNING
Group [B64F 1/228](#) is incomplete pending reclassification of documents from groups [B64F 1/00](#), [B64F 1/04](#) and [B64F 1/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C B64F 1/34
- for starting propulsion plant
- WARNING
Group [B64F 1/34](#) is impacted by reclassification into groups [B64F 1/35](#) and [B64F 1/352](#).
Groups [B64F 1/34](#), [B64F 1/35](#) and [B64F 1/352](#) should be considered in order to perform a complete search.
- N B64F 1/35
- for supplying electrical power to stationary aircraft
- WARNING
Group [B64F 1/35](#) is incomplete pending reclassification of documents from groups [B64F 1/00](#), [B64F 1/34](#), [B64F 1/36](#) and [B64F 1/362](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B64F 1/352
- • {Mobile units}
- WARNING
Group [B64F 1/352](#) is incomplete pending reclassification of documents from groups [B64F 1/34](#), [B64F 1/36](#), [B64F 1/362](#) and [B64F 1/364](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C B64F 1/36
- Other airport installations (ground installations for de-icing aircraft [B64F 5/20](#))
- WARNING
Group [B64F 1/36](#) is impacted by reclassification into groups [B64F 1/35](#) and [B64F 1/352](#).
Groups [B64F 1/36](#), [B64F 1/35](#) and [B64F 1/352](#) should be considered in order to perform a complete search.
- C B64F 1/362
- • {Installations for supplying conditioned air to parked aircraft}
- WARNING
Group [B64F 1/362](#) is impacted by reclassification into groups [B64F 1/35](#) and [B64F 1/352](#).
Groups [B64F 1/362](#), [B64F 1/35](#) and [B64F 1/352](#) should be considered in order to perform a complete search.

C B64F 1/364 . . . {Mobile units}

WARNING

Group [B64F 1/364](#) is impacted by reclassification into group [B64F 1/352](#). Groups [B64F 1/364](#) and [B64F 1/352](#) should be considered in order to perform a complete search.

Project: MP12219 (B64G)

M B64G

COSMONAUTICS; VEHICLES OR EQUIPMENT THEREFOR (~~apparatus for, or methods of, winning materials from extraterrestrial sources E21C 51/00~~)

NOTES

1. This subclass covers only vehicles, equipment or the like, which are specially adapted for cosmonautics.
2. This subclass does not cover vehicles and equipment applicable to both cosmonautics and aeronautics, which are covered by the appropriate aeronautical subclasses of class [B64](#).
3. In this subclass, the following term is used with the meaning indicated:
 - "cosmonautics" includes all transport outside the earth's atmosphere, and thus includes artificial earth satellites, and interplanetary and interstellar travel.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme:

U B64G 1/00

Cosmonautic vehicles

M B64G 1/10

- Artificial satellites; Systems of such satellites; Interplanetary vehicles (space shuttles [B64G 1/14](#); ~~radio transmission systems using satellites H04B 7/185~~)

M B64G 1/1007

- {Communications satellites (~~communications aspects H04B 7/185~~)}

M B64G 1/1014

- {Navigation satellites (~~navigation systems G01S 5/145~~)}

M B64G 1/16

- Extraterrestrial cars (~~land vehicle aspects B60 - B62~~)

U B64G 1/22

- Parts of, or equipment specially adapted for fitting in or to, cosmonautic vehicles

M B64G 1/24

- Guiding or controlling apparatus, e.g. for attitude control (~~jet-propulsion plants F02K; navigation or navigational instruments, see the relevant subclasses, e.g. G01C; automatic pilots G05D 1/00~~)

M B64G 1/40

- Arrangements or adaptations of propulsion systems (~~propulsion plants per se, see the relevant subclasses, e.g. F02K, F03H~~)

WARNING

Group [B64G 1/40](#) is impacted by reclassification into group [B64G 1/4005](#). Groups [B64G 1/40](#) and [B64G 1/4005](#) should be considered in order to perform a complete search.

M B64G 1/42

- Arrangements or adaptations of power supply systems (~~power supply systems per se, see the relevant subclasses~~)

M B64G 1/44

- using radiation, e.g. deployable solar arrays (~~solar cells per se H01L 31/00~~)

M B64G 1/46

- Arrangements or adaptations of devices for control of environment or living conditions (~~space suits B64G 6/00~~)

WARNING

Group [B64G 1/46](#) is impacted by reclassification into group [B64G 1/465](#). Groups [B64G 1/46](#) and [B64G 1/465](#) should be considered in order to perform a complete search.

- M B64G 1/48
 - • • for treatment of the atmosphere ([B64G 1/50](#) takes precedence; ~~air conditioning in general F24F~~)
- M B64G 1/50
 - • • for temperature control (~~temperature control in general G05D 23/00~~)
- M B64G 1/52
 - • Protection, safety or emergency devices; Survival aids (~~life-saving in general A62~~)
- M B64G 1/54
 - • • Protection against radiation (~~against radiation in general G21F~~)
- M B64G 1/56
 - • • Protection against meteoroids or space debris (~~meteoroid or space debris detectors B64G 1/68~~)
- M B64G 1/58
 - • • Thermal protection, e.g. heat shields (~~thermal insulation in general F16L 59/00; chemical aspects, see the relevant classes~~)
- M B64G 1/66
 - • Arrangements or adaptations of apparatus or instruments, not otherwise provided for (~~instruments per se, see the relevant classes, e.g. antennas for use in satellites H01Q 1/28~~)
- M B64G 3/00** **Observing or tracking cosmonautic vehicles (~~radio or other waves systems for navigation or tracking G01S~~)**
- M B64G 7/00** **Simulating cosmonautic conditions, e.g. for conditioning crews (~~simulators for teaching or training purposes G09B 9/00~~)**

Project: RP12203 (B64U)

U B64U 50/00 Propulsion; Power supplyWARNING

Group [B64U 50/00](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#) and [B64U 10/00](#).

Group [B64U 50/00](#) is also impacted by reclassification into groups [B64U 50/10](#) - [B64U 50/19](#), [B64U 50/20](#) - [B64U 50/27](#) and [B64U 50/30](#) - [B64U 50/39](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M B64U 50/30
 - Supply or distribution of electrical power

WARNING

Groups [B64U 50/30](#), [B64U 50/31](#), [B64U 50/32](#) and [B64U 50/33](#) are incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 50/00](#) and [B64U 50/19](#).

All groups listed in this Warning should be considered in order to perform a complete search.
- M B64U 50/31
 - generated by photovoltaics

WARNING

Group [B64U 50/31](#) is incomplete pending reclassification of documents from groups [B64C 1/00](#), [B64C 1/0009](#), [B64C 1/06](#), [B64C 1/061](#), [B64C 1/062](#), [B64C 1/063](#), [B64C 1/064](#), [B64C 1/065](#), [B64C 1/068](#), [B64C 1/069](#), [B64C 27/08](#), [B64C 27/10](#), [B64C 27/20](#), [B64C 39/00](#), [B64C 39/001](#), [B64C 39/003](#), [B64C 39/005](#), [B64C 39/006](#), [B64C 39/008](#), [B64C 39/02](#), [B64C 39/024](#), [B64C 39/029](#), [B64U 10/00](#), [B64U 50/00](#), [B64U 50/19](#) and [B64D 27/353](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP12088 (B65B)

- U B65B 1/00** **Packaging fluent solid material, e.g. powders, granular or loose fibrous material, loose masses of small articles, in individual containers or receptacles, e.g. bags, sacks, boxes, cartons, cans, or jars**
- M B65B 1/02** • Machines characterised by the incorporation of means for making the containers or receptacles (from flat, folded, or tubular webs of flexible sheet material [B65B 9/00](#); ~~making containers or receptacles of interest apart from this application, see the appropriate subclasses~~)
- U B65B 3/00** **Packaging plastic material, semiliquids, liquids or mixed solids and liquids, in individual containers or receptacles, e.g. bags, sacks, boxes, cartons, cans, or jars**
- M B65B 3/02** • Machines characterised by the incorporation of means for making the containers or receptacles (~~making containers or receptacles of interest apart from this application, see appropriate subclasses~~)
- U B65B 5/00** **Packaging individual articles in containers or receptacles, e.g. bags, sacks, boxes, cartons, cans, jars**
- M B65B 5/02** • Machines characterised by incorporation of means for making the containers or receptacles (~~making containers or receptacles of interest apart from this application, see the appropriate subclasses~~)
- U B65B 7/00** **Closing containers or receptacles after filling**
- M B65B 7/01** • Machines characterised by incorporation of means for making the closures before applying (~~making closures, of interest apart from this application, see the relevant subclass~~)

Project: MP11853 (B65D)

- M B65D** **CONTAINERS FOR STORAGE OR TRANSPORT OF ARTICLES OR MATERIALS, e.g. BAGS, BARRELS, BOTTLES, BOXES, CANS, CARTONS, CRATES, DRUMS, JARS, TANKS, HOPPERS, FORWARDING CONTAINERS; ACCESSORIES, CLOSURES, OR FITTINGS THEREFOR; PACKAGING ELEMENTS; PACKAGES**
- NOTES
1. In this subclass, the indexing codes of [B65D 2519/00004](#) - [B65D 2519/00995](#) should be added, if applicable
 2. This subclass covers:
 - containers, packaging elements or packages with auxiliary means or provisions for displaying articles or materials;
 - methods of packaging which are wholly characterised by the form of the package produced or the form of the container or packaging element used, as distinct from the operations performed or the apparatus employed, which are covered by subclass [B65B](#)
 3. This subclass, which is intended to be as comprehensive as possible, only excludes containers or packages of a nature clearly confined to a single other subclass, which are classified in that subclass
 4. In this subclass, groups [B65D 5/00](#), [B65D 27/00](#), [B65D 29/00](#), [B65D 31/00](#) or [B65D 65/00](#) include constructional features of foldable or erectable container

or wrapper blanks as well as the containers or wrappers formed by folding or erecting such blanks

5. Containers, packaging elements or packages classified in group [B65D 85/00](#), are also classified according to the constructional or functional features, if such features are of interest

6. In this subclass, the following terms or expressions are used with the meanings indicated:

- "rigid or semi-rigid containers" includes:
 - a. containers not deformed by, or not taking-up the shape of, their contents;
 - b. containers adapted to be temporarily deformed to expel their contents;
 - c. pallets;
 - d. trays;
- "flexible containers" includes:
 - a. containers deformed by, or taking-up the shape of, their contents;
 - b. containers adapted to be permanently deformed to expel their contents;
- "packaging elements" includes:
 - a. elements, other than containers, for covering, protecting, stiffening, or holding together articles or materials ~~to be~~ to be stored or transported;
 - b. packaging materials of special type or form not provided for in other subclasses;
- "packages" includes:
 - a. combination of containers or packaging elements with articles or materials to be stored or transported;
 - b. articles joined together for convenience of storage or transport;
- "paper" includes materials, e.g. cardboard, plastic sheet materials, laminated materials, or metal foils, worked in a manner analogous to paper;
- "large containers", in groups [B65D 88/00](#) or [B65D 90/00](#), means containers having about the size of containers used in container traffic, sometimes referred to as freight, forwarding or "ISO" (~~International Standardization~~) [\[International Organization for Standardization\]](#) containers, or larger containers

7. Tamper-indicating means for containers or closures are classified in the group appropriate to the type of container or closure, e.g. [B65D 5/54](#), [B65D 17/00](#), [B65D 27/30](#), [B65D 27/30](#), [B65D 27/34](#), [B65D 33/34](#), [B65D 41/32](#), [B65D 47/36](#), [B65D 49/12](#), [B65D 51/20](#), [B65D 55/06](#)

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

| | | |
|--|------------|--|
| B65D 5/34 | covered by | B65D 5/325 |
| B65D 5/35 | covered by | B65D 5/325 |
| B65D 5/355 | covered by | B65D 5/0005 |
| B65D 5/43 | covered by | B65D 5/42 |
| B65D 5/462 | covered by | B65D 5/46008 - B65D 5/46032 |
| B65D 5/465 | covered by | B65D 5/46008 - B65D 5/46032 |
| B65D 5/468 | covered by | B65D 5/4608 |
| B65D 5/472 | covered by | B65D 5/46048 |
| B65D 5/475 | covered by | B65D 5/46008 |
| B65D 5/478 | covered by | B65D 5/46056 |
| B65D 5/4805 - B65D 5/489 | covered by | B65D 5/48002 |
| B65D 5/49 - B65D 5/499 | covered by | B65D 5/48024 |

| | | |
|-------------------------|------------|--|
| B65D 5/63 | covered by | B65D 5/72 |
| B65D 6/00 - B65D 6/40 | covered by | B65D 7/00 , B65D 9/00 , B65D 11/00 , B65D 15/00 |
| B65D 8/00 - B65D 8/22 | covered by | B65D 7/00 , B65D 9/00 , B65D 11/00 , B65D 15/00 |
| B65D 19/22 | covered by | B65D 19/0004 |
| B65D 19/24 | covered by | B65D 19/0004 |
| B65D 19/26 | covered by | B65D 19/0004 |
| B65D 19/28 | covered by | B65D 19/0004 |
| B65D 19/30 | covered by | B65D 19/0004 |
| B65D 19/31 | covered by | B65D 19/0004 |
| B65D 19/32 | covered by | B65D 19/0002 , B65D 19/0004 |
| B65D 19/34 | covered by | B65D 19/0004 |
| B65D 21/024 | covered by | B65D 21/0201 |
| B65D 21/028 | covered by | B65D 21/0204 |
| B65D 21/032 | covered by | B65D 21/0209 |
| B65D 21/036 | covered by | B65D 21/0217 |
| B65D 25/26 | covered by | B65D 81/02 |
| B65D 30/00 - B65D 30/28 | covered by | B65D 29/00 , B65D 31/00 |
| B65D 33/17 | covered by | B65D 33/1633 |
| B65D 33/36 | covered by | B65D 75/58 |
| B65D 33/38 | covered by | B65D 75/5861 |
| B65D 35/48 - B65D 35/54 | covered by | B65D 47/2018 |
| B65D 39/18 | covered by | B65D 39/00 |
| B65D 41/01 | covered by | B65D 41/00 |
| B65D 43/03 | covered by | B65D 43/00 + B65D 2543/00027 |
| B65D 43/04 | covered by | B65D 43/0214 |
| B65D 43/10 | covered by | B65D 43/0204 |
| B65D 47/22 | covered by | B65D 47/20 |
| B65D 47/34 | covered by | B05B 11/00 |
| B65D 50/08 | covered by | B65D 55/02 |
| B65D 50/10 | covered by | B65D 55/02 |
| B65D 50/12 | covered by | B65D 55/02 |
| B65D 50/14 | covered by | B65D 55/02 |
| B65D 65/26 - B65D 65/32 | covered by | B65D 75/58 |
| B65D 65/34 | covered by | B65D 75/66 |
| B65D 65/36 | covered by | B65D 75/58 |
| B65D 71/52 - B65D 71/68 | covered by | B65D 71/0003 - B65D 71/0077 |
| B65D 75/60 - B65D 75/64 | covered by | B65D 75/58 |
| B65D 81/15 | covered by | B65D 81/05 |
| B65D 81/17 | covered by | B65D 81/02 |
| B65D 83/18 | covered by | B65D 83/201 , B65D 83/206 |
| B65D 83/58 | covered by | B65D 83/44 |
| B65D 83/76 | covered by | B65D 83/0005 |
| B65D 85/57 | covered by | G11B 23/00 |
| B65D 85/575 | covered by | G11B 23/00 |

B65D 85/86 - B65D 85/90 covered by [H01L 21/00](#), [H05K 13/00](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP12088 (B65D)

M B65D 65/00

Wrappers or flexible covers; Packaging materials of special type or form (wrappers or envelopes with shock-absorbing properties [B65D 81/03](#); ~~layered products per se B32B~~; ~~materials per se, see the relevant classes~~)

NOTE

Attention is drawn to the definition of "packaging element" in Note (5) following the title of this subclass

Project: RP12190 (B65H)

B65H

HANDLING THIN OR FILAMENTARY MATERIAL, e.g. SHEETS, WEBS, CABLES

NOTES

1. This subclass does not cover methods or devices intimately associated with other operations on thin or filamentary material, e.g. sheets, webs, cables or means for performing such operations, which are classified in the relevant subclasses for these operations, e.g.:

[B07C](#)

Postal sorting, similar sorting of documents, e.g. cheques

~~[B08B 1/02](#)~~

~~[B08B 1/20](#)~~

Cleaning ~~travelling work of moving articles~~, e.g. ~~webs, by methods involving the use of tools, brushes or like members of moving webs or of objects on a conveyor~~

[B21B 41/00](#)

Metal rolling involving guiding, conveying or accumulating easily-flexible work, e.g. wire, sheet metal bands, in loops or curves

[B21C 47/00](#)

, Winding-up, coiling, winding-off or temporarily

[B21C 49/00](#)

accumulating metal wire, metal band or other flexible metal material, characterised by features relevant to metal processing only, other than by rolling

[B21D 43/00](#)

Feeding, positioning or storing devices, combined with, or arranged in, or specially adapted for use in connection with, apparatus for working or processing sheet metal without essentially removing material

[B23K 9/12](#)

Means for automatic feeding of electrodes for spot or seam welding or cutting

[B29C 31/00](#)

Handling for shaping or joining of plastics, for shaping of substances in a plastic state in general or for after-treatment of shaped products, e.g. feeding the material to be shaped

[B41B 15/32](#)

, Film-handling mechanisms in photographic

[B41B 21/32](#)

composing machines

[B41F 13/02](#)

Conveying or guiding webs through rotary printing presses or machines

[B41J 11/00](#)

to Handling of copy- or impression-transfer material

[B41J 17/00](#)

in typewriters or selective printing mechanisms

[B41K 3/44](#)

Means for handling copy matter in stamping or numbering apparatus or devices

| | |
|----------------------------|--|
| B41L | Handling sheets or webs in apparatus or devices for manifolding, duplicating or printing for office or other commercial purposes, or on addressing machines or like series-printing machines |
| B42B | Handling relating to permanently attaching together sheets, quires, or signatures |
| B42C | Handling sheets in book-binding |
| B65B | Handling of sheets or webs in apparatus for, or methods of, packaging articles, not of interest apart from their application in packaging machines |
| B65C | Handling of labels in labelling or tagging apparatus |
| C14B 1/62 | Winding or stacking hides or leather in machines or devices for manufacturing leather |
| D01- D07 | Spinning, weaving, braiding, lace-making, knitting, sewing, making ropes or cables |
| D21F 2/00 | Transferring webs from wet ends to press sections in paper-making |
| F26B 13/00 | Handling fabrics, fibres, yarns or other material in long lengths in drying apparatus |
| G03B | Film-strip handling or handling of pictures in apparatus for taking photographs or for projecting or viewing them |
| G06K 13/00 | Conveying record carriers from one station to another |
| G06M 7/00 | Counting of flat articles, e.g. sheets, carried by a conveyor |
| G11B 15/00 | to Information storage based on relative movement |
| G11B 19/00 | , between record carrier and transducer, |
| G11B 23/00 | , involving handling record carriers for |
| G11B 25/00 | recording or reproducing |
| H01F 41/06 | Manufacturing coils for magnets, inductances, transformers, by winding |
| H01G 13/02 | Machines for winding capacitors |
| H04N 1/00 | Sheet handling not of interest apart from its use in systems for transmission or reproduction of pictures or patterns not varying in time, e.g. facsimile transmission |

2. In this subclass:

- the groups relating to thin material, as defined under (i) of Note (3) below, are primarily intended to cover the handling of articles made of paper or cardboard, but also include the handling of articles made of other materials which have similar characteristics or present similar handling problems, e.g. articles made of sheet- plastics or leather;
- the groups relating to filamentary material (groups [B65H 49/00](#) onwards,) as defined in Note (3) below, cover only methods or devices of general application or interest.

3. In this subclass, the following terms or expressions are used with the meanings indicated:

- "handling" includes feeding, folding (other than in the manufacture of products), guiding, orientating, storing, unwinding, and winding;
- "thin material" includes:
 - i. sheets, signatures, envelopes, blanks, and thin and thin piles thereof (hereinafter referred to as "articles"), and
 - ii. webs, tapes, and films, e.g. of paper, fabric, metal foil, or plastics;
- "filamentary material" includes thread, wires, ropes, cables, and hoses;
- "package" means a mass of filamentary material, formed by coiling, depositing, or winding, with or without a supporting core or former or an enclosing container or receptacle.

- {"yarn" also covers similar filamentary materials.}

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[B65H 19/16](#) covered by [B65H 19/1889](#)
[B65H 35/07](#) covered by [B65H 35/0006](#)
[B65H 77/00](#) covered by [B65H 23/00](#), [B65H 59/00](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0515-F (B65H)

- U B65H 75/00 **Storing webs, tapes, or filamentary material, e.g. on reels (fishing reels [A01K 89/00](#); storing means for record carriers, specially adapted for cooperation with the recording or reproducing apparatus [G11B 23/02](#))**
- U B65H 75/02 • Cores, formers, supports, or holders for coiled, wound, or folded material, e.g. reels, spindles, bobbins, cop tubes, cans {, mandrels or chucks} (packaging aspects [B65D 85/67](#))
- U B65H 75/18 • • Constructional details
- M B65H 75/22 • • • collapsible; with removable parts

WARNING

Group B65H 75/22 is impacted by reclassification into groups B65H 75/2209, B65H 75/2218, B65H 75/2227, B65H 75/2236, B65H 75/2245, B65H 75/2254, B65H 75/2263, B65H 75/2272, B65H 75/2281 and B65H 75/229.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B65H 75/2209 • • • {collapsible by use of hinged or slidable parts; foldable without removing parts}

WARNING

Group B65H 75/2209 is incomplete pending reclassification of documents from group B65H 75/22.

Groups B65H 75/22 and B65H 75/2209 should be considered in order to perform a complete search.

- M B65H 75/2218 • • • {Collapsible hubs}

WARNING

Groups B65H 75/2218 and B65H 75/2227 are incomplete pending reclassification of documents from group B65H 75/22.

Groups B65H 75/22, B65H 75/2218 and B65H 75/2227 should be considered in order to perform a complete search.

- M B65H 75/2236 • • • {Collapsible flanges}

WARNING

Group B65H 75/2236 is incomplete pending reclassification of documents from group B65H 75/22.

Groups B65H 75/22 and B65H 75/2236 should be considered in order to perform a complete search.

- M B65H 75/2245 • • • {connecting flange to hub}

WARNING

Group B65H 75/2245 is incomplete pending reclassification of documents from group B65H 75/22.

- Groups B65H 75/22 and B65H 75/2245 should be considered in order to perform a complete search.
- M B65H 75/2254 . . . {with particular joining means for releasably connecting parts}
- WARNING
Groups B65H 75/2254, B65H 75/2263, B65H 75/2272, B65H 75/2281 and B65H 75/229 are incomplete pending reclassification of documents from group B65H 75/22.
All groups listed in this Warning should be considered in order to perform a complete search.
- M B65H 75/24 . . . adjustable in configuration, e.g. expandible
- WARNING
Group B65H 75/24 is impacted by reclassification into group B65H 75/2495. Groups B65H 75/24 and B65H 75/2495 should be considered in order to perform a complete search.
- M B65H 75/241 . . . {axially adjustable reels or bobbins}
- WARNING
Group B65H 75/241 is impacted by reclassification into groups B65H 75/2413 and B65H 75/2416.
Groups B65H 75/241, B65H 75/2413 and B65H 75/2416 should be considered in order to perform a complete search.
- M B65H 75/2413 . . . {adjustable by threaded means}
- WARNING
Group B65H 75/2413 is incomplete pending reclassification of documents from group B65H 75/241.
Groups B65H 75/241 and B65H 75/2413 should be considered in order to perform a complete search.
- M B65H 75/2416 . . . {with axial positions defined by discrete locations}
- WARNING
Group B65H 75/2416 is incomplete pending reclassification of documents from group B65H 75/241.
Groups B65H 75/241 and B65H 75/2416 should be considered in order to perform a complete search.
- M B65H 75/242 . . . {Expandible spindles, mandrels or chucks, e.g. for securing or releasing cores, holders or packages}
- WARNING
Group B65H 75/242 is impacted by reclassification into groups B65H 75/243, B65H 75/2437, B65H 75/245, B65H 75/2455, B65H 75/246, B65H 75/247, B65H 75/248, B65H 75/2484, B65H 75/2487, B65H 75/249 and B65H 75/2495.
All groups listed in this Warning should be considered in order to perform a complete search.
- M B65H 75/243 . . . {actuated by use of a fluid}
- WARNING
Group B65H 75/243 is incomplete pending reclassification of documents from group B65H 75/242.
Group B65H 75/243 is also impacted by reclassification into group B65H 75/2437.

~~Groups B65H 75/242, B65H 75/243 and B65H 75/2437 should be considered in order to perform a complete search.~~

- M B65H 75/2437 {comprising a fluid-pressure-actuated elastic member, e.g. a diaphragm or a pneumatic tube}

WARNING

~~Group B65H 75/2437 is incomplete pending reclassification of documents from groups B65H 75/242 and B65H 75/243. Groups B65H 75/242, B65H 75/243 and B65H 75/2437 should be considered in order to perform a complete search.~~

- M B65H 75/245 {by deformation of an elastic or flexible material ([B65H 75/2437](#) takes precedence)}

WARNING

~~Group B65H 75/245 is incomplete pending reclassification of documents from group B65H 75/242. Group B65H 75/245 is also impacted by reclassification into group B65H 75/2455. Groups B65H 75/242, B65H 75/245 and B65H 75/2455 should be considered in order to perform a complete search.~~

- M B65H 75/2455 {deformation resulting from axial compression of elastic or flexible material}

WARNING

~~Group B65H 75/2455 is incomplete pending reclassification of documents from groups B65H 75/242 and B65H 75/245. Groups B65H 75/242, B65H 75/245 and B65H 75/2455 should be considered in order to perform a complete search.~~

- M B65H 75/246 {expansion caused by relative rotation around the supporting spindle or core axis}

WARNING

~~Group B65H 75/246 is incomplete pending reclassification of documents from group B65H 75/242. Group B65H 75/246 is also impacted by reclassification into group B65H 75/249. Groups B65H 75/242, B65H 75/246 and B65H 75/249 should be considered in order to perform a complete search.~~

- M B65H 75/247 {using rollers or rods moving relative to a wedge or cam surface}

WARNING

~~Group B65H 75/247 is incomplete pending reclassification of documents from group B65H 75/242. Group B65H 75/247 is also impacted by reclassification into group B65H 75/249. Groups B65H 75/242, B65H 75/247 and B65H 75/249 should be considered in order to perform a complete search.~~

- M B65H 75/248 {expansion caused by actuator movable in axial direction}

WARNING

~~Group B65H 75/248 is incomplete pending reclassification of documents from group B65H 75/242. Group B65H 75/248 is also impacted by reclassification into groups B65H 75/2484 and B65H 75/2487.~~

All groups listed in this Warning should be considered in order to perform a complete search.

M B65H 75/2484 {movable actuator including wedge-like or lobed member}

WARNING

Group B65H 75/2484 is incomplete pending reclassification of documents from groups B65H 75/242 and B65H 75/248. Groups B65H 75/242, B65H 75/248 and B65H 75/2484 should be considered in order to perform a complete search.

M B65H 75/2487 {comprising a linkage}

WARNING

Group B65H 75/2487 is incomplete pending reclassification of documents from groups B65H 75/242 and B65H 75/248. Groups B65H 75/242, B65H 75/248 and B65H 75/2487 should be considered in order to perform a complete search.

M B65H 75/249 {expansion caused by actuator movable in direction perpendicular to or about the axis ([B65H 75/243](#) – [B65H 75/2487](#) take precedence)}

WARNING

Group B65H 75/249 is incomplete pending reclassification of documents from groups B65H 75/242, B65H 75/246 and B65H 75/247. All groups listed in this Warning should be considered in order to perform a complete search.

M B65H 75/2495 {including plural segments or spokes which are individually adjustable}

WARNING

Group B65H 75/2495 is incomplete pending reclassification of documents from groups B65H 75/24 and B65H 75/242. Groups B65H 75/24, B65H 75/242 and B65H 75/2495 should be considered in order to perform a complete search.

Project: MP12088 (B68G)

M B68G 1/00 Loose filling materials for upholstery (**manufacture of the materials, see the relevant classes**)

M B68G 5/00 Resilient upholstery pads (finished upholstery [B68G 11/00](#) {; making upholstery from plastics [B29D 99/0092](#)}; **waddings, fleeces, mats, or like products of fibrous structure, see the relevant classes**)

Project: Unknown (B81)

B81 MICROSTRUCTURAL TECHNOLOGY

NOTES

1. This class covers microstructural devices or systems, including at least one essential element or formation characterised by its very small size typically within the range of 10^{-4} to 10^{-7} meters, i.e. its significant features **can not cannot**, in at least one dimension, be completely discerned without the use of an optical microscope.
2. In this class, the following expressions are used with the meaning indicated:
 - "microstructural devices" covers:
 - i. micromechanical devices comprising movable, flexible or deformable elements; and
 - ii. three-dimensional structures without movable, flexible or deformable elements, comprising microformations designed to accomplish an

essential structural function for interacting with their environment, as opposed to purely electronic or chemical functions, regardless of whether the structures are combined with microelectronic devices or formed from specific materials;

- "microstructural systems" covers:
 - i. systems of cooperating microstructural devices; and
 - ii. microelectro-mechanical or microopto-mechanical systems, which combine on a common substrate the specific features of microstructural devices and electrical or optical components, e.g. for controlling, analysing or signalling the functioning of microstructural devices.

Project: MP12214 (C)

M C

CHEMISTRY; METALLURGY

NOTES

1. In section C, the definitions of groups of chemical elements are as follows:

~~ALKALI METALS: *Alkali metals*: Li, Na, K, Rb, Cs, Fr~~

~~ALKALINE EARTH METALS: *Alkaline earth metals*: Ca, Sr, Ba, Ra~~

~~LANTHANIDES: *Lanthanides*: elements with atomic numbers 57 to 71 inclusive~~

~~RARE EARTHS: *Rare earths*: Sc, Y, Lanthanides~~

~~ACTINIDES: *Actinides*: elements with atomic numbers 89 to 103 inclusive~~

~~REFRACTORY METALS: *Refractory metals*: Ti, V, Cr, Zr, Nb, Mo, Hf, Ta, W~~

~~HALOGENS: *Halogens*: F, Cl, Br, I, At~~

~~NOBLE GASES: *Noble gases*: He, Ne, Ar, Kr, Xe, Rn~~

~~PLATINUM GROUP: *Platinum group*: Os, Ir, Pt, Ru, Rh, Pd~~

~~NOBLE METALS: *Noble metals*: Ag, Au, Platinum group~~

~~LIGHT METALS: *Light metals*: alkali metals, alkaline earth metals, Be, Al, Mg~~

~~HEAVY METALS: *Heavy metals*: metals other than light metals~~

~~IRON GROUP: *Iron group*: Fe, Co, Ni~~

~~NON-METALS: *Non-metals*: H, B, C, Si, N, P, O, S, Se, Te, noble gases, halogens~~

~~METALS: *Metals*: elements other than non-metals~~

~~TRANSITION ELEMENTS: *Transition elements*: elements with atomic numbers 21 to 30 inclusive, 39 to 48 inclusive, 57 to 80 inclusive, 89 upwards~~

2. The following notes are meant to assist in the use of this part of the classification scheme; they must not be read as modifying in any way the elaborations. Section C covers:

- pure chemistry, which covers inorganic compounds, organic compounds, macromolecular compounds, and their methods of preparation;
- Section applied C chemistry, which covers compositions containing the above compounds, such as: glass, ceramics, fertilisers, plastics compositions, paints, products of the petroleum industry. It also covers certain compositions on account of their having particular properties rendering them suitable for certain purposes, as in the case of explosives, dyestuffs, adhesives, lubricants and detergents; covers:

a. pure chemistry, which covers inorganic compounds, organic compounds, macromolecular compounds, and their methods of preparation;

b. applied chemistry, which covers compositions containing the above compounds, such as: glass, ceramics, fertilisers, plastics compositions, paints, products of the petroleum industry. It also covers certain compositions on account of their having particular

- properties rendering them suitable for certain purposes, as in the case of explosives, dyestuffs, adhesives, lubricants, and detergents;
 - c. certain marginal industries, such as the manufacture of coke and of solid or gaseous fuels, the production and refining of oils, fats, and waxes, the fermentation industry, (e.g. brewing and wine-making) the sugar industry;
 - d. certain operations or treatments, which are either purely mechanical, e.g. the mechanical treatment of leather and skins, or partly mechanical, e.g. the treatment of water, or the prevention of corrosion in general;
 - e. metallurgy, ferrous or non-ferrous alloys.
- a. In the case of operations, treatments, products, or articles which have both a chemical and non-chemical part or aspect, the general rule is that the chemical part or aspect is covered by section C.
 - b. In some of these cases, the chemical part or aspect brings with it a non-chemical one, even though purely mechanical, because this latter aspect either is essential to the operation or treatment or constitutes an important element of it; it has seemed, in fact, more logical not to dissociate the different parts or aspects of a coherent whole. This is the case for applied chemistry and for the industries, operations, and treatments mentioned in Notes 1), c), d) and e). For example, furnaces peculiar to the manufacture of glass are covered by class C03 and not by class F27.
 - c. There are, however, some exceptions in which the mechanical (or non-chemical) aspect carries with it the chemical aspect, for example:
 - certain extractive processes in subclass A61K;
 - the chemical purification of air in subclass A61L;
 - chemical methods of fire-fighting in subclass A62D;
 - chemical processes and apparatus in class B01;
 - impregnation of wood in subclass B27K;
 - chemical methods of analysis or testing in subclass G01N;
 - photographic materials and processes in class G03, and generally, the chemical treatment of textiles and the production of cellulose or paper in section D.
 - d. In still other cases, the pure chemical aspect is covered by section C and the applied chemical aspect by another section such as A, B, F, e.g. the use of a substance or composition for
 - treatment of plants or animals covered by subclass A01N;
 - foodstuffs covered by class A23;
 - munitions or explosives covered by class F42.
 - e. When the chemical and mechanical aspects are so closely interlocked that a neat and simple division is not possible, or when certain mechanical processes follow as a natural or logical continuation of a chemical treatment, section C may cover, in addition to the chemical aspect, a part only of the mechanical aspect, e.g. after-treatments of artificial stone covered by class C04. In this latter case a note or a reference is usually given to make the position clear, even if sometimes the division is rather arbitrary.

certain marginal industries, such as the manufacture of coke and of solid or gaseous fuels, the production and refining of oils, fats and waxes, the fermentation industry (e.g., brewing and wine-making), the sugar industry;

- *certain operations or treatments, which are either purely mechanical, e.g., the mechanical treatment of leather and skins, or partly mechanical, e.g., the treatment of water or the prevention of corrosion in general;*
- *metallurgy, ferrous or non-ferrous alloys.*

3. In all sections of the CPC, in the absence of an indication to the contrary, the Periodic Table of chemical elements referred to is the one with 18 groups as represented in the table below.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|--------------------|-------------|-----|-------------|-----|----|-----|-----|----------|----|-----|------|-----|----|-----|------|-------|----|----|
| | IA | IIA | IIIB | IVB | VB | VIB | VII | [-VIII-] | IB | IIB | IIIA | IVA | VA | VIA | VIIA | VIIIA | | |
| Period/ Periods | | | | | | | | | | | | | | | | | | |
| 1 | H | | | | | | | | | | | | | | | | | He |
| 2 | Li | Be | | | | | | | | | | | B | C | N | O | F | Ne |
| 3 | Na | Mg | | | | | | | | | | | Al | Si | P | S | Cl | Ar |
| 4 | K | Ca | Sc | Ti | V | Cr | Mn | Fe | Co | Ni | Cu | Zn | Ga | Ge | As | Se | Br | Kr |
| 5 | Rb | Sr | Y | Zr | Nb | Mo | Tc | Ru | Rh | Pd | Ag | Cd | In | Sn | Sb | Te | I | Xe |
| 6 | Cs | Ba | Lanthanides | Hf | Ta | W | Re | Os | Ir | Pt | Au | Hg | Tl | Pb | Bi | Po | At | Rn |
| 7 | Fr | Ra | Actinides | Rf | Db | Sg | Bh | Hs | Mt | Ds | Rg | Cn | Nh | Fl | Mc | Lv | Ts | Og |
| | Lanthanides | | | La | Ce | Pr | Nd | Pm | Sm | Eu | Gd | Tb | Dy | Ho | Er | Tm | Yb | Lu |
| | Actinides | | | Ac | Th | Pa | U | Np | Pu | Am | Cm | Bk | Cf | Es | Fm | Md | No | Lr |

4. In the case of operations, treatments, products or articles having both a chemical and a non-chemical part or aspect, the general rule is that the chemical part or aspect is covered by section C.

5. In some of these cases, the chemical part or aspect brings with it a non-chemical one, even though purely mechanical, because this latter aspect either is essential to the operation or treatment or constitutes an important element thereof. It has seemed, in fact, more logical not to dissociate the different parts or aspects of a coherent whole. This is the case for applied chemistry and for the industries, operations and treatments mentioned in Note (2) bullets 2, 3, 4 and 5. For example, furnaces peculiar to the manufacture of glass are covered by class C03 and not by class F27.

6. There are, however, some exceptions in which the mechanical (or non-chemical) aspect carries with it the chemical aspect, for example:

- certain extractive processes, in subclass A61K;
- the chemical purification of air, in subclass A61L;
- chemical methods of fire-fighting, in subclass A62D;
- chemical processes and apparatus, in class B01;
- impregnation of wood, in subclass B27K;
- chemical methods of analysis or testing, in subclass G01N;
- photographic materials and processes, in class G03, and, generally, the chemical treatment of textiles and the production of cellulose or paper, in section D.

7. In still other cases, the pure chemical aspect is covered by section C and the applied chemical aspect by another section, such as A, B or F, e.g., the use of a substance or composition for:

- treatment of plants or animals, covered by subclass A01N;
- foodstuffs, covered by class A23;
- ammunition or explosives, covered by class F42

8. When the chemical and mechanical aspects are so closely interlocked that a neat and simple division is not possible, or when certain mechanical processes follow as a natural or logical continuation of a chemical treatment, section C may cover, in addition to the chemical aspect, a part only of the mechanical aspect, e.g., after-treatment of artificial stone, covered by class C04. In this latter case, a note or a reference is usually given to make the position clear, even if sometimes the division is rather arbitrary.

Project: MP11853 (C01B)

U C01B 37/00

Compounds having molecular sieve properties but not having base-exchange properties

NOTE

Compounds classified in main group C01B 37/00 are also classified in other groups of class C01 according to their composition

M C01B 37/04

• Aluminophosphates (~~APO-compounds~~)[APO compounds]

U C01B 37/06

• Aluminophosphates containing other elements, e.g. metals, boron

- M C01B 37/08 · · Silicoaluminophosphates (~~SAPO-compounds~~)[SAPO compounds] {, e.g. CoSAPO}

Project: MP11853 (C01G)**U C01G 21/00 Compounds of lead**

- U C01G 21/02 · Oxides
- M C01G 21/04 · · Lead suboxide (~~[Pb₂O]~~)
- M C01G 21/06 · · Lead monoxide (~~PbO~~)[PbO]
- M C01G 21/08 · · Lead dioxide (~~[PbO₂]~~)
- M C01G 21/10 · · Red lead (~~[Pb₃O₄]~~)

U C01G 49/00 Compounds of iron

- U C01G 49/02 · Oxides; Hydroxides {(C01G 49/0018 takes precedence)}
- M C01G 49/04 · · Ferrous oxide (~~FeO~~)[FeO]
- M C01G 49/06 · · Ferric oxide (~~[Fe₂O₃]~~)
- M C01G 49/08 · · Ferroso-ferric oxide (~~[Fe₃O₄]~~)

Project: MP12088 (C07C)

- U C07C 405/00 Compounds containing a five-membered ring having two side-chains in ortho position to each other, and having oxygen atoms directly attached to the ring in ortho position to one of the side-chains, one side-chain containing, not directly attached to the ring, a carbon atom having three bonds to hetero atoms with at the most one bond to halogen, and the other side-chain having oxygen atoms attached in gamma-position to the ring, e.g. prostaglandins {; Analogues or derivatives thereof}**
- U C07C 405/005 · {Analogues or derivatives having the five membered ring replaced by other rings}
- M C07C 405/0058 · · {having the side-chains or their analogues or derivatives attached to a not condensed ring different from a five-membered ring (~~five-membered ring-see 124 CA and sub-groups~~)}

Project: MP12214 (C07F)

M C07F ACYCLIC, CARBOCYCLIC OR HETEROCYCLIC COMPOUNDS CONTAINING ELEMENTS OTHER THAN CARBON, HYDROGEN, HALOGEN, OXYGEN, NITROGEN, SULFUR, SELENIUM OR TELLURIUM (metal-containing porphyrins [C07D 487/22](#))

NOTES

1. Attention is drawn to Note (3) *after class [C07](#)*, which defines the last place priority rule applied in the range of subclasses [C07C-C07K](#) and within these subclasses.
2. Attention is drawn to Note (6) following the title of class [C07](#).
- ~~3. Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the periodic table of chemical elements the IPC refers.~~
- 3. Therapeutic activity of compounds is further classified in subclass [A61P](#).*
4. In this subclass-, organic acid salts, alcoholates, phenates, chelates or mercaptides are classified as the parent compounds.
5. {Compounds containing Se or Te are classified with their sulfur homologues.}
6. {A hydrocarbon chain is considered to be terminated by a heteroatom or by a carbon atom having three bonds to heteroatoms with at the most one to halogen.}
7. {When groups, e.g. aromatic or aliphatic groups, are mentioned without further indications, it means that the group concerned can be further substituted. Otherwise it will be indicated, e.g. [C07F 9/11](#) with hydroxyalkyl compounds without further substituents on alkyl.}

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
[C07F 9/6593](#) covered by [C07F 9/65815](#)
2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M C07F 1/00 Compounds containing elements of Groups 1 or 11 of the Periodic System Table

M C07F 3/00 Compounds containing elements of Groups 2 or 12 of the Periodic System Table

M C07F 5/00 Compounds containing elements of Groups 3 or 13 of the Periodic System Table

M C07F 7/00 Compounds containing elements of Groups 4 or 14 of the Periodic System Table

M C07F 9/00 Compounds containing elements of Groups 5 or 15 of the Periodic System Table

M C07F 9/005 · {Compounds of elements of Group 5 of the Periodic System Table without metal-carbon linkages}

Project: MP11853 (C07F)

U C07F 9/02 · Phosphorus compounds (sugar phosphates [C07H 11/04](#); nucleotides [C07H 19/00](#), [C07H 21/00](#); nucleic acids [C07H 21/00](#))

U C07F 9/28 · · with one or more P—C bonds

- M C07F 9/30 . . . Phosphinic acids $[R_2P(=O)(OH)]$; *Thiophosphinic acids* {;*Thiophosphinic acids* {, i.e. $[R_2P(=X_1)(XH)X_2H]$ ($X = S, Se$), X_1, X_2 are each independently O, S or Se}}}
- M C07F 9/38 . . . Phosphonic acids $[RP(=O)(OH)_2]$; *Thiophosphonic acids* {;*Thiophosphonic acids* {, i.e. $[RP(=X_1)(XH)_2X_2H]$ ($X = S, Se$), X_1, X_2 are each independently O, S or Se}}}
- M C07F 9/46 . . . Phosphinous acids $[R_2=P-OHPOH]$, $[R_2P(=O)H]$; *Thiophosphinous acids* {including $[R_2PSH]$; *Thiophosphinous acids*; *Aminophosphines* $[R_2-P-NH_2]$ {including $R_2P(=O)HP(=S)H$ }; *Aminophosphines* $[R_2PNH_2]$; *derivatives* *Derivatives* thereof}
- M C07F 9/48 . . . Phosphonous acids $R-P[RP(OH)_2]$ {including $[RHP(=O)(OH)]$ }; *Thiophosphonous acids* {including $[RP(SH)_2]$, $[RHP(=O)(OH)S(SH)]$ }; *Derivatives* thereof}

Project: MP12214 (C07F)

- M C07F 11/00 **Compounds containing elements of Groups 6 or 16 of the Periodic System Table**
- M C07F 13/00 **Compounds containing elements of Groups 7 or 17 of the Periodic System Table**
- M C07F 15/00 **Compounds containing elements of Groups 8, 9, 10 or 18 of the Periodic System Table**

Project: MP11853 (C07K)

- U C07K 14/00 **Peptides having more than 20 amino acids; Gastrins; Somatostatins; Melanotropins; Derivatives thereof**
- U C07K 14/005 . . . from viruses
- NOTE
When classifying in this group, subject-matter related to viral proteins shall be classified by the symbol [C07K 14/005](#) together with (a number of) appropriate indexing codes out of [C12N 2710/00-C12N 2795/00](#)
- WARNING
1. From March 15, 2012 groups [C07K 14/01](#) - [C07K 14/19](#) and subgroups thereof are no longer used for the classification of new documents. 2. Reclassification of the back-file follows the principle outlined in the Note here above
- U C07K 14/08 . . . RNA viruses
- U C07K 14/15 . . . Retroviridae, e.g. bovine leukaemia virus, feline leukaemia virus human T-cell leukaemia-lymphoma virus
- M C07K 14/155 . . . Lentiviridae, e.g. *human immunodeficiency virus [HIV]*, visna-maedi virus; *equine infectious virus, FIV, SIV or equine infectious anaemia virus*
- U C07K 14/195 . . . from bacteria
- NOTE
In groups [C07K 14/20](#) - [C07K 14/365](#), where appropriate, after the bacteria terminology, the indication of the order (O), family (F) or genus (G) of the bacteria is given in brackets.
- U C07K 14/32 . . . from Bacillus (G)
- M C07K 14/325 . . . Bacillus thuringiensis crystal *protein (delta-endotoxin)peptides, i.e. delta-endotoxins*

- U C07K 14/435 · from animals; from humans
- U C07K 14/475 · · Growth factors; Growth regulators
- M C07K 14/485 · · · Epidermal growth factor [EGF] (~~urogastrone~~), *i.e.* urogastrone
- M C07K 14/50 · · · Fibroblast growth ~~factors~~factor [FGF]
- U C07K 14/575 · · Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin [C07K 14/665](#), e.g. corticotropin [C07K 14/695](#))
- M C07K 14/59 · · · Follicle-stimulating hormone [FSH]; Chorionic gonadotropins, ~~e.g. HCG~~*e.g.* hCG [*human chorionic gonadotropin*]; Luteinising hormone [LH]; Thyroid-stimulating hormone [TSH]
- M C07K 14/60 · · · Growth-~~hormone releasing factors~~ (~~hormone-releasing factor~~ [GH-RF] (~~Somatoliberin~~), *i.e.* somatoliberin
- M C07K 14/61 · · · Growth ~~hormones~~hormone [GH] (~~Somatotropin~~), *i.e.* somatotropin
- M C07K 14/635 · · · Parathyroid hormone (~~parathormone~~), *i.e.* parathormone; Parathyroid hormone-related peptides
- M C07K 14/65 · · · Insulin-like growth factors (~~Somatomedins~~), *i.e.* somatomedins, e.g. IGF-1, IGF-2
- M C07K 14/78 · · Connective tissue peptides, e.g. collagen, elastin, laminin, fibronectin, vitronectin; *or* cold insoluble globulin [CIG]

Project: MP12214 (C08K)**U C08K 3/00 Use of inorganic substances as compounding ingredients**NOTE

In this group, C-Sets are used. The detailed information about the C-Sets construction and the associated syntax rules is present in the Definitions of [C08K](#).

- U C08K 3/10 · Metal compounds
- M C08K 3/105 · · Compounds containing metals of Groups 1 to 3 or *of* Groups 11 to 13 of the Periodic ~~system~~Table
- M C08K 3/11 · · Compounds containing metals of Groups 4 to 10 or *of* Groups 14 to 16 of the Periodic ~~system~~Table

Project: MP11853 (C09F)**M C09F NATURAL RESINS; FRENCH POLISH; DRYING-OILS; ~~DRIERS~~ (~~SICCATIVES~~)OIL DRYING AGENTS, *i.e.* ~~SICCATIVES~~; TURPENTINE**WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M C09F 9/00 Compounds to be used as driers (~~siccatives~~), *i.e.* ~~siccatives~~**Project: RP11790 (C11D)****M C11D 11/00 Special methods for preparing compositions containing mixtures of detergents (~~;~~ ~~Methods for using cleaning compositions~~)**

- D C11D 11/0005 · {Special-cleaning or washing methods}
<administratively transferred to [C11D 2111/40](#) ADD>
- D C11D 11/0011 · · {characterised by the objects to be cleaned}
<administratively transferred to [C11D 2111/10](#) ADD>
- D C11D 11/0017 · · · {"Soft" surfaces, e.g. textiles}
<administratively transferred to [C11D 2111/12](#) ADD>

- D C11D 11/0023 . . . {"Hard" surfaces}
<administratively transferred to [C11D 2111/14](#) ADD>
- D C11D 11/0029 {Metals}
<administratively transferred to [C11D 2111/16](#) ADD>
- D C11D 11/0035 {Glasses or plastics}
<administratively transferred to [C11D 2111/18](#) ADD>
- D C11D 11/0041 {Industrial or commercial equipment, e.g. reactors, tubes or engines
(C11D 11/0047 takes precedence)}
<administratively transferred to [C11D 2111/20](#) ADD>
- D C11D 11/0047 {Electronic devices, e.g. PCBs or semiconductors}
<administratively transferred to [C11D 2111/22](#) ADD>
- D C11D 11/0052 {Mineral surfaces, e.g. stones, frescoes, plaster, walls or concrete}
<administratively transferred to [C11D 2111/24](#) ADD>
- D C11D 11/0058 . . {involving the application of foam or a temporary coating on the surface to be
cleaned}
<administratively transferred to [C11D 2111/42](#) ADD>
- D C11D 11/0064 . . {Multi-step methods}
<administratively transferred to [C11D 2111/44](#) ADD>
- D C11D 11/007 . . {involving applying energy, e.g. irradiation}
<administratively transferred to [C11D 2111/46](#) ADD>
- D C11D 11/0076 . . {Regeneration of cleaning solutions}
<administratively transferred to [C11D 2111/48](#) ADD>

U C11D 19/00 Recovery of glycerol from a saponification liquor

N C11D 2111/00 - C11D 2111/00 Objects cleaned; Non-standard cleaning processes

**N C11D 2111/00 Cleaning compositions characterised by the objects to be cleaned;
Cleaning compositions characterised by non-standard cleaning or washing
processes**

- N C11D 2111/10 . . Objects to be cleaned
- N C11D 2111/12 . . . Soft surfaces, e.g. textile
- N C11D 2111/14 . . . Hard surfaces
- N C11D 2111/16 Metals
- N C11D 2111/18 Glass; Plastics
- N C11D 2111/20 Industrial or commercial equipment, e.g. reactors, tubes or engines
- N C11D 2111/22 Electronic devices, e.g. PCBs or semiconductors
- N C11D 2111/24 Mineral surfaces, e.g. stones, frescoes, plasters, walls or concretes
- N C11D 2111/40 . . Specific cleaning or washing processes
- N C11D 2111/42 . . Application of foam or a temporary coating on the surface to be cleaned
- N C11D 2111/44 . . Multi-step processes
- N C11D 2111/46 . . applying energy, e.g. irradiation
- N C11D 2111/48 . . Regeneration of cleaning solutions

Project: MP11853 (C12C)

U C12C 7/00 Preparation of wort (malt extract [C12C 1/18](#))

M C12C 7/14 · Clarifying-wort (Läuterung) *Lautering, i.e. clarifying wort*

Project: MP12088 (C30B)

M C30B 13/00 Single-crystal growth by zone-melting; Refining by zone-melting (C30B 17/00 takes precedence; by changing the cross-section of the treated solid C30B 15/00; under a protective fluid C30B 27/00; ~~zone-refining of specific materials, see the relevant subclasses for the materials; for the growth of homogeneous polycrystalline material with defined structure C30B 28/00~~)

Project: MP12214 (C30B)

M C30B 29/00 Single crystals or homogeneous polycrystalline material with defined structure characterised by the material or by their shape

NOTE

1. In groups C30B 29/02 - ~~C30B 29/58~~ C30B 29/54, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, a material is classified in the last appropriate place.

2. Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the Periodic Table of chemical elements the CPC refers. In this group, the system used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.

Project: MP12088 (D01G)

M D01G 13/00 Mixing, e.g. blending, fibres; Mixing non-fibrous materials with fibres (~~mixing of fibres combined with other operations, e.g. bale-breaking of fibre-opening, see appropriate groups for such operations~~)

Project: MP12088 (D04G)

M D04G MAKING NETS BY KNOTTING OF FILAMENTARY MATERIAL; MAKING KNOTTED CARPETS OR TAPESTRIES; KNOTTING NOT OTHERWISE PROVIDED FOR (binding knotters for harvesters A01D 59/04; wire netting B21F; tying articles by knotting B65B; knotting in association with winding or unwinding B65H 69/00; knotting in weaving D03J; ~~making nets, carpets, or tapestries by other techniques, see the relevant subclasses~~)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP12088 (D06B)

U D06B 23/00 Component parts, details, or accessories of apparatus or machines, specially adapted for the treating of textile materials, not restricted to a particular kind of apparatus, provided for in groups D06B 1/00 - D06B 21/00

M D06B 23/20 · Arrangements of apparatus for treating processing-liquids, -gases or -vapours, e.g. purification, filtration, ~~distillation or distillation~~ (such apparatus per se, see the relevant classes for the apparatus)

Project: RP12064 (D06F)

U D06F 39/00 Details of washing machines not specific to a single type of machines covered by groups D06F 9/00 - D06F 27/00 (control of washing machines D06F 33/00, D06F 34/00)

- F D06F 39/006
(Frozen) • {Recovery arrangements, e.g. for the recovery of energy or water}
- WARNING**
Group [D06F 39/006](#) is no longer used for the classification of documents as of January 1, 2024.
The content of this group is being reclassified into groups [D06F 39/20](#) and [D06F 39/30](#).
Groups [D06F 39/006](#), [D06F 39/20](#) and [D06F 39/30](#) should be considered in order to perform a complete search.
- D D06F 39/008 • {Steam-generating arrangements}
<administratively transferred to [D06F 39/40](#)>
- U D06F 39/12 • Casings; Tubs
- U D06F 39/14 • • Doors or covers; Securing means therefor
- N D06F 39/20 • Arrangements for water recovery
- WARNING**
Group [D06F 39/20](#) is incomplete pending reclassification of documents from group [D06F 39/006](#).
Groups [D06F 39/006](#) and [D06F 39/20](#) should be considered in order to perform a complete search.
- N D06F 39/30 • Arrangements for energy recovery
- WARNING**
Group [D06F 39/30](#) is incomplete pending reclassification of documents from group [D06F 39/006](#).
Groups [D06F 39/006](#) and [D06F 39/30](#) should be considered in order to perform a complete search.
- N D06F 39/40 • Steam generating arrangements

Project: MP12185 (D06F)

- U D06F 2103/00 Parameters monitored or detected for the control of domestic laundry washing machines, washer-dryers or laundry dryers
- M D06F 2103/26 • **Unbalance***Imbalance*; Noise level

Project: MP12214 (D06M)

- M D06M **TREATMENT, NOT PROVIDED FOR ELSEWHERE IN CLASS [D06](#), OF FIBRES, THREADS, YARNS, FABRICS, FEATHERS OR FIBROUS GOODS MADE FROM SUCH MATERIALS**
- NOTES**
1. In each of the groups [D06M 11/00](#) - [D06M 15/00](#), *the last place priority rule is applied, i.e. at each hierarchical level*, in the absence of an indication to the contrary, a substance is classified in the last appropriate place.
- 2. Within each one of main groups [D06M 11/00](#) - [D06M 15/00](#), a mixture of substances is classified at least according to the essential ingredient. If more than one ingredient is essential, the mixture is classified, in the absence of an indication to the contrary, according to the essential ingredient which belongs to the last appropriate place in the sequence of substances;**
2. In this subclass:
- a. *within each one of main groups [D06M 11/00](#) - [D06M 15/00](#), a mixture of substances is classified at least according to the essential ingredient. If more than one ingredient is essential, the mixture is classified, in the absence of an indication to the contrary, according to the essential*

ingredient which belongs to the last appropriate place in the sequence of substance;

b. treatment by mixtures of substances covered by two or more of main groups [D06M 11/00](#) - [D06M 15/00](#) is classified in each appropriate main group.

~~3. Treatment by mixtures of substances covered by two or more of main groups [D06M 11/00](#) - [D06M 15/00](#) is classified in each appropriate main group.~~

~~4.~~ 3. In this subclass, the treatment of textiles, not provided for elsewhere in class [D06](#), is classified according to the following principles:

- a. ~~Treatment~~ treatment of textiles characterised by the treating agent in groups [D06M 11/00](#) - [D06M 16/00](#);
- b. ~~Treatment~~ treatment of textiles characterised by the process in group [D06M 23/00](#).

4. Attention is drawn to Note (3) after the title of section [C](#), which Note indicates to which version of the Periodic Table of chemical elements the CPC refers.

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

U D06M 11/00

Treating fibres, threads, yarns, fabrics or fibrous goods made from such materials, with inorganic substances or complexes thereof; Such treatment combined with mechanical treatment, e.g. mercerising ([D06M 10/00](#) takes precedence)

NOTES

1. If a compound used in the treatment is characterised by its cation, it is classified in group [D06M 11/00](#); metallisation by treatment with a metal salt, followed by reduction, is classified in group [D06M 11/83](#).
2. In this group, the following term is used with the meaning indicated:
 - "treatment" means, in the absence of an indication to the contrary, the treatment which leads to the end product, e.g. treatment with barium sulfate can mean treatment with barium chloride and with sulfuric acid in two separate steps

- | | | |
|---|-------------|---|
| U | D06M 11/07 | • with halogens; with halogen acids or salts thereof; with oxides or oxyacids of halogens or salts thereof |
| U | D06M 11/11 | • • with halogen acids or salts thereof |
| M | D06M 11/13 | • • • Ammonium halides or halides of elements of Groups 1 or 11 of the Periodic System Table |
| M | D06M 11/155 | • • • Halides of elements of Groups 2 or 12 of the Periodic System Table |
| M | D06M 11/17 | • • • Halides of elements of Groups 3 or 13 of the Periodic System Table |
| M | D06M 11/20 | • • • Halides of elements of Groups 4 or 14 of the Periodic System Table , e.g. zirconyl chloride |
| M | D06M 11/22 | • • • Halides of elements of Groups 5 or 15 of the Periodic System Table |
| M | D06M 11/24 | • • • Halides of elements of Groups 6 or 16 of the Periodic System Table , e.g. chromyl chloride |
| M | D06M 11/26 | • • • Halides of elements of Group Groups 7 of the Periodic System Table (interhalogen compounds D06M 11/09) |
| M | D06M 11/28 | • • • Halides of elements of Groups 8, 9, 10 or 18 of the Periodic System Table |
| U | D06M 11/32 | • with oxygen, ozone, ozonides, oxides, hydroxides or percompounds; Salts derived from anions with an amphoteric element-oxygen bond (with water or heavy water D06M 11/05 ; with oxides or oxyacids of halogens D06M 11/30) |
| U | D06M 11/36 | • • with oxides, hydroxides or mixed oxides; with salts derived from anions with an amphoteric element-oxygen bond |

- M D06M 11/38 · · · Oxides or hydroxides of elements of Groups 1 or 11 of the Periodic [System Table](#)
- M D06M 11/44 · · · Oxides or hydroxides of elements of Groups 2 or 12 of the Periodic [System Table](#); Zincates; Cadmates
- M D06M 11/45 · · · Oxides or hydroxides of elements of Groups 3 or 13 of the Periodic [System Table](#); Aluminates
- M D06M 11/46 · · · Oxides or hydroxides of elements of Groups 4 or 14 of the Periodic [System Table](#); Titanates; Zirconates; Stannates; Plumbates
- M D06M 11/47 · · · Oxides or hydroxides of elements of Groups 5 or 15 of the Periodic [System Table](#); Vanadates; Niobates; Tantalates; Arsenates; Antimonates; Bismuthates
- M D06M 11/49 · · · Oxides or hydroxides of elements of Groups 8, ~~9, 10~~ [9, 10](#) or 18 of the Periodic [System Table](#); Ferrates; Cobaltates; Nickelates; Ruthenates; Osmates; Rhodates; Iridates; Palladates; Platinates
- U D06M 11/51 · with sulfur, selenium, tellurium, polonium or compounds thereof (with persulfuric acids or their salts [D06M 11/50](#))
- U D06M 11/55 · · with sulfur trioxide; with sulfuric acid or thiosulfuric acid or their salts
- M D06M 11/56 · · · Sulfates or thiosulfates other than of elements of Groups 3 or 13 of the Periodic [System Table](#)
- M D06M 11/57 · · · Sulfates or thiosulfates of elements of Groups 3 or 13 of the Periodic [System Table](#), e.g. alums

Project: MP12088 (E01C)

- U E01C 1/00 **Design or layout of roads, e.g. for noise abatement, for gas absorption (design or layout of sports grounds [A63C 19/00](#); design or layout of airfields [B64F](#) {, of helicopter landing stages [E01F 3/00](#)})**
- M E01C 1/002 · {Design or lay-out of roads, e.g. street systems, cross-sections ([E01C 1/005](#), [E01C 1/007](#) take precedence; of footpaths, sidewalks, berms, hard shoulders or cycle tracks [E01C 15/00](#)); Design for noise abatement, e.g. sunken road (reducing transmission of structure-born noise [E01C 3/06](#); ~~arrangement of means for absorbing surfacings see the groups for the respective surfacings; other arrangements for absorbing or reflecting air transmitted road traffic noise, e.g. barriers [E01F 8/00](#); arrangements for absorbing or reflecting air transmitted road traffic noise, e.g. barriers [E01F 8/00](#))} }~~

Project: MP12088 (E03B)

- U E03B 7/00 **Water main or service pipe systems (pipes or tubes in general [F16L](#))**
- M E03B 7/07 · Arrangement of devices, e.g. filters, flow controls, measuring devices, siphons; ~~or valves, in the pipe systems (devices per se, see the relevant classes for these devices)~~

Project: MP12088 (E04B)

- M E04B 1/00 **Constructions in general; Structures which are not restricted either to walls, e.g. partitions, or floors or ceilings or roofs (scaffolds, shutterings [E04G](#); structures specially adapted for buildings for special purposes, general layout of buildings, e.g. modular co-ordination, [E04H](#); ~~the particular parts of buildings, see the relevant groups for those parts~~)**
- M E04B 1/62 · Insulation or other protection; Elements or use of specified material therefor (chemical compositions [C01](#) - [C11](#); implements for applying insulation or sealings [E04F 21/00](#); buildings to withstand, or to provide protection against, external undesired influences [E04H 9/00](#); sealing pipes in walls or partitions [F16L 5/02](#); shielding against dangerous radiation [G21F](#); ~~constructions of particular parts of buildings, see the relevant groups for those parts~~)

Project: MP12088 (E04C)

M E04C 5/00 Reinforcing elements, e.g. for concrete; Auxiliary elements therefor ~~{(methods or devices for making reinforcing materials B21D);}~~ material composition ~~{C04B};,~~ C21, C22; ~~arrangements of reinforcing elements; see the relevant subclasses)~~

NOTES

1. In this group, the following terms or expressions are used with the meanings indicated:

- "reinforcing" means increasing any physical strength characteristic of the end product, e.g. compressive or flexural strength;
- "elements" includes relatively large bodies, e.g. steel bars, as well as relatively small discrete bodies of any form, e.g. glass fibres.

2. Discrete reinforcing elements, which are small compared with the reinforced building element, only characterised by their composition are classified in C04B, e.g. steel fibres C04B 14/48, plastic elements with a shape other than granular or fibrous C04B 16/12

Project: MP12088 (E04D)

M E04D 13/00 Special arrangements or devices in connection with roof coverings; ~~{Protection against birds};}~~ Roof drainage {; {Sky-lights} (ventilation tiles E04D 1/30; ventilation slabs E04D 3/40; internal channels E04F 17/00; ~~elements therefor; see the relevant groups)~~

Project: MP12088 (E04F)

M E04F 21/00 Implements for finishing work on buildings (for working or treating building elements of stone or stone-like material B28D; ~~designed specifically for special details provided for in the other groups of this subclass; see the relevant groups for the details {working measures on existing buildings E04G 23/00; measuring angles or linear dimensions in general G01B, G01C; measuring inclination; e.g. by clinometers or levels G01C 9/00; reference lines, planes or sectors, generated by active optical means G01C 15/004})~~

Project: Unknown (E05B)

U E05B 45/00 Alarm locks

U E05B 45/06 · Electric alarm locks ~~{(E05B 45/005 takes precedence)}~~

U E05B 2045/065 · · {Switch or sensor type used in alarm locks}

M E05B 2045/068 · · · {Piezo-electric Piezoelectric sensors}

Project: RP11523 (E05F)

U E05F 1/00 Closers or openers for wings, not otherwise provided for in this subclass

U E05F 1/08 · spring-actuated {, e.g. for horizontally sliding wings (counterbalancing sliding or lifting wings E05D; springs per se F16F, e.g. gas-springs F16F 9/00)}

M E05F 1/10 · · for swinging wings {, e.g. counterbalance ~~(spring-assisted actuation of lids or covers of refuse receptacles B65F 1/1623)}~~

M E05F 1/12 · · · Mechanisms in the shape of hinges or pivots, operated by springs ~~{(for hinges with two or more pins E05D 3/06)}~~

- U E05F 5/00** Braking devices, e.g. checks; Stops; Buffers (construction of pneumatic or liquid braking devices [E05F 3/00](#); braking devices, buffers or end stops on drawers for tables, cabinets or like furniture [A47B 88/473](#); combined with devices for holding wings open [E05C 17/00](#); devices for limiting opening of wings or for holding wings open by a movable member extending between frame and wing [E05C 17/04](#))
- M E05F 5/003** · {for sliding wings (~~E05D 13/04 takes precedence~~ *Fasteners specially adapted for holding sliding wings open E05D 13/04*)}
- U E05F 7/00** Accessories for wings not provided for in other groups of this subclass (specially adapted for furniture [A47B 95/00](#); door-lifters [B66F](#), [E04F 21/00](#); knobs or handles [E05B](#))
- M E05F 7/08** · ~~Special means~~ *Means* for transmitting movements between vertical and horizontal sliding bars, rods, or cables ~~{(E05D 15/5208 takes precedence means for transmitting movements between vertical and horizontal sliding bars, rods, or cables, for the fastening of wings E05C 9/24 {; with means for transmitting movements between vertical and horizontal sliding bars, rods or cables E05D 15/5208})}~~
- M E05F 9/00 - E05F 17/00** **Operating mechanisms for wings** ~~(for safeguarding bank teller windows E05G 5/00; for interconnected louvres E06B 7/086; for blinds or roll-type closures E06B 9/00)~~
- U E05F 11/00** **Man-operated mechanisms for operating wings, including those which also operate the fastening (connecting mechanisms for a plurality of wings E05F 17/00)**
- C E05F 11/38** · for sliding windows, e.g. vehicle windows, to be opened or closed by vertical movement
- WARNING**
Group [E05F 11/38](#) is impacted by reclassification into groups [E05F 15/6892](#), [E05F 15/6894](#), [E05F 15/6896](#), [E05F 15/6899](#), [E05F 15/6901](#), [E05F 15/6903](#), [E05F 15/6905](#), [E05F 15/6907](#), [E05F 15/6909](#), [E05F 15/6911](#), [E05F 15/6914](#), [E05F 15/6916](#) and [E05F 15/6918](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C E05F 11/382** · · {for vehicle windows ([E05F 11/40](#) - [E05F 11/52](#) take precedence)}
- WARNING**
Group [E05F 11/382](#) is impacted by reclassification into groups [E05F 15/6892](#), [E05F 15/6894](#), [E05F 15/6896](#), [E05F 15/6899](#), [E05F 15/6901](#), [E05F 15/6903](#), [E05F 15/6905](#), [E05F 15/6907](#), [E05F 15/6909](#), [E05F 15/6911](#), [E05F 15/6914](#), [E05F 15/6916](#) and [E05F 15/6918](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C E05F 11/385** · · · {Fixing of window glass to the carrier of the operating mechanism}
- WARNING**
Group [E05F 11/385](#) is impacted by reclassification into groups [E05F 15/6892](#) and [E05F 15/6894](#).
Groups [E05F 11/385](#), [E05F 15/6892](#) and [E05F 15/6894](#) should be considered in order to perform a complete search.
- C E05F 2011/387** · · · · {using arrangements in the window glass, e.g. holes}
- WARNING**
Group [E05F 2011/387](#) is impacted by reclassification into group [E05F 15/6894](#).

Groups E05F 2011/387 and E05F 15/6894 should be considered in order to perform a complete search.

- C E05F 11/40
 - operated by screw mechanism

WARNING

Group E05F 11/40 is impacted by reclassification into group E05F 15/6896. Groups E05F 11/40 and E05F 15/6896 should be considered in order to perform a complete search.

- C E05F 11/405
 - • {for vehicle windows}

WARNING

Group E05F 11/405 is impacted by reclassification into group E05F 15/6896. Groups E05F 11/405 and E05F 15/6896 should be considered in order to perform a complete search.

- C E05F 11/42
 - operated by rack bars and toothed wheels {or other push-pull mechanisms}

WARNING

Group E05F 11/42 is impacted by reclassification into groups E05F 15/6899 and E05F 15/6901. Groups E05F 11/42, E05F 15/6899 and E05F 15/6901 should be considered in order to perform a complete search.

- C E05F 11/423
 - • {for vehicle windows}

WARNING

Group E05F 11/423 is impacted by reclassification into groups E05F 15/6899 and E05F 15/6901. Groups E05F 11/423, E05F 15/6899 and E05F 15/6901 should be considered in order to perform a complete search.

- C E05F 11/426
 - • • {Flexible rack-and-pinion arrangements}

WARNING

Group E05F 11/426 is impacted by reclassification into group E05F 15/6901. Groups E05F 11/426 and E05F 15/6901 should be considered in order to perform a complete search.

- C E05F 11/44
 - operated by one or more lifting arms

WARNING

Group E05F 11/44 is impacted by reclassification into groups E05F 15/6903 and E05F 15/6905. Groups E05F 11/44, E05F 15/6903 and E05F 15/6905 should be considered in order to perform a complete search.

- C E05F 11/445
 - • {for vehicle windows}

WARNING

Group E05F 11/445 is impacted by reclassification into groups E05F 15/6903 and E05F 15/6905. Groups E05F 11/445, E05F 15/6903 and E05F 15/6905 should be considered in order to perform a complete search.

- C E05F 11/46
 - operated by lazy-tongs mechanism

WARNING

Group E05F 11/46 is impacted by reclassification into groups E05F 15/6903 and E05F 15/6905.

Groups E05F 11/46, E05F 15/6903 and E05F 15/6905 should be considered in order to perform a complete search.

- C E05F 11/465
 - • • {for vehicle windows}

WARNING

*Group E05F 11/465 is impacted by reclassification into groups E05F 15/6903 and E05F 15/6905.
Groups E05F 11/465, E05F 15/6903 and E05F 15/6905 should be considered in order to perform a complete search.*

- C E05F 11/48
 - • operated by cords or chains {or other flexible elongated pulling elements, e.g. tapes}

WARNING

*Group E05F 11/48 is impacted by reclassification into groups E05F 15/6907, E05F 15/6909, E05F 15/6911, E05F 15/6914 and E05F 15/6916.
All groups listed in this Warning should be considered in order to perform a complete search.*

- C E05F 11/481
 - • • {for vehicle windows}

WARNING

*Group E05F 11/481 is impacted by reclassification into groups E05F 15/6907, E05F 15/6909, E05F 15/6911, E05F 15/6914 and E05F 15/6916.
All groups listed in this Warning should be considered in order to perform a complete search.*

- C E05F 11/483
 - • • • {by cables}

WARNING

*Group E05F 11/483 is impacted by reclassification into groups E05F 15/6909, E05F 15/6911, E05F 15/6914 and E05F 15/6916.
All groups listed in this Warning should be considered in order to perform a complete search.*

- C E05F 11/485
 - • • • • {with cable tensioners}

WARNING

*Group E05F 11/485 is impacted by reclassification into group E05F 15/6911.
Groups E05F 11/485 and E05F 15/6911 should be considered in order to perform a complete search.*

- C E05F 11/486
 - • • • • {with one cable connection to the window glass}

WARNING

*Group E05F 11/486 is impacted by reclassification into group E05F 15/6914.
Groups E05F 11/486 and E05F 15/6914 should be considered in order to perform a complete search.*

- C E05F 11/488
 - • • • • {with two cable connections to the window glass}

WARNING

*Group E05F 11/488 is impacted by reclassification into group E05F 15/6916.
Groups E05F 11/488 and E05F 15/6916 should be considered in order to perform a complete search.*

- C E05F 11/50
- • Crank gear with clutches or retaining brakes, for operating window mechanisms
- WARNING**
Group [E05F 11/50](#) is impacted by reclassification into group [E05F 15/6918](#). Groups [E05F 11/50](#) and [E05F 15/6918](#) should be considered in order to perform a complete search.
- C E05F 11/505
- • • {for vehicle windows}
- WARNING**
Group [E05F 11/505](#) is impacted by reclassification into group [E05F 15/6918](#). Groups [E05F 11/505](#) and [E05F 15/6918](#) should be considered in order to perform a complete search.
- C E05F 11/52
- • combined with means for producing an additional movement, e.g. a horizontal or a rotary movement
- WARNING**
Group [E05F 11/52](#) is impacted by reclassification into groups [E05F 15/6892](#), [E05F 15/6894](#), [E05F 15/6896](#), [E05F 15/6899](#), [E05F 15/6901](#), [E05F 15/6903](#), [E05F 15/6905](#), [E05F 15/6907](#), [E05F 15/6909](#), [E05F 15/6911](#), [E05F 15/6914](#), [E05F 15/6916](#) and [E05F 15/6918](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C E05F 11/525
- • • {for vehicle windows}
- WARNING**
Group [E05F 11/525](#) is impacted by reclassification into groups [E05F 15/6892](#), [E05F 15/6894](#), [E05F 15/6896](#), [E05F 15/6899](#), [E05F 15/6901](#), [E05F 15/6903](#), [E05F 15/6905](#), [E05F 15/6907](#), [E05F 15/6909](#), [E05F 15/6911](#), [E05F 15/6914](#), [E05F 15/6916](#) and [E05F 15/6918](#). All groups listed in this Warning should be considered in order to perform a complete search.
- M E05F 2015/434
- • • • {with *cameras* or optical sensors}
- C E05F 15/689
- • • • specially adapted for vehicle windows
- WARNING**
Group [E05F 15/689](#) is impacted by reclassification into groups [E05F 15/6892](#), [E05F 15/6894](#), [E05F 15/6896](#), [E05F 15/6899](#), [E05F 15/6901](#), [E05F 15/6903](#), [E05F 15/6905](#), [E05F 15/6907](#), [E05F 15/6909](#), [E05F 15/6911](#), [E05F 15/6914](#), [E05F 15/6916](#) and [E05F 15/6918](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N E05F 15/6892
- • • • • {*Fixing of window glass to the carrier of the operating mechanism*}
- WARNING**
Group [E05F 15/6892](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/385](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N E05F 15/6894 {using arrangements in the window glass, e.g. holes}
- WARNING
Group [E05F 15/6894](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/385](#), [E05F 2011/387](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N E05F 15/6896 {operated by screw mechanism}
- WARNING
Group [E05F 15/6896](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/40](#), [E05F 11/405](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N E05F 15/6899 {operated by rack bars and toothed wheels or other push-pull mechanisms}
- WARNING
Group [E05F 15/6899](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/42](#), [E05F 11/423](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N E05F 15/6901 {Flexible rack-and-pinion arrangements}
- WARNING
Group [E05F 15/6901](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/42](#), [E05F 11/423](#), [E05F 11/426](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N E05F 15/6903 {operated by one or more lifting arms}
- WARNING
Groups [E05F 15/6903](#) and [E05F 15/6905](#) are incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/44](#), [E05F 11/445](#), [E05F 11/46](#), [E05F 11/465](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N E05F 15/6905 {operated by lazy-tongs mechanism}
- N E05F 15/6907 {operated by cords or chains or other flexible elongated pulling elements, e.g. tapes}
- WARNING
Group [E05F 15/6907](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/48](#), [E05F 11/481](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N E05F 15/6909 {by cables}
WARNING
Group [E05F 15/6909](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/48](#), [E05F 11/481](#), [E05F 11/483](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N E05F 15/6911 {with cable tensioners}
WARNING
Group [E05F 15/6911](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/48](#), [E05F 11/481](#), [E05F 11/483](#), [E05F 11/485](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N E05F 15/6914 {with one cable connection to the window glass}
WARNING
Group [E05F 15/6914](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/48](#), [E05F 11/481](#), [E05F 11/483](#), [E05F 11/486](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N E05F 15/6916 {with two cable connections to the window glass}
WARNING
Group [E05F 15/6916](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/48](#), [E05F 11/481](#), [E05F 11/483](#), [E05F 11/488](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N E05F 15/6918 {Crank gear with clutches or retaining brakes, for operating window mechanisms}
WARNING
Group [E05F 15/6918](#) is incomplete pending reclassification of documents from groups [E05F 11/38](#), [E05F 11/382](#), [E05F 11/50](#), [E05F 11/505](#), [E05F 11/52](#), [E05F 11/525](#), [E05F 15/689](#), [E05F 15/692](#), [E05F 15/695](#) and [E05F 15/697](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- C E05F 15/692 enabling manual drive, e.g. in case of power failure
WARNING
Group [E05F 15/692](#) is impacted by reclassification into groups [E05F 15/6892](#), [E05F 15/6894](#), [E05F 15/6896](#), [E05F 15/6899](#),

E05F 15/6901, E05F 15/6903, E05F 15/6905, E05F 15/6907, E05F 15/6909, E05F 15/6911, E05F 15/6914, E05F 15/6916 and E05F 15/6918.

All groups listed in this Warning should be considered in order to perform a complete search.

C E05F 15/695 Control circuits therefor

WARNING

Group E05F 15/695 is impacted by reclassification into groups E05F 15/6892, E05F 15/6894, E05F 15/6896, E05F 15/6899, E05F 15/6901, E05F 15/6903, E05F 15/6905, E05F 15/6907, E05F 15/6909, E05F 15/6911, E05F 15/6914, E05F 15/6916 and E05F 15/6918.

All groups listed in this Warning should be considered in order to perform a complete search.

C E05F 15/697 Motor units therefor, e.g. geared motors

WARNING

Group E05F 15/697 is impacted by reclassification into groups E05F 15/6892, E05F 15/6894, E05F 15/6896, E05F 15/6899, E05F 15/6901, E05F 15/6903, E05F 15/6905, E05F 15/6907, E05F 15/6909, E05F 15/6911, E05F 15/6914, E05F 15/6916 and E05F 15/6918.

All groups listed in this Warning should be considered in order to perform a complete search.

D E05F 2700/00 **Operating mechanisms for sliding windows**

D E05F 2700/02 . Devices for moving and locking sliding windows

D E05F 2700/04 . Devices for blocking sliding windows in general

Project: MP12217 (E21)

M E21 **EARTH OR ROCK DRILLING; MINING**

Project: MP12217 (E21B)

M E21B **EARTH DRILLING, e.g. DEEP OR ROCK DRILLING (mining, quarrying E21C; making shafts, driving galleries or tunnels E21D); OBTAINING OIL, GAS, WATER, SOLUBLE OR MELTABLE MATERIALS OR A SLURRY OF MINERALS FROM WELLS**

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[E21B 7/08](#) covered by [E21B 7/06](#)

[E21B 43/22](#) covered by [C09K 8/58](#)

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

M E21B 1/00 **Percussion drilling (drives used in the borehole E21B 4/00)**

NOTE

When classifying in groups [E21B 1/12](#) - [E21B 1/38](#), a symbol from one of the following main groups of [B25D](#) should also be given:

- [B25D 9/00](#) Portable percussive tools with fluid-pressure drives
- [B25D 11/00](#) Portable percussive tools with motor drive
- [B25D 16/00](#) Portable percussive machines with superimposed rotation

- [B25D 17/00](#) Details of, or accessories for, portable power-driven percussive tools

WARNING

Group [E21B 1/00](#) is impacted by reclassification into groups [E21B 1/12](#), [E21B 1/14](#), [E21B 1/16](#), [E21B 1/18](#), [E21B 1/20](#), [E21B 1/22](#), [E21B 1/24](#), [E21B 1/26](#), [E21B 1/28](#), [E21B 1/30](#), [E21B 1/32](#), [E21B 1/34](#), [E21B 1/36](#), and [E21B 1/38](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M E21B 3/00

Rotary drilling ~~(drives used in the borehole E21B 4/00; rotary drilling machines in general B23B)~~

WARNING

Group [E21B 3/00](#) is impacted by reclassification into groups [E21B 3/02](#), [E21B 3/022](#), [E21B 3/025](#), [E21B 3/03](#), [E21B 3/035](#), [E21B 3/04](#), [E21B 3/045](#), and [E21B 3/06](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U E21B 3/02

- Surface drives for rotary drilling

WARNING

Group [E21B 3/02](#) is incomplete pending reclassification of documents from group [E21B 3/00](#).

Group [E21B 3/02](#) is also impacted by reclassification into group [E21B 3/022](#).

Groups [E21B 3/00](#), [E21B 3/02](#), and [E21B 3/022](#) should be considered in order to perform a complete search.

M E21B 3/04

- • Rotary tables ~~{{(portable drilling rigs with rotary tables E21B 7/021)}~~

WARNING

Groups [E21B 3/04](#) – [E21B 3/06](#) are incomplete pending reclassification of documents from group [E21B 3/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M E21B 3/06

- • • Adaptation of rotary draw works to drive rotary tables ~~(connecting or disconnecting couplings or joints E21B 19/16; rope, cable, or chain winding mechanisms, capstans B66D)~~

U E21B 4/00

Drives for drilling, used in the borehole

M E21B 4/02

- Fluid rotary type drives ~~(hydraulic turbines for drilling wells F03B 13/02)~~

M E21B 4/06

- Down-hole impacting means, e.g. hammers ~~(percussion drill bits E21B 10/36; boring rams [E21B 11/02](#); releasing jars E21B 31/107)~~

M E21B 6/00

Drives for drilling with combined rotary and percussive action ~~(drives used in the borehole E21B 4/00; portable percussive machines with superimposed rotation B25D 16/00)~~

Project: MP11966 (E21B)

U E21B 7/00

Special methods or apparatus for drilling

M E21B 7/002

- {Drilling with diversely driven shafts extending into the borehole ~~(simultaneously drilling and casing E21B 7/20; plural down-hole drives E21B 4/16; [E21B 7/001](#) takes precedence)}~~

M E21B 7/003

- {Drilling with mechanical conveying means ~~(tunnelling E21D)}~~}

Project: MP12217 (E21B)

- M E21B 7/02 • Drilling rigs ~~characterized~~*characterised* by means for land transport {with their own drive}, e.g. skid mounting or wheel mounting (~~portable drilling rigs for use on underwater floors E21B 7/124~~)
- M E21B 7/04 • Directional drilling (~~derricks or masts specially adapted therefor E21B 15/04~~)
- M E21B 7/12 • Underwater drilling (~~derricks or masts specially adapted therefor E21B 15/02;~~ telescoping joints E21B 17/07; using heave compensators E21B 19/09; well heads specially adapted for underwater installations E21B 33/035)
- M E21B 7/18 • Drilling by liquid or gas jets, with or without entrained pellets (E21B 7/14 takes precedence; ~~hydraulic monitors E21C 45/00~~)
- M E21B 7/20 • Driving or forcing casings or pipes into boreholes, e.g. sinking; Simultaneously drilling and casing boreholes (~~surface means for applying to-and-fro rotation movements to the casing E21B 3/025; placing piles E02D 7/00; sinking shafts while moving the lining downwards E21D 1/08~~); making galleries by forcing prefabricated elements through the ground E21D 9/005)
- M E21B 7/26 • Drilling without earth removal, e.g. with self-propelled burrowing devices (E21B 7/30 takes precedence; ~~down-hole drives E21B 4/00~~); e.g. self-propelled fluid-operated hammers E21B 4/145)
- WARNING**
Group E21B 7/26 is impacted by reclassification into group E21B 7/267. Groups E21B 7/26 and E21B 7/267 should be considered in order to perform a complete search.
- M E21B 7/28 • Enlarging drilled holes, e.g. by counterboring (~~drill bits for enlarging the borehole E21B 10/26~~)
- M E21B 10/00** **Drill bits (specially adapted for deflecting the direction of boring {E21B 7/064}; with means for collecting substances E21B 27/00)**
- M E21B 10/02 • Core bits (characterised by wear resisting parts E21B 10/46 E21B 10/48; ~~obtaining undisturbed cores E21B 25/00~~)
- M E21B 10/08 • Roller bits (E21B 10/26 takes precedence; roller core bits E21B 10/06; ~~with leading portion E21B 10/26~~; characterised by wear resisting parts E21B 10/46 E21B 10/50)
- M E21B 10/10 • • with roller axle supported at both ends (~~with disc cutters E21B 10/12~~)
- M E21B 10/18 • • characterised by conduits or nozzles for drilling fluids (~~drilling fluid supply to the bearings E21B 10/23~~)
- M E21B 10/20 • • characterised by detachable or adjustable parts, e.g. legs or axles (~~cross axle roller bits E21B 10/10~~)
- U E21B 10/22 • • characterised by bearing, lubrication or sealing details
- M E21B 10/24 • • • characterised by lubricating details (E21B 10/23 takes precedence)
- M E21B 10/26 • Drill bits with leading portion, i.e. drill bits with a pilot cutter; Drill bits for enlarging the borehole, e.g. reamers (percussion drill bits with leading portion E21B 10/40; ~~augers with leading portion E21B 10/44~~)
- WARNING**
Group E21B 10/26 is impacted by reclassification into group E21B 10/265. Groups E21B 10/26 and E21B 10/265 should be considered in order to perform a complete search.

- M E21B 10/42
- Rotary drag type drill bits with teeth, blades or like cutting elements, e.g. fork-type bits, fish tail bits (characterised by wear resisting parts ~~{E21B 10/54}~~ [E21B 10/46](#); by conduits or nozzles for drilling fluid [E21B 10/60](#); by detachable or adjustable parts [E21B 10/62](#))
- WARNING**
Group [E21B 10/42](#) is impacted by reclassification into groups [E21B 10/62](#), [E21B 10/627](#), and [E21B 10/633](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 10/44
- Bits with helical conveying portion, e.g. screw type bits; Augers with leading portion or with detachable parts ([E21B 10/42](#) takes precedence; ~~drilling rods with helical structure E21B 17/22~~)
- U E21B 10/46
- characterised by wear resisting parts, e.g. diamond inserts
- U E21B 10/54
- the bit being of the rotary drag type, e.g. fork-type bits
- M E21B 10/55
- with preformed cutting elements (~~inserts per se E21B 10/56, E21B 10/58~~)
- M E21B 10/58
- Chisel-type inserts (~~{E21B 10/485,} E21B 10/52, E21B 10/54~~ take precedence)
- M E21B 10/64
- characterised by the whole or part thereof being insertable into or removable from the borehole without withdrawing the drilling pipe (~~retrievable core receivers E21B 25/02~~)

Project: MP11966 (E21B)

- U E21B 11/00
- Other drilling tools**
- WARNING**
Group [E21B 11/00](#) is impacted by reclassification into group [E21B 11/04](#).
Groups [E21B 11/00](#) and [E21B 11/04](#) should be considered in order to perform a complete search.
- M E21B 11/005
- {Hand operated drilling tools (~~hand portable tools detachable from portable drilling rigs E21B 7/028~~)}
- WARNING**
Group [E21B 11/005](#) is impacted by reclassification into group [E21B 7/028](#).
Groups [E21B 11/005](#) and [E21B 7/028](#) should be considered in order to perform a complete search.

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- M E21B 11/02
- Boring rams (~~percussion drives used in the borehole E21B 4/06; percussion drill bits E21B 10/36~~)
- U E21B 15/00
- Supports for the drilling machine, e.g. derricks or masts**
- M E21B 15/02
- specially adapted for underwater drilling ([E21B 15/04](#) takes precedence; ~~floating drilling platforms B63B 35/44; drilling platforms on legs E02B 17/00~~)
- M E21B 17/00
- Drilling rods or pipes; Flexible drill strings; Kellies; Drill collars; Sucker rods; {Cables;} Casings; Tubings (~~rod couplings in general F16D; tubes or tube couplings in general F16L~~)**
- M E21B 17/01
- Risers (~~{supporting a riser from a drilling or production platform E21B 19/004;} riser connectors {on well heads} E21B 33/038~~)
- U E21B 17/02
- Couplings; joints {(expandable couplings or joints [E21B 43/106](#))}
- WARNING**
Group [E21B 17/02](#) is impacted by reclassification into group [E21B 17/041](#).

Groups [E21B 17/02](#) and [E21B 17/041](#) should be considered in order to perform a complete search.

- U E21B 17/04
- • between rod {or the like} and bit or between rod and rod {or the like}
- WARNING
Group [E21B 17/04](#) is impacted by reclassification into group [E21B 17/041](#). Groups [E21B 17/04](#) and [E21B 17/041](#) should be considered in order to perform a complete search.
- M E21B 17/07
- • • Telescoping joints for varying drill string lengths; Shock absorbers ~~(heave compensators in the derrick E21B-19/09; releasing jars E21B-31/107)~~
- M E21B 17/10
- Wear protectors; Centralising devices {, e.g. stabilisers} ~~(drives used in the borehole with anchoring means E21B-4/18; guiding or centralising devices outside the borehole E21B-19/24)~~
- M E21B 17/1085
- • {Wear protectors; Blast joints; Hard facing ~~(wear protection included in centralising devices, see relevant subgroups)}~~
- M E21B 17/18
- Pipes provided with plural fluid passages ~~{{E21B 17/203 takes precedence;} circulation of drilling fluid by means of such pipes E21B-21/12)}~~
- M E21B 17/22
- Rods or pipes with helical structure ~~(drill bits with helical conveying portion E21B-10/44)~~
- M E21B 19/00**
- Handling rods, casings, tubes or the like outside the borehole, e.g. in the derrick; Apparatus for feeding the rods or cables ~~(surface drives E21B-1/02; E21B-3/02)~~**
- M E21B 19/02
- Rod or cable suspensions ~~(load-engaging elements for hoisting or lowering purposes in general B66C-1/00; crown blocks or pulley blocks B66D; cable guides B66D-1/36)~~
- U E21B 19/06
- • Elevators, i.e. rod- or tube-gripping devices
- M E21B 19/07
- • • Slip-type elevators ~~(slips in rotary tables E21B-19/10)~~
- M E21B 19/08
- Apparatus for feeding the rods or cables ([E21B 19/22](#) takes precedence; automatic feed [E21B 44/02](#); ~~hoisting drums B66D~~); Apparatus for increasing or decreasing the pressure on the drilling tool; Apparatus for counterbalancing the weight of the rods
- WARNING
Group [E21B 19/08](#) is impacted by reclassification into groups [E21B 19/081](#), [E21B 19/083](#), [E21B 19/084](#), [E21B 19/086](#), [E21B 19/087](#), [E21B 19/089](#), and [E21B 19/09](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 19/09
- • specially adapted for drilling underwater formations from a floating support using heave compensators supporting the drill string ~~(drilling pipe telescoping joints E21B-17/07-{}; heave compensators for supporting a riser E21B-19/006)}~~
- WARNING
Group [E21B 19/09](#) is incomplete pending reclassification of documents from group [E21B 19/08](#).
Groups [E21B 19/08](#) and [E21B 19/09](#) should be considered in order to perform a complete search.
- M E21B 19/12
- Rope clamps {; Rod, casings or tube clamps not secured to elevators} ~~(rope clamps in general F16G-11/00)~~
- M E21B 19/16
- Connecting or disconnecting pipe couplings or joints ([E21B 19/20](#) takes precedence; ~~pipe wrenches or the like B25B~~)

- M E21B 21/00 **Methods or apparatus for flushing boreholes, e.g. by use of exhaust air from motor (freeing objects stuck in boreholes by flushing [E21B 31/03](#); ~~well drilling compositions C09K 8/02~~)**

WARNING

Group [E21B 21/00](#) is impacted by reclassification into groups [E21B 21/001](#), [E21B 21/002](#), [E21B 21/003](#), [E21B 21/01](#), [E21B 21/012](#), [E21B 21/015](#), [E21B 21/019](#), [E21B 21/02](#), [E21B 21/06](#), [E21B 21/062](#), [E21B 21/063](#), [E21B 21/065](#), [E21B 21/066](#), [E21B 21/067](#), [E21B 21/068](#), [E21B 21/07](#), [E21B 21/08](#), [E21B 21/082](#), [E21B 21/085](#), [E21B 21/10](#), [E21B 21/103](#), [E21B 21/106](#), [E21B 21/12](#), [E21B 21/14](#), [E21B 21/16](#), and [E21B 21/18](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 21/01
- Arrangements for handling drilling fluids or cuttings outside the borehole, e.g. mud boxes (~~arrangements for treating drilling fluids E21B 21/06~~; ~~waste disposal systems E21B 41/005~~)

WARNING

Group [E21B 21/01](#) is incomplete pending reclassification of documents from group [E21B 21/00](#).

Group [E21B 21/01](#) is also impacted by reclassification into group [E21B 21/019](#). Groups [E21B 21/00](#), [E21B 21/01](#), and [E21B 21/019](#) should be considered in order to perform a complete search.

- M E21B 21/06
- Arrangements for treating drilling fluids outside the borehole (~~treating steps per se, see the relevant subclasses~~)

WARNING

Groups [E21B 21/06](#) - [E21B 21/07](#) are incomplete pending reclassification of documents from group [E21B 21/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 21/10
- Valve arrangements in drilling-fluid circulation systems (~~valves in general F16K~~)

WARNING

Groups [E21B 21/10](#) - [E21B 21/106](#) are incomplete pending reclassification of documents from group [E21B 21/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

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- M E21B 21/103
- {Down-hole by-pass valve arrangements, i.e. between the inside of the drill string and the annulus (*valves specifically for maintaining circulation of drilling fluid while connecting or disconnecting tubular joints E21B 21/019*)}
- M E21B 21/106
- {Valve arrangements outside the borehole, e.g. kelly valves (*valves specifically for maintaining circulation of drilling fluid while connecting or disconnecting tubular joints E21B 21/019*)}

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- M E21B 21/12
- using drilling pipes with plural fluid passages, e.g. closed circulation systems (~~pipes with plural fluid passages E21B 17/18~~)

WARNING

Group [E21B 21/12](#) is incomplete pending reclassification of documents from group [E21B 21/00](#).

Groups [E21B 21/00](#) and [E21B 21/12](#) should be considered in order to perform a complete search.

M E21B 21/16

- using gaseous fluids ([E21B 21/14](#) takes precedence; ~~arrangements for handling drilling fluids outside the borehole E21B 21/01; arrangements for treating drilling fluids E21B 21/06~~)

WARNING

Group [E21B 21/16](#) is incomplete pending reclassification of documents from group [E21B 21/00](#).

Groups [E21B 21/00](#) and [E21B 21/16](#) should be considered in order to perform a complete search.

M E21B 23/00

Apparatus for displacing, setting, locking, releasing, or removing tools, packers or the like in the boreholes or wells (setting of casings, screens or liners [E21B 43/10](#))

M E21B 23/04

- operated by fluid means, e.g. actuated by explosion (~~E21B 23/06; E21B 23/08~~ ~~take takes~~ precedence)

WARNING

Group [E21B 23/04](#) is impacted by reclassification into groups [E21B 23/0411](#), [E21B 23/04115](#), [E21B 23/0412](#), [E21B 23/0413](#), [E21B 23/0414](#), [E21B 23/0415](#), [E21B 23/0416](#), [E21B 23/0417](#), [E21B 23/0418](#), [E21B 23/0419](#), [E21B 23/042](#), [E21B 23/0421](#), [E21B 23/0422](#), [E21B 23/0423](#), and [E21B 34/142](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M E21B 23/08

- Introducing or running tools by fluid pressure, e.g. through-the-flow-line tool systems (~~special provisions on heads therefor E21B 33/068; cementing plugs E21B 33/16; scrapers operated by fluid pressure E21B 37/04~~)

M E21B 23/14

- for displacing a cable or a cable-operated tool, e.g. for logging or perforating operations in deviated wells (~~by fluid pressure E21B 23/08; provision on well heads for introducing or removing cable-operated tools E21B 33/072; E21B 33/076~~)

M E21B 25/00

Apparatus for obtaining or removing undisturbed cores, e.g. core barrels, or core extractors (core bits [E21B 10/02](#); ~~using explosives or projectiles in boreholes E21B 49/04; side-wall sampling or coring E21B 49/06~~)

M E21B 25/02

- the core receiver being insertable into, or removable from, the borehole without withdrawing the drilling pipe (~~retrievable drill bits E21B 10/64~~)

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U E21B 27/00

Containers for collecting or depositing substances in boreholes or wells, e.g. bailers, {baskets or buckets} for collecting mud or sand; Drill bits with means for collecting substances, e.g. valve drill bits

WARNING

Group [E21B 27/00](#) is impacted by reclassification into groups [E21B 11/04](#) and [E21B 31/08](#).

Groups [E21B 27/00](#), [E21B 11/04](#), and [E21B 31/08](#) should be considered in order to perform a complete search.

M E21B 27/04

- where the collecting or depositing means include helical conveying means ~~{{drilling with helical conveying means combined with bucket-type container E21B 7/006}}~~

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- M E21B 28/00 Vibration generating arrangements for boreholes or wells, e.g. for stimulating production (~~for drilling E21B-7/24;~~ ~~{for fishing for or freeing objects E21B 31/005;}~~ for transmitting measuring-signals E21B 47/14; for geophysical measurements G01V 1/02)
- M E21B 29/00 Cutting or destroying pipes, packers, plugs, or wire lines, located in boreholes or wells, e.g. cutting of damaged pipes, of windows (~~perforators E21B-43/11~~); Deforming of pipes in boreholes or wells; Reconditioning of well casings while in the ground ~~{(by enlarging drilled holes or counterboring E21B-7/28)}~~
- M E21B 29/02
 - by explosives or by thermal or chemical means ~~{(freeing stuck objects by explosives E21B 31/002;}~~ ~~destroying objects in boreholes or wells by explosives E21B-31/16)}~~
- M E21B 29/08
 - Cutting or deforming pipes to control fluid flow ~~{(shear type blow-out preventers E21B-33/063)}~~
- M E21B 31/00 **Fishing for or freeing objects in boreholes or wells** (~~provisions on well heads for introducing or removing objects E21B-33/068; locating or determining the position of objects in boreholes or wells E21B-47/09~~)
- WARNING
Group E21B 31/00 is impacted by reclassification into group E21B 31/08. Groups E21B 31/00 and E21B 31/08 should be considered in order to perform a complete search.
- M E21B 31/107
 - using impact means for releasing stuck parts, e.g. jars (~~telescoping joints E21B-17/07~~)
- U E21B 31/12
 - Grappling tools, e.g. tongs or grabs
- M E21B 31/14
 - with means deflecting the direction of the tool, e.g. by use of knuckle joints (~~apparatus for deflecting the boring E21B-7/06~~)
- M E21B 31/16
 - combined with cutting or destroying means (~~cutting or destroying means per se E21B-29/00~~)
- U E21B 33/00 **Sealing or packing boreholes or wells**
- WARNING
Group E21B 33/00 is impacted by reclassification into groups E21B 2200/00, E21B 2200/01, E21B 2200/02, E21B 2200/03, E21B 2200/04, E21B 2200/05, E21B 2200/06, E21B 2200/08, E21B 2200/09, E21B 2200/20, and E21B 2200/22. All groups listed in this Warning should be considered in order to perform a complete search.
- U E21B 33/02
 - Surface sealing or packing
- M E21B 33/03
 - Well heads; Setting-up thereof (~~valve arrangements therefor E21B-34/02~~)
- U E21B 33/035
 - specially adapted for underwater installations (E21B 33/043, E21B 33/064, E21B 33/076 take precedence)
- WARNING
Group E21B 33/035 is impacted by reclassification into groups E21B 33/0353 and E21B 33/0387. Groups E21B 33/035, E21B 33/0353, and E21B 33/0387 should be considered in order to perform a complete search.

- M E21B 33/038
- • • Connectors used on well heads, e.g. for connecting blow-out preventer and riser ~~(connecting a production flow-line to an underwater well head E21B-43/013)~~
- WARNING**
Group [E21B 33/038](#) is impacted by reclassification into group [E21B 33/0353](#).
Groups [E21B 33/038](#) and [E21B 33/0353](#) should be considered in order to perform a complete search.
- M E21B 33/04
- • • Casing heads; Suspending casings or tubings in well heads ~~(setting of casings in wells E21B-43/10)~~
- U E21B 33/06
- • • Blow-out preventers {, i.e. apparatus closing around a drill pipe, e.g. annular blow-out preventers (rotating blow-out preventers [E21B 33/085](#))}
- M E21B 33/064
- • • specially adapted for underwater well heads ~~(({control systems for submerged well heads E21B-33/0355;}) connectors therefor E21B-33/038)~~

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- M E21B 33/068
- • • having provision for introducing objects or fluids into, or removing objects from, wells (cementing ~~-~~ heads [E21B 33/05](#) ~~{; wipers, oil savers E21B-33/08}~~)

Project: MP12217 (E21B)

- U E21B 33/10
- in the borehole ~~(({sealing the junction between main bore and laterals E21B 41/0042})}~~
- U E21B 33/12
- • Packers; Plugs (used for cementing [E21B 33/134](#), [E21B 33/16](#))
- M E21B 33/128
- • • with a member expanded radially by axial pressure ([E21B 33/122](#), [E21B 33/124](#) ~~{; E21B-33/129}~~ take precedence ~~{; characterised by the construction of the sealing means E21B-33/1208}~~)
- M E21B 33/13
- • Methods or devices for cementing, for plugging holes, crevices, or the like ~~(dump bailers E21B-27/02; chemical compositions therefor C09K 8/00)~~
- M E21B 33/138
- • • Plastering the borehole wall; Injecting into the formation ~~(({packers E21B-33/12})}~~
- M E21B 33/14
- • • for cementing casings into boreholes ~~(({control of cementation quality or level E21B-47/005})}~~
- M E21B 34/00**
- Valve arrangements for boreholes or wells (in drilling fluid circulation systems E21B 21/10; blow-out preventers E21B 33/06; oil flow regulating apparatus E21B 43/12; valves in general F16K)**
- U E21B 34/06
- in wells
- M E21B 34/10
- • operated by control fluid supplied from outside the borehole ~~(({by a dropped ball or piston E21B-34/142;}) control means being outside the borehole E21B-34/16)~~
- M E21B 35/00**
- Methods or apparatus for preventing or extinguishing fires (cutting or deforming pipes to control fluid flow E21B 29/08; controlling flow of fluid to or in wells E21B 43/12; fire fighting in general A62C, A62D)**
- M E21B 36/00**
- Heating, cooling, or insulating arrangements for boreholes or wells, e.g. for use in permafrost zones (drilling by use of heat E21B 7/14; secondary recovery methods using heat E21B 43/24)**
- M E21B 37/00**
- Methods or apparatus for cleaning boreholes or wells ([E21B 21/00](#) takes precedence; ~~{bailers E21B 27/00;} cleaning pipes in general B08B 9/02)~~**
- U E21B 37/02
- Scrapers specially adapted therefor

- M E21B 37/04
- operated by fluid pressure, e.g. free-piston scrapers ~~(operating other tools by fluid pressure E21B 23/08)~~
- M E21B 37/06
- using chemical means for preventing, ~~limiting~~ ~~{or eliminating or limiting {~~ *e.g. eliminating,* ~~}~~ the deposition of paraffins or like substances ~~(chemical compositions therefor C09K 8/52)~~
- U E21B 41/00** **Equipment or details not covered by groups [E21B 15/00](#) - [E21B 40/00](#)**
- WARNING
Group [E21B 41/00](#) is incomplete pending reclassification of documents from group [E21B 41/0092](#).
Group [E21B 41/00](#) is also impacted by reclassification into group [E21B 41/0099](#).
Groups [E21B 41/0092](#), [E21B 41/00](#), and [E21B 41/0099](#) should be considered in order to perform a complete search.
- M E21B 41/02
- *in situ* inhibition of corrosion in boreholes or wells ~~(dump bailers E21B 27/02; chemical compositions therefor C09K 8/54; inhibiting corrosion in general C23F)~~
- M E21B 41/04
- Manipulators for underwater operations, e.g. temporarily connected to well heads ~~(manipulators in general B25J)~~
- M E21B 41/06
- Work chambers for underwater operations, e.g. temporarily connected to well heads ~~(in general B63C 11/00)~~
- M E21B 43/00** **Methods or apparatus for obtaining oil, gas, water, soluble or meltable materials or a slurry of minerals from wells (applicable only to water [E03B](#); ~~obtaining oil-bearing deposits or soluble or meltable materials by mining techniques E21C 41/00; pumps F04~~)**
- WARNING
Group [E21B 43/00](#) is incomplete pending reclassification of documents from group [E21B 41/0092](#).
Groups [E21B 41/0092](#) and [E21B 43/00](#) should be considered in order to perform a complete search.
- M E21B 43/01
- specially adapted for obtaining from underwater installations ~~(underwater well heads E21B 33/035)~~
- M E21B 43/017
- Production satellite stations, i.e. underwater installations comprising a plurality of satellite well heads connected to a central station ~~(underwater separating arrangements E21B 43/36)~~
- WARNING
Group [E21B 43/017](#) is impacted by reclassification into group [E21B 43/0175](#).
Groups [E21B 43/017](#) and [E21B 43/0175](#) should be considered in order to perform a complete search.
- M E21B 43/02
- Subsoil filtering ~~(E21B 43/11 takes precedence; chemical compositions for consolidating loose sand or the like around wells C09K 8/56)~~
- M E21B 43/10
- Setting of casings, screens, liners {or the like} in wells ~~(driving or forcing casings into boreholes, simultaneously drilling and casing boreholes E21B 7/20; setting of tools, packers or the like E21B 23/00; suspending casings in well heads E21B 33/04)~~
- M E21B 43/16
- Enhanced recovery methods for obtaining hydrocarbons ~~(fracturing E21B 43/26; obtaining slurry E21B 43/29; reclamation of contaminated soil *in situ* B09C -{; chemical compositions therefor C09K 8/58})~~
- WARNING
Group [E21B 43/16](#) is incomplete pending reclassification of documents from group [E21B 41/0092](#).

Groups [E21B 41/0092](#) and [E21B 43/16](#) should be considered in order to perform a complete search.

- M E21B 43/24
- using heat, e.g. steam injection ~~(heating, cooling or insulating wells E21B 36/00; in combination with organic material C09K 8/592)~~
- M E21B 43/25
- Methods for stimulating production ~~{(dump bailers E21B 27/02; vibration generating arrangements E21B 28/00; (by vibrating earth formations E21B 43/003; chemical compositions therefor C09K 8/60)}~~
- M E21B 43/26
- by forming crevices or fractures ~~((chemical compositions therefor C09K 8/62))~~
- WARNING**
Group [E21B 43/26](#) is impacted by reclassification into groups [E21B 43/2605](#), [E21B 43/2607](#), and [E21B 43/27](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 43/263
- using explosives ~~((combustion in situ using explosives E21B 43/248))~~
- M E21B 43/267
- reinforcing fractures by propping ~~((chemical compositions therefor C09K 8/80))~~
- M E21B 43/285
- Melting minerals, e.g. sulfur ([E21B 43/24](#) takes precedence; ~~heating, cooling or insulating arrangements for wells E21B 36/00~~)
- M E21B 43/30
- Specific pattern of wells, e.g. ~~optimizing~~*optimising* the spacing of wells ~~(production satellite stations E21B 43/017)~~
- M E21B 43/34
- Arrangements for separating materials produced by the well ~~(separating apparatus per se, see the relevant subclasses)~~
- WARNING**
Group [E21B 43/34](#) is impacted by reclassification into group [E21B 43/35](#).
Groups [E21B 43/34](#) and [E21B 43/35](#) should be considered in order to perform a complete search.
- M E21B 44/00
- Automatic control systems specially adapted for drilling operations, i.e. self-operating systems which function to carry out or modify a drilling operation without intervention of a human operator, e.g. computer-controlled drilling systems ~~(for non-automatic drilling control, see the operation controlled; automatic feeding from rack and connecting of drilling pipes E21B 19/20; controlling pressure or flow of drilling fluid E21B 21/08)~~; Systems specially adapted for monitoring a plurality of drilling variables or conditions ~~(means for transmitting measuring signals from the well to the surface E21B 47/12)~~**
- U E21B 47/00
- Survey of boreholes or wells (monitoring pressure or flow of drilling fluid [E21B 21/08](#))**
- WARNING**
Group [E21B 47/00](#) is impacted by reclassification into group [E21B 47/006](#).
Groups [E21B 47/00](#) and [E21B 47/006](#) should be considered in order to perform a complete search.
- M E21B 47/003
- Determining well or borehole volumes ~~(determining depth E21B 47/04; diameter E21B 47/08)~~
- U E21B 47/02
- Determining slope or direction
- M E21B 47/024
- of devices in the borehole ([E21B 47/022](#) takes precedence *determining slope or direction of the borehole [E21B 47/022](#)*)
- U E21B 47/04
- Measuring depth or liquid level
- M E21B 47/047
- Liquid level ([E21B 47/053](#) takes precedence *measuring depth or liquid level using radioactive markers [E21B 47/053](#)*)

Project: MP11966 (E21B)

- M E21B 47/10 · Locating fluid leaks, intrusions or movements ~~{(using impression packers E21B 47/098)}~~
- WARNING**
Group [E21B 47/10](#) is impacted by reclassification into groups [E21B 47/113](#) and [E21B 47/114](#).
Groups [E21B 47/10](#), [E21B 47/113](#), and [E21B 47/114](#) should be considered in order to perform a complete search.

Project: MP12217 (E21B)

- M E21B 47/103 · · using thermal measurements ~~{(measurement temperature E21B 47/07)}~~
- U E21B 47/12 · Means for transmitting measuring-signals or control signals from the well to the surface, or from the surface to the well, e.g. for logging while drilling
- WARNING**
Group [E21B 47/12](#) is impacted by reclassification into group [E21B 47/138](#).
Groups [E21B 47/12](#) and [E21B 47/138](#) should be considered in order to perform a complete search.
- M E21B 47/125 · · using earth as an electrical conductor (~~E21B 47/13 takes precedence by~~
~~electromagnetic energy E21B 47/13~~)
- M E21B 49/00 **Testing the nature of borehole walls; Formation testing; Methods or apparatus for obtaining samples of soil or well fluids, specially adapted to earth drilling or wells** ~~(sampling in general G01N 1/00)~~
- M E21B 49/02 · by mechanically taking samples of the soil ~~(apparatus for obtaining undisturbed cores E21B 25/00; investigation of foundation soil in situ E02D 1/00)~~

Project: MP12088 (F01B)

- U F01B 11/00 **Reciprocating-piston machines or engines without rotary main shaft, e.g. of free-piston type**
- M F01B 11/04 · Engines combined with reciprocatory driven devices, e.g. hammers (with pumps [F01B 23/08](#); ~~predominating aspects of driven devices, see the relevant classes for the devices~~)
- M F01B 21/00 **Combinations of two or more machines or engines** ([F01B 23/00](#) takes precedence; ~~regulating or controlling, see the relevant groups~~; combinations of two or more pumps [F04](#); fluid gearing [F16H](#))
- M F01B 23/00 **Adaptations of machines or engines for special use; Combinations of engines with devices driven thereby** ([F01B 11/00](#) takes precedence; fluid gearing [F16H](#); ~~aspects predominantly concerning driven devices, see the relevant classes for these devices; regulating or controlling, see the relevant groups~~)
- M F01B 23/02 · Adaptations for driving vehicles, e.g. locomotives ~~(arrangements in vehicles; see the relevant classes for vehicles)~~

Project: MP12088 (F01C)

- M F01C 13/00 **Adaptations of machines or engines for special use; Combinations of engines with devices driven thereby** ~~(aspects predominantly concerning driven devices, see the relevant classes for these devices)~~

Project: MP12088 (F01D)

- M F01D 9/00 **Stators** ~~(non-fluid guiding aspects of casings, regulating, controlling, or safety aspects, see the relevant groups)~~
- M F01D 13/00 **Combinations of two or more machines or engines** (F01D 15/00 takes precedence; ~~regulating or controlling, see the relevant groups;~~ combinations of two or more pumps F04; fluid gearing F16H)
- M F01D 15/00 **Adaptations of machines or engines for special use; Combinations of engines with devices driven thereby** ~~(regulating or controlling see the relevant groups; aspects predominantly concerning driven devices, see the relevant classes for the devices)~~
- M F01D 15/02 · Adaptations for driving vehicles, e.g. locomotives ~~(arrangement in vehicles, see the relevant vehicle classes)~~
- U F01D 17/00 **Regulating or controlling by varying flow** (for reversing F01D 1/30; by varying rotor-blade position F01D 7/00; specially for starting F01D 19/00; shutting-down F01D 21/00; regulating or controlling in general G05 {; specially adapted for hand-held tools or the like F01D 15/06})
- M F01D 17/02 · Arrangement of sensing elements ~~(sensing elements per se: see the relevant subclasses)~~

Project: MP12088 (F01K)

- U F01K 15/00 **Adaptations of plants for special use** {{(F01K 7/02 takes precedence)}
- M F01K 15/02 · for driving vehicles, e.g. locomotives ~~(arrangements in vehicles, see the relevant vehicle classes)~~
- U F01K 23/00 **Plants characterised by more than one engine delivering power external to the plant, the engines being driven by different fluids**
- U F01K 23/02 · the engine cycles being thermally coupled
- U F01K 23/06 · · combustion heat from one cycle heating the fluid in another cycle
- M F01K 23/064 · · · {in combination with an industrial process, e.g. chemical, metallurgical ~~(particularly adapted for a specific process see the relevant classes)}~~

Project: Unknown (F01L)

- U F01L 9/00 **Valve-gear or valve arrangements actuated non-mechanically**
- U F01L 9/20 · by electric means
- M F01L 9/24 · · ~~Piezo-electric~~ *Piezoelectric* actuators

Project: MP12088 (F01N)

- M F01N 5/00 **Exhaust or silencing apparatus combined or associated with devices profiting *from*by exhaust energy** (using kinetic or wave energy of exhaust gases in exhaust systems for charging F02B; ~~predominant aspects of such devices, see the relevant classes for the devices)~~

Project: MP12088 (F02C)

M F02C GAS-TURBINE PLANTS; AIR INTAKES FOR JET-PROPULSION PLANTS; CONTROLLING FUEL SUPPLY IN AIR-BREATHING JET-PROPULSION PLANTS (construction of turbines [F01D](#); jet-propulsion plants [F02K](#); construction of compressors or fans [F04](#); ~~gas-turbine combustion chambers~~ [F23R](#); *generating combustion products of high pressure or high velocity* [F23R](#); using gas turbines in compression refrigeration plants [F25B 11/00](#); ~~using gas-turbine plants in vehicles, see the relevant vehicle classes~~)

NOTES

1. This subclass covers:
 - combustion product or hot gas turbine plants;
 - internal combustion turbines or turbine plants;
 - turbine plants in which the working fluid is an unheated, pressurised gas.
2. This subclass does not cover:
 - steam turbine plants, which are covered by subclass [F01K](#);
 - special vapour plants, which are covered by subclass [F01K](#).
 - { combined cycle plants, which are covered by subclass [F01K 23/00](#)}
3. In this subclass, the following expression is used with the meaning indicated:
 - "gas-turbine plants" covers all the subject matter of Note (1) above and covers also features of jet-propulsion plants common to gas-turbine plants.
4. Attention is drawn to the Notes preceding class [F01](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M F02C 6/00 Plural gas-turbine plants; Combinations of gas-turbine plants with other apparatus (~~aspects predominantly concerning such apparatus, see the relevant classes for the apparatus~~); Adaptations of gas-turbine plants for special use

Project: Unknown (F02K)

U F02K 1/00 Plants characterised by the form or arrangement of the jet pipe or nozzle; Jet pipes or nozzles peculiar thereto (rocket nozzles [F02K 9/97](#))

U F02K 1/78 • Other construction of jet pipes

U F02K 1/82 • • Jet pipe walls, e.g. liners

M F02K 1/822 • • • {Heat insulating structures or liners, cooling arrangements, e.g. post combustion liners; ~~infra-red~~ *Infrared* radiation suppressors}

M F02K 1/825 • • • • {~~infra-red~~ *Infrared* radiation suppressors}

Project: MP12088 (F02P)

M F02P 13/00 Sparking plugs structurally combined with other parts of internal-combustion engines ({connection of ignition coil to spark plug connector [F02P 3/02](#)};) with fuel injectors [F02M 57/06](#) {; ~~spark plug connectors~~ *spark plug connector* per se [H01T 13/04](#) – [H01T 13/06](#); predominant aspects of sparking plug, see [H01T 13/40](#) – [H01T 13/44](#)}; ~~predominant aspects of the parts, see the relevant subclasses~~)

Project: MP12088 (F03C)

U F03C 1/00 Reciprocating-piston liquid engines

- M F03C 1/26
- adapted for special use or combined with apparatus driven thereby ~~(aspects predominantly concerning the driven apparatus see the relevant classes for such apparatus)~~

Project: Unknown (F03G)

- U F03G 6/00 **Devices for producing mechanical power from solar energy (solar boilers [F24](#))**

WARNING

Group [F03G 6/00](#) is impacted by reclassification into groups [F03G 6/002](#), [F03G 6/0055](#), [F03G 6/071](#), [F03G 6/074](#), [F03G 6/083](#), [F03G 6/089](#), [F03G 6/092](#), [F03G 6/098](#), [F03G 6/108](#), [F03G 6/111](#), [F03G 6/114](#), [F03G 6/117](#), [F03G 6/121](#), [F03G 6/124](#), [F03G 6/127](#) and [F03G 6/129](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U F03G 6/06
- with solar energy concentrating means

WARNING

Group [F03G 6/06](#) is impacted by reclassification into groups [F03G 6/061](#), [F03G 6/062](#), [F03G 6/063](#) and [F03G 6/068](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M F03G 6/061
- {Parabolic linear or ~~through~~[trough](#) concentrators}

WARNING

Group [F03G 6/061](#) is incomplete pending reclassification of documents from group [F03G 6/06](#).

Groups [F03G 6/06](#) and [F03G 6/061](#) should be considered in order to perform a complete search.

Project: Unknown (F04B)

- U F04B 43/00 **Machines, pumps, or pumping installations having flexible working members (pumps or pumping installations specially adapted for elastic fluids [F04B 45/00](#))**

- U F04B 43/08
- having tubular flexible members ([F04B 43/12](#) takes precedence)

- U F04B 43/09
- • Pumps having electric drive

- M F04B 43/095
- • • {~~Piezo-electric~~[Piezoelectric](#) drive}

Project: MP12088 (F04C)

- U F04C 23/00 **Combinations of two or more pumps, each being of rotary-piston or oscillating-piston type, specially adapted for elastic fluids; Pumping installations specially adapted for elastic fluids; Multi-stage pumps specially adapted for elastic fluids ([F04C 25/00](#) takes precedence)**

NOTE

Multi-stage pumps or compressors with stages connected in series or in parallel are not considered as having complementary function

- M F04C 23/02
- Pumps characterised by combination with, or adaptation to, specific driving engines or motors ~~(predominant aspects of the engines or motors, see the relevant classes)~~

Project: MP12088 (F04D)

- U F04D 13/00 **Pumping installations or systems (controlling [F04D 15/00](#))**

- M F04D 13/02 · Units comprising pumps and their driving means ~~(predominant aspects of the driving means, see the relevant classes for such means)~~
- U F04D 25/00 **Pumping installations or systems (controlling [F04D 27/00](#))**
- M F04D 25/02 · Units comprising pumps and their driving means ~~(predominant aspect of the driving means, see the relevant classes for such means)~~

Project: MP12216 (F15D)

- M F15D **FLUID DYNAMICS, i.e. METHODS OR MEANS FOR INFLUENCING THE FLOW OF GASES OR LIQUIDS ~~(nozzles, spray heads B05B; devices to decrease friction or resistance or to increase speed of ships B63B; ship rudders B63H 25/38; influencing the flow or the viscosity of fluids with chemical additives C09K 3/00, C10M; hydraulic engineering E02B); fluid circuit elements F15C; (one-way check valves F16K 15/00)~~**

NOTE

This subclass comprises boundary-layer control and other arrangements and methods, not provided for in other classes, for influencing the flow of fluids relative to constraining surfaces and after leaving these surfaces, e.g. producing or removing turbulence, deflecting jets, guiding flow through bends in conduits, affecting distribution of fluid in a conduit, reducing fluid friction.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP12071 (F15D)

- U F15D 1/00 **Influencing flow of fluids**
- U F15D 1/02 · in pipes or conduits
- M F15D 1/04 · · Arrangements of guide vanes in pipe elbows or duct bends; Construction of pipe conduit elements ~~or for~~ elbows with respect to flow, ~~especially e.g.~~ for reducing losses ~~in of~~ flow

Project: MP12216 (F15D)

- M F15D 1/08 · of jets leaving an orifice ~~(nozzles or outlets with means for mechanically breaking up or deflecting the jet B05B, e.g. B05B 1/26)~~
- U F15D 1/10 · around bodies of solid material
- M F15D 1/14 · Diverting flow into alternative channels ~~(in hydraulic engineering E02B)~~

Project: MP12088 (F16C)

- M F16C 13/00 **Rolls, drums, discs, or the like (guide rollers in feeding webs [B65H 27/00](#); calender rolls, bearings therefor [D21G 1/02](#); rotary drums or rollers for heat-exchange or heat-transfer apparatus [F28F 5/02](#); ~~special adaptations, see the relevant classes~~); Bearings or mountings therefor**
- M F16C 33/00 **Parts of bearings; Special methods for making bearings or parts thereof ~~(metal-working or like operations, see the relevant classes)~~**

Project: Unknown (F16C)

- U F16C 2202/00 **Solid materials defined by their properties**
- U F16C 2202/30 · Electric properties; Magnetic properties
- M F16C 2202/36 · · ~~Piezo-electric~~ *Piezoelectric*

Project: MP12088 (F16D)

- U F16D 3/00** Yielding couplings, i.e. with means permitting movement between the connected parts during the drive (couplings disconnectable simply by axial movement [F16D 1/10](#); slip couplings [F16D 7/00](#))
- M F16D 3/02 · adapted to specific functions (~~universal joints, see the appropriate groups~~)
- U F16D 7/00** Slip couplings, e.g. slipping on overload, for absorbing shock (combined with yielding shaft couplings [F16D 3/14](#); fluid slip couplings [F16D 31/00](#) - [F16D 35/00](#))
- M F16D 7/02 · of the friction type (~~couplings in which overload initiates a decrease of coupling pressure or a disconnection, see the relevant groups for clutches {, e.g. for friction overload clutches F16D 43/21}~~)
- U F16D 11/00** Clutches in which the members have interengaging parts (arrangements for synchronisation [F16D 23/02](#))
- M F16D 11/08 · actuated by moving a non-rotating part axially (~~actuating-mechanism in the relevant groups~~)
- U F16D 47/00** Systems of clutches, or clutches and couplings, comprising devices of types grouped under at least two of the preceding guide headings
- M F16D 47/02 · of which at least one is a coupling (~~elastic attachment of clutch parts, see the groups for the clutches {clutch flywheels with damping devices F16F 15/10}~~)
- U F16D 69/00** Friction linings; Attachment thereof; Selection of coating friction substances or surfaces (clutching elements [F16D 13/60](#); braking members [F16D 65/02](#))
- M F16D 69/02 · ~~Compositions of linings~~ *Composition of linings* {; {Methods of manufacturing}
- NOTE**
Indexing codes [F16D 69/021](#) - [F16D 2250/0053](#) are used for indexing aspects relating to compositions or manufacturing of friction linings

Project: Unknown (F16F)

- U F16F 15/00** Suppression of vibrations in systems ({damping of non-rotary systems using inertia effect [F16F 7/10](#); prevention or isolation of vibrations in machine tools [B23Q 11/0032](#); suppression of driveline vibrations in hybrid vehicle transmissions [B60W 30/20](#)}; vehicle seat suspension devices [B60N 2/50](#); {methods or devices for protecting against, or damping of, acoustic waves, e.g. sound [G10K 11/16](#)}); Means or arrangements for avoiding or reducing out-of-balance forces, e.g. due to motion ({vibration absorbing or balancing means for aircraft propellers [B64C 11/008](#), for rotorcraft rotors [B64C 27/001](#)}; testing static and dynamic balance of machines or structures [G01M 1/00](#))
- U F16F 15/005 · {using electro- or magnetostrictive actuation means (generating of mechanical vibrations operating with electrostriction [B06B 1/06](#), with magnetostriction [B06B 1/08](#); vehicle suspension arrangements characterised by use of piezoelectric elements [B60G 17/01941](#); piezoelectric, electrostrictive and magnetostrictive devices *per se* [H10N 30/00](#))}
- M F16F 15/007 · {~~Piezo-electric~~ *Piezoelectric* elements being placed under pre-constraint, e.g. placed under compression}

Project: MP11853 (F16F)

- U F16F 15/30 · Flywheels ([F16F 15/16](#), [F16F 15/28](#) take precedence; suppression of vibrations in rotating systems using elastic members or friction-damping members moving with the system, {i.e. split flywheels or single masses connected to a hub by elastic members or friction-damping members} [F16F 15/12](#); rotary-body aspects in general [F16C 13/00](#), [F16C 15/00](#))
- M F16F 15/305 · · made of plastics, e.g. fibre-reinforced plastics [FRP]; { i.e. characterised by their special construction from such materials}

Project: MP12088 (F16K)

- M F16K 25/00 Details relating to contact between valve members and **seatseats** (**sealing constructions, see the appropriate groups according to the type of valve**; movement of valve members other than for opening and closing [F16K 29/00](#))

Project: Unknown (F16K)

- U F16K 31/00 {Actuating devices;} Operating means; Releasing devices {(regulating means [G05D](#))}
- U F16K 31/004 · {actuated by piezoelectric means}
- M F16K 31/005 · · {~~Piezo-electric~~*Piezoelectric* benders}
- M F16K 31/007 · · {~~Piezo-electric~~*Piezoelectric* stacks}

Project: MP12088 (F16L)

- U F16L 59/00 Thermal insulation in general
- M F16L 59/02 · Shape or form of insulating materials, with or without coverings integral with the insulating materials (~~chemical aspects see the relevant classes~~)

Project: MP12088 (F16M)

- M F16M 11/00 *Stands or trestles as supports for apparatus or articles placed thereon* {; ~~Stands or trestles as supports for apparatus or articles placed thereon~~ { Stands for scientific apparatus such as gravitational force meters} (~~without heads F16K 13/00; without heads F16M 13/00~~; easels or stands for blackboards or the like [A47B 97/04](#); show-stands [A47F 7/00](#); for workmen [E04G 1/32](#); {sockets or holders for poles or posts [E04H 12/22](#)} ; ~~supporting;~~ *supporting or* suspending for lighting devices [F21V 21/00](#); ~~special modifications for particular apparatus or articles, see the appropriate subclasses~~)

Project: MP12088 (F16N)

- M F16N 15/00 Lubrication with substances other than oil or grease; Lubrication characterised by the use of particular lubricants in particular apparatus or conditions ([F16N 17/00](#) takes precedence; lubricating compositions, selection of particular substances as lubricants in general [C10M](#); ~~bearings with surfaces incorporating lubricant F16C 33/04; lubrication specially adapted to machines or apparatus provided for in a single other class, see the relevant class for the machine or apparatus~~)
- M F16N 29/00 Special means in lubricating arrangements or systems providing for the indication or detection of undesired conditions; Use of devices responsive to conditions in lubricating arrangements or systems (~~in bearings F16C; constructions of apparatus outside the lubricating arrangements or systems, see the relevant classes~~)

Project: MP12088 (F16P)

- M F16P 7/00** **Emergency devices preventing damage to a machine or apparatus**
([F16P 1/00](#), [F16P 3/00](#), [F16P 5/00](#) take precedence; **indicating means, see the appropriate classes**)

Project: RP0416-F (F21L)

- D F21L 2001/00** ~~{Portable electric lighting devices employing point-like light sources; Portable lighting devices employing light sources of unspecified shape, e.g. inspection lamps for mains connection}~~
~~—(Frozen)~~

WARNING

Group F21L 2001/00 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00 – F21L 4/085.

All groups listed in this Warning should be considered in order to perform a complete search.

- M F21L 2/00** **Systems of electric lighting devices (systems employing both electric and non-electric light sources or exchangeable light sources [F21L 27/00](#))**

WARNING

Group F21L 2/00 is incomplete pending reclassification of documents from groups F21L 15/00 – F21L 15/14, F21L 2001/00, F21L 2003/00, F21L 2005/00 and F21L 25/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- D F21L 2003/00 - F21L 15/00** **Portable electric lighting devices**

- D F21L 2003/00** ~~{Portable electric lighting devices employing linear light sources}~~
~~—(Frozen)~~

WARNING

Group F21L 2003/00 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00 – F21L 4/085.

All groups listed in this Warning should be considered in order to perform a complete search.

- N F21L 4/00 - F21L 14/00** **Portable electric lighting devices**

- M F21L 4/00** **Electric lighting devices with self-contained electric batteries or cells**

WARNING

Groups F21L 4/00 – F21L 4/085 are incomplete pending reclassification of documents from groups F21L 15/00 – F21L 15/14, F21L 2001/00, F21L 2003/00, F21L 2005/00 and F21L 25/00.

All groups listed in this Warning should be considered in order to perform a complete search.

- D F21L 2005/00** ~~{Portable electric lighting devices employing light sources of shapes not covered by group F21L 2001/00 or F21L 2003/00}~~
~~—(Frozen)~~

WARNING

Group F21L 2005/00 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00 – F21L 4/085.

F21L 2005/00

(Frozen)

(continued)

All groups listed in this Warning should be considered in order to perform a complete search.

D F21L 15/00
—(Frozen)

{Details of kinds solely applicable to the devices covered by groups F21L 2/00 - F21L 14/00}

WARNING

Group F21L 15/00 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00-F21L 4/085.

Groups F21L 15/00, F21L 2/00, and F21L 4/00 - F21L 4/085 should be considered in order to perform a complete search.

D F21L 15/02
—(Frozen)

- {concerned with light emission or distribution}

WARNING

Group F21L 15/02 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00 - F21L 4/085, F21V 3/00 - F21V 3/12, F21V 3/049, F21V 5/00-F21V 5/08, F21V 7/00-F21V 7/22, F21V 13/00-F21V 13/14, F21V 14/025, F21V 14/045, and F21V 14/065. —

All groups listed in this Warning should be considered in order to perform a complete search.

D F21L 15/04
—(Frozen)

- {Arrangements of coloured filters or screens}

WARNING

Group F21L 15/04 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00-F21L 4/085, F21V 9/08-F21V 9/12, F21V 11/00-F21V 11/186, and F21V 14/085.

All groups listed in this Warning should be considered in order to perform a complete search.

D F21L 15/06
—(Frozen)

- {concerned with the fitting}

WARNING

Group F21L 15/06 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00-F21L 4/085, F21V 19/00-F21V 19/04, and F21V 23/00-F21V 23/06.

All groups listed in this Warning should be considered in order to perform a complete search.

D F21L 15/08
—(Frozen)

- {Supporting and suspending elements}

WARNING

Groups F21L 15/08 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00-F21L 4/085, F21V 21/08-F21V 21/0965, and F21V 21/14-F21V 21/32.

All groups listed in this Warning should be considered in order to perform a complete search.

D F21L 15/10
—(Frozen)

- • {without arrangements for adjustment}

WARNING

Group F21L 15/10 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00-F21L 4/085, and F21V 21/08-F21V 21/0965.

F21L 15/10

(Frozen)

(continued)

All groups listed in this Warning should be considered in order to perform a complete search.

D F21L 15/14
—*(Frozen)*

- • • {Clips; Clamps; Head fittings (for medical purposes A61B 1/06)}

WARNING

Group F21L 15/14 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00-F21L 4/085, and F21V 21/08-F21V 21/0965.

All groups listed in this Warning should be considered in order to perform a complete search.

D F21L 25/00
—*(Frozen)*

~~{Details of kinds solely applicable to the devices covered by groups F21L 17/00 – F21L 23/00}~~

WARNING

~~Group F21L 25/00 is no longer used for the classification of documents as of February 1, 2017. The content of this group is being reclassified into groups F21L 2/00, F21L 4/00 – F21L 4/085, F21V 35/00 – F21V 35/006, and F21V 37/00 – F21V 37/02.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

Project: RP0416-F (F21V)

M F21V 3/00

Globes; Bowls; Cover glasses (with refracting properties [F21V 5/00](#); with reflecting properties [F21V 7/00](#); characterised by cooling arrangements [F21V 29/506](#))

WARNING

~~Groups F21V 3/00 – F21V 3/049 are incomplete pending reclassification of documents from group F21L 15/02.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

U F21V 3/04

- characterised by materials, surface treatments or coatings

U F21V 3/06

- • characterised by the material

M F21V 3/08

- • • the material comprising photoluminescent substances

WARNING

~~Group F21V 3/08 is incomplete pending reclassification of documents from group F21L 15/02.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

U F21V 3/10

- • characterised by coatings

M F21V 3/12

- • • the coatings comprising photoluminescent substances

WARNING

~~Group F21V 3/12 is incomplete pending reclassification of documents from group F21L 15/02.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

- M F21V 5/00** **Refractors for light sources (characterised by cooling arrangements [F21V 29/504](#))**
- WARNING**
Group F21V 5/00 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 5/002** • {using microoptical elements for redirecting or diffusing light}
- WARNING**
Group F21V 5/002 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 5/003** • • {using holograms}
- WARNING**
Group F21V 5/003 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 5/004** • • {using microlenses}
- WARNING**
Group F21V 5/004 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 5/005** • • {using microprisms}
- WARNING**
Group F21V 5/005 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 5/006** • {applied to portable lighting devices}
- WARNING**
Group F21V 5/006 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 5/007** • {Array of lenses or refractors for a cluster of light sources, e.g. for arrangement of multiple light sources in one plane (combination of two or more refractors [F21V 5/008](#))}
- WARNING**
Group F21V 5/007 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.

- M F21V 5/008
- {Combination of two or more successive refractors along an optical axis}
- WARNING
~~Group F21V 5/008 is incomplete pending reclassification of documents from group F21L 15/02.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~
- M F21V 5/02
- of prismatic shape ([F21V 5/04](#) takes precedence)
- WARNING
~~Group F21V 5/02 is incomplete pending reclassification of documents from group F21L 15/02.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~
- M F21V 5/04
- of lens shape
- WARNING
~~Group F21V 5/04 is incomplete pending reclassification of documents from group F21L 15/02.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~
- M F21V 5/041
- • {Ball lenses}
- WARNING
~~Group F21V 5/041 is incomplete pending reclassification of documents from group F21L 15/02.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~
- M F21V 5/043
- • {the lens having cylindrical faces, e.g. rod lenses, toric lenses}
- WARNING
~~Group F21V 5/043 is incomplete pending reclassification of documents from group F21L 15/02.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~
- M F21V 5/045
- • {the lens having discontinuous faces, e.g. Fresnel lenses}
- WARNING
~~Group F21V 5/045 is incomplete pending reclassification of documents from group F21L 15/02.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~
- M F21V 5/046
- • {the lens having a rotationally symmetrical shape about an axis for transmitting light in a direction mainly perpendicular to this axis, e.g. ring or annular lens with light source disposed inside the ring}
- WARNING
~~Group F21V 5/046 is incomplete pending reclassification of documents from group F21L 15/02.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~

- M F21V 5/048
- {the lens being a simple lens adapted to cooperate with a point-like source for emitting mainly in one direction and having an axis coincident with the main light transmission direction, e.g. convergent or divergent lenses, plano-concave or plano-convex lenses}
- WARNING**
Group F21V 5/048 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 5/06
- Hanging lustres for chandeliers
- WARNING**
Group F21V 5/06 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 5/08
- producing an asymmetric light distribution
- WARNING**
Group F21V 5/08 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 7/00
- Reflectors for light sources (characterised by cooling arrangements F21V 29/505)**
- WARNING**
Group F21V 7/00 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 7/22
- characterised by materials, surface treatments or coatings, e.g. dichroic reflectors
- WARNING**
Group F21V 7/22 is incomplete pending reclassification of documents from group F21L 15/02.
All groups listed in this Warning should be considered in order to perform a complete search.
- U F21V 9/00
- Elements for modifying spectral properties, polarisation or intensity of the light emitted, e.g. filters (coloured shades F21V 1/00; elements characterised by cooling arrangements F21V 29/502)**
- M F21V 9/08
- for producing coloured light, e.g. monochromatic; for reducing intensity of light (with provision for controlling the colour F21V 9/40)
- WARNING**
Group F21V 9/08 is incomplete pending reclassification of documents from group F21L 15/04.
Groups F21V 9/08 and F21L 15/04 should be considered in order to perform a complete search.

- M F21V 9/083
- {for portable lighting devices}
- WARNING**
Group F21V 9/083 is incomplete pending reclassification of documents from group F21L 15/04.—
Groups F21L 15/04 and F21V 9/083 should be considered in order to perform a complete search.
- M F21V 9/12
- with liquid-filled chambers
- WARNING**
Group F21V 9/12 is incomplete pending reclassification of documents from group F21L 15/04.—
Groups F21L 15/04 and F21V 9/12 should be considered in order to perform a complete search.
- M F21V 9/40
- with provision for controlling spectral properties, e.g. colour, or intensity
- WARNING**
Group F21V 9/40 is incomplete pending reclassification of documents from group F21L 15/04.—
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 11/00
- Screens not covered by groups [F21V 1/00](#), [F21V 3/00](#), [F21V 7/00](#) or [F21V 9/00](#) (characterised by cooling arrangements [F21V 29/502](#))
- WARNING**
Groups F21V 11/00 - F21V 11/186 are incomplete pending reclassification of documents from group F21L 15/04.—
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 13/00
- Producing particular characteristics or distribution of the light emitted by means of a combination of elements specified in two or more of main groups [F21V 1/00](#) - [F21V 11/00](#) (controlling the distribution of the light emitted by adjustment of elements [F21V 14/00](#))
- WARNING**
Groups F21V 13/00 - F21V 13/14 are incomplete pending reclassification of documents from group F21L 15/02.—
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 13/02
- Combinations of only two kinds of elements
- WARNING**
Group F21V 13/02 is incomplete pending reclassification of documents from group F21L 15/02.—
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 13/08
- the elements being filters or photoluminescent elements and reflectors
- WARNING**
Group F21V 13/08 is incomplete pending reclassification of documents from group F21L 15/02.—
All groups listed in this Warning should be considered in order to perform a complete search.

| | | |
|----------|-------------------|---|
| M | F21V 13/12 | <ul style="list-style-type: none"> • Combinations of only three kinds of elements <p><u>WARNING</u> Group F21V 13/12 is incomplete pending reclassification of documents from group F21L 15/02. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| M | F21V 13/14 | <ul style="list-style-type: none"> • the elements being filters or photoluminescent elements, reflectors and refractors <p><u>WARNING</u> Group F21V 13/14 is incomplete pending reclassification of documents from group F21L 15/02. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| U | F21V 14/00 | <p>Controlling the distribution of the light emitted by adjustment of elements (reflectors with provision for adjusting the curvature F21V 7/16; light filters or the like with provision for controlling the colour or intensity F21V 9/40; screens using adjustable parallel laminae or strips F21V 11/04; screens using iris-type diaphragms F21V 11/10; screens using movable sheets without apertures F21V 11/18; adjustable mountings for lighting devices F21V 21/14)</p> |
| U | F21V 14/02 | <ul style="list-style-type: none"> • by movement of light sources {(in vehicle head lamps F21S 41/657)} |
| M | F21V 14/025 | <ul style="list-style-type: none"> • {in portable lighting devices} <p><u>WARNING</u> Group F21V 14/025 is incomplete pending reclassification of documents from group F21L 15/02. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| U | F21V 14/04 | <ul style="list-style-type: none"> • by movement of reflectors {(in vehicle head lamps F21S 41/675)} |
| M | F21V 14/045 | <ul style="list-style-type: none"> • {in portable lighting devices} <p><u>WARNING</u> Group F21V 14/045 is incomplete pending reclassification of documents from group F21L 15/02. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| U | F21V 14/06 | <ul style="list-style-type: none"> • by movement of refractors {(in vehicle head lamps F21S 41/635)} |
| M | F21V 14/065 | <ul style="list-style-type: none"> • {in portable lighting devices} <p><u>WARNING</u> Group F21V 14/065 is incomplete pending reclassification of documents from group F21L 15/02. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| U | F21V 14/08 | <ul style="list-style-type: none"> • by movement of the screens {or filters} |
| M | F21V 14/085 | <ul style="list-style-type: none"> • {in portable lighting devices} <p><u>WARNING</u> Group F21V 14/085 is incomplete pending reclassification of documents from group F21L 15/04. All groups listed in this Warning should be considered in order to perform a complete search.</p> |

- M F21V 19/00** **Fastening of light sources or lamp holders (fastening electric light source solely by the coupling device [H01R 33/00](#) {; special means for attaching candle to candle holder [F21V 35/003](#)})**
- WARNING**
Groups F21V 19/00 - F21V 19/04 are incomplete pending reclassification of documents from group F21L 15/06.
All groups listed in this Warning should be considered in order to perform a complete search.
- U F21V 21/00** **Supporting, suspending, or attaching arrangements for lighting devices ([F21V 17/00](#), [F21V 19/00](#) take precedence; arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general [B60Q](#), stands for supporting apparatus or articles in general [F16M 11/00](#)); Hand grips**
- M F21V 21/08** **• Devices for easy attachment to any desired place, e.g. clip, clamp, magnet**
- WARNING**
Groups F21V 21/08 - F21V 21/0965 are incomplete pending reclassification of documents from groups F21L 15/08, F21L 15/10 and F21L 15/14.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 21/14** **• Adjustable mountings**
- WARNING**
Groups F21V 21/14 - F21V 21/32 are incomplete pending reclassification of documents from group F21L 15/08.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 23/00** **Arrangement of electric circuit elements in or on lighting devices {(characterised by cooling arrangements [F21V 29/508](#))}**
- WARNING**
Groups F21V 23/00 - F21V 23/06 are incomplete pending reclassification of documents from group F21L 15/06.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 35/00** **Candle holders**
- WARNING**
Groups F21V 35/00 - F21V 35/006 are incomplete pending reclassification of documents from group F21L 25/00.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F21V 37/00** **Details of lighting devices employing combustion as light source, not otherwise provided for**
- WARNING**
Groups F21V 37/00 - F21V 37/02 are incomplete pending reclassification of documents from group F21L 25/00.
All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP12260 (F24T)

M F24T 50/00 Geothermal systems (for producing mechanical power from geothermal energy ~~F03G 7/04~~ [F03G 4/00](#))

Project: MP12088 (F25D)

M F25D REFRIGERATORS; COLD ROOMS; ICE-BOXES; COOLING OR FREEZING APPARATUS NOT OTHERWISE PROVIDED FOR (refrigerated showcases [A47F 3/04](#); thermally-insulated vessels for domestic use [A47J 41/00](#); refrigerated vehicles, see the appropriate subclasses of classes [B60](#) - [B64](#); containers with thermal insulation in general [B65D 81/38](#); heat-transfer, heat-exchange or heat-storage materials, e.g. refrigerants, or materials for the production of heat or cold by chemical reactions other than by combustion [C09K 5/00](#); thermally-insulated vessels for liquefied or solidified gases [F17C](#); air-conditioning or air-humidification [F24F](#); refrigeration machines, plants, or systems [F25B](#); cooling of instruments or comparable apparatus without refrigeration [G12B](#); ~~cooling of engines or pumps, see the relevant classes~~)

NOTES

- In this subclass, the following term is used with the meaning indicated:
 - "device" means an enclosed space to be cooled; such devices being associated either with refrigerating machinery, e.g. in a refrigerator, or with other cold sources, e.g. in an ice-box.
- Attention is drawn to Note (2) following the title of subclass [F24F](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP12184 (F27B)

M F27B FURNACES, KILNS, OVENS, OR RETORTS IN GENERAL; OPEN SINTERING OR LIKE APPARATUS

NOTE

Attention is drawn to the ~~references and notes~~ [Notes](#) following the title of class [F27](#) and the note (par. III) following the Contents of Section H.

WARNINGS

- The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

| | | |
|---|------------|--|
| F27B 1/09 | covered by | F27B 1/08 |
| F27B 5/05 | covered by | F27B 5/04 |
| F27B 14/16 , F27B 14/18 | covered by | F27B 14/0806 |
| F27B 21/08 - F27B 21/14 | covered by | F27D 3/00 , F27D 21/00 |

- In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP12184 (F27D)

M F27D **DETAILS OR ACCESSORIES OF FURNACES, KILNS, OVENS, OR RETORTS, IN SO FAR AS THEY ARE OF KINDS OCCURRING IN MORE THAN ONE KIND OF FURNACE (combustion apparatus [F23](#))**

NOTE

Attention is drawn to the ~~references and~~ Notes following the title of class [F27](#) and the ~~Note III following the Contents of Section H.~~

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP12088 (F28F)

M F28F 5/00 **Elements specially adapted for movement (~~arrangements for moving the elements, see the appropriate subclass for the apparatus concerned~~)**

Project: Unknown (F41A)

U F41A 19/00 **Firing or trigger mechanisms; Cocking mechanisms**
U F41A 19/58 · Electric firing mechanisms ([F41A 17/10](#), [F41A 17/12](#) take precedence)
U F41A 19/60 · · characterised by the means for generating electric energy
M F41A 19/62 · · · ~~Piezo-electric~~ *Piezoelectric* generators

Project: Unknown (F41J)

U F41J 5/00 **Target indicating systems; Target-hit or score detecting systems {(for shooting or hurling games [A63F 9/0204](#); devices for measuring projectile velocity using optical means [G01P 3/685](#))}**
M F41J 5/08 · ~~Infra-red~~ *Infrared* hit-indicating systems

Project: MP12204 (G01B)

M G01B 21/00 **Measuring arrangements or details thereof, where the measuring technique is not covered by the other groups of this subclass, unspecified or not relevant**

NOTE

{Measuring arrangements or details thereof covered by two or more of groups [G01B 3/00](#) - [G01B 17/00](#) are classified in this group if no single other group can be selected as being predominantly applicable.-}

Project: MP12185 (G01M)

U G01M 1/00 **Testing static or dynamic balance of machines or structures**
U G01M 1/02 · Details of balancing machines or devices
M G01M 1/08 · · Instruments for indicating directly the magnitude and phase of the ~~unbalance~~ *imbalance*
M G01M 1/12 · Static balancing; Determining position of centre of gravity (~~by determining unbalance~~ *G01M 1/14* ~~by determining imbalance~~ *G01M 1/14*)
M G01M 1/14 · Determining ~~unbalance~~ *imbalance* ([G01M 1/30](#) takes precedence)
U G01M 1/16 · · by oscillating or rotating the body to be tested
M G01M 1/20 · · · and applying external forces compensating forces due to ~~unbalance~~ *imbalance*
M G01M 1/22 · · · and converting vibrations due to ~~unbalance~~ *imbalance* into electric variables

- M G01M 1/28 . . . with special adaptations for determining ~~unbalance~~*imbalance* of the body in situ, e.g. of vehicle wheels
- M G01M 1/30 . Compensating ~~unbalance~~*imbalance*

Project: RP12065 (G01N)

- M G01N 15/00 Investigating characteristics of particles; Investigating permeability, pore-volume, or surface-area of porous materials (identification of microorganisms C12Q)**
- D G01N 2015/0065 . {biological, e.g. blood}
<administratively transferred to [G01N 15/01](#)>
- D G01N 2015/0069 . . {with lysing, e.g. of erythrocyts}
<administratively transferred to [G01N 2015/011](#) ADD>
- D G01N 2015/0073 . . {Red blood cells}
<administratively transferred to [G01N 2015/012](#) ADD>
- D G01N 2015/0076 . . . {Reticulocytes}
<administratively transferred to [G01N 2015/014](#) ADD>
- D G01N 2015/008 . . {White cells}
<administratively transferred to [G01N 2015/016](#) ADD>
- D G01N 2015/0084 . . {Platelets}
<administratively transferred to [G01N 2015/018](#) ADD>
- D G01N 2015/0088 . . {Biological contaminants; Fouling}
<administratively transferred to [G01N 2015/019](#) ADD>
- U G01N 2015/0096 . {Investigating consistence of powders, dustability, dustiness}
- N G01N 15/01 . *pecially adapted for biological cells, e.g. blood cells (investigating sedimentation of particle suspensions in blood [G01N 15/05](#))*
- N G01N 2015/011 . . {with lysing, e.g. of erythrocytes}
- N G01N 2015/012 . . {Red blood cells}
- N G01N 2015/014 . . . {Reticulocytes}
- N G01N 2015/016 . . {White blood cells}
- N G01N 2015/018 . . {Platelets}
- N G01N 2015/019 . . {Biological contaminants; Fouling}
- M G01N 15/02 . Investigating particle size or size distribution (~~G01N 15/04, G01N 15/10 take precedence~~; by measuring osmotic pressure [G01N 7/10](#); *investigating sedimentation of particle suspensions [G01N 15/04](#); investigating individual particles [G01N 15/10](#)*)
- M G01N 15/0205 . . {by optical means, e.g. by light scattering, diffraction, holography or imaging}
- M G01N 15/0227 . . . {using imaging, e.g. a projected image of suspension *using imaging*; -using holography}
- M G01N 2015/0233 . . . {using holography}
- M G01N 15/06 . Investigating concentration of particle suspensions (~~G01N 15/04, G01N 15/10 take precedence~~; by weighing [G01N 5/00](#); *investigating sedimentation of particle suspensions [G01N 15/04](#); investigating individual particles [G01N 15/10](#)*)

NOTE

References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group and its subgroups:

- Investigating or analysing materials;

- by the use of optical means: [G01N 21/00](#), e.g. [G01N 21/47](#), [G01N 21/90](#);
 - by other radiations or by particles: [G01N 23/00](#), e.g. [G01N 23/02](#), [G01N 23/201](#);
 - by measuring impedance: [G01N 27/02](#), e.g. [G01N 27/06](#), [G01N 27/22](#);
 - by electrochemical means: [G01N 27/00](#), e.g. [G01N 27/26](#);
 - by measuring absorption of sonic or ultrasonic vibrations: [G01N 29/00](#), e.g. [G01N 29/02](#)
- U G01N 2015/0687 . . {in solutions, e.g. non volatile residue}
- D G01N 2015/0693 . . {~~by optical means, e.g. by integrated nephelometry~~
<administratively transferred to [G01N 15/075](#)>
- N G01N 15/075 . . *by optical means*
- U G01N 15/10 . . Investigating individual particles
- U G01N 15/1012 . . {Calibrating particle analysers; References therefor}
- N G01N 2015/1014 . . . {Constitution of reference particles}
- N G01N 2015/1016 . . . {Particle flow simulating, e.g. liquid crystal cell}
- D G01N 2015/1018 . . . {Constitution of reference particles}
<administratively transferred to [G01N 2015/1014](#) ADD>
- N G01N 2015/1019 . . {Associating Coulter-counter and optical flow cytometer [OFC]}
- N G01N 2015/1021 . . {Measuring mass of individual particles}
- N G01N 2015/1022 . . {Measurement of deformation of individual particles by non-optical means}
- N G01N 15/1023 . . {Microstructural devices for non-optical measurement}
- N G01N 2015/1024 . . {Counting particles by non-optical means}
- D G01N 2015/1025 . . . {Particle flow simulating, e.g. liquid crystal cell}
<administratively transferred to [G01N 2015/1016](#) ADD>
- N G01N 2015/1026 . . {Recognising analyser failures, e.g. bubbles; Quality control for particle analysers}
- N G01N 2015/1027 . . {Determining speed or velocity of a particle}
- N G01N 2015/1028 . . {Sorting particles}
- N G01N 2015/1029 . . {Particle size}
- N G01N 2015/103 . . {Particle shape}
- M G01N 15/1031 . . {~~by measuring electrical or magnetic effects thereof, e.g. conductivity or capacity (involving the use of Coulter counters G01N 15/12; using nanoscale size effects, other than for sizing or counting, by translocation through nanopores G01N 33/48721)~~}
- D G01N 2015/1037 . . {~~Associating coulter-counter and optical flow cytometer [OFC]~~
<administratively transferred to [G01N 2015/1019](#) ADD>
- D G01N 2015/1043 . . {~~Measuring mass of individual particles~~
<administratively transferred to [G01N 2015/1021](#) ADD>
- D G01N 2015/105 . . {~~Other than optical measurement of deformation of individual particles (optical measurement G01N 2015/1495)~~
<administratively transferred to [G01N 2015/1022](#) ADD>
- D G01N 15/1056 . . {~~Microstructural devices for other than electro-optical measurement (for electro-optical measurement G01N 15/1484)~~
<administratively transferred to [G01N 15/1023](#)>
- D G01N 2015/1062 . . {~~counting the particles by other than electro-optical means (by electro-optical means G01N 2015/1486)~~
<administratively transferred to [G01N 2015/1024](#) ADD>

- D G01N 2015/1068 . . {Recognizing failure of the analyser, e.g. bubbles; Quality control for particle analysers}
<administratively transferred to [G01N 2015/1026](#) ADD>
- D G01N 2015/1075 . . {Determining speed or velocity of a particle}
<administratively transferred to [G01N 2015/1027](#) ADD>
- D G01N 2015/1081 . . {Sorting the particles}
<administratively transferred to [G01N 2015/1028](#) ADD>
- D G01N 2015/1087 . . {Particle size}
<administratively transferred to [G01N 2015/1029](#) ADD>
- D G01N 2015/1093 . . {Particle shape}
<administratively transferred to [G01N 2015/103](#) ADD>
- M G01N 15/12 . . *Coulter counters by observing changes in resistance or impedance across apertures when traversed by individual particles, e.g. by using the Coulter principle*
- D G01N 15/1209 . . . {Details}
<administratively transferred to [G01N 15/131](#)>
- D G01N 15/1218 . . . {concerning the aperture}
<administratively transferred to [G01N 15/13](#)>
- D G01N 15/1227 . . . {Circuits}
<administratively transferred to [G01N 15/132](#)>
- D G01N 2015/1236 . . . {Flow forming}
<administratively transferred to [G01N 2015/133](#) ADD>
- D G01N 15/1245 . . {Devices using more than one aperture}
<administratively transferred to [G01N 15/134](#)>
- D G01N 2015/1254 . . {Electrodes}
<administratively transferred to [G01N 2015/135](#) ADD>
- D G01N 2015/1263 . . . {Scanning electrodes}
<administratively transferred to [G01N 2015/136](#) ADD>
- D G01N 2015/1272 . . {Cleaning}
<administratively transferred to [G01N 2015/137](#) ADD>
- D G01N 2015/1281 . . {Detecting blocking debris}
<administratively transferred to [G01N 2015/138](#) ADD>
- D G01N 2015/129 . . {measuring the ratio of AC/DC impedances}
<administratively transferred to [G01N 2015/139](#) ADD>
- N G01N 15/13 *Details pertaining to apertures*
- N G01N 15/131 *{Details ([G01N 15/13](#) takes precedence)}*
- N G01N 15/132 *{Circuits}*
- N G01N 2015/133 *{Flow forming}*
- N G01N 15/134 *{Devices using two or more apertures}*
- N G01N 2015/135 *{Electrodes}*
- N G01N 2015/136 *{Scanning electrodes}*
- N G01N 2015/137 *{Cleaning}*
- N G01N 2015/138 *{Detecting blocking debris}*
- N G01N 2015/139 *{Measuring the ratio of AC/DC impedances}*

- M G01N 15/14 . . . **Electro-optical investigation** *Optical investigation techniques*, e.g. flow cytometers *cytometry*
- M G01N 15/1404 . . . **{Fluid conditioning in flow cytometers** *Handling flow*, e.g. flow cells *hydrodynamic focusing*; **Supply**; **Control of flow**
- D G01N 2015/1409 {Control of supply of sheaths fluid, e.g. sample injection control}
<administratively transferred to [G01N 15/1409](#)>
- N G01N 15/1409 *Handling samples, e.g. injecting samples*
- U G01N 2015/1411 {Features of sheath fluids}
- M G01N 15/1429 . . . **{using an analyser being characterised by its signal processing}** *Signal processing*
- U G01N 15/1431 {the electronics being integrated with the analyser, e.g. hand-held devices for on-site investigation}
- N G01N 15/1433 *using image recognition*
- M G01N 15/1434 . . . **{using an analyser being characterised by its optical arrangement}** *Optical arrangements*
- U G01N 15/1456 {without spatial resolution of the texture or inner structure of the particle, e.g. processing of pulse signals}
- D G01N 15/1463 {using image analysis for extracting features of the particle}
- NOTE**
{ References listed below indicate GPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:
- counting objects disposed at random with size distinction G06M 11/04
 - extraction of features from image for pattern recognition G06V 10/40
 - specific image analysis method for the recognition of microscopic objects G06V 20/69
 - image enhancement in general G06T 5/00
 - image analysis in general G06T 7/00
- }
- <administratively transferred to [G01N 15/1433](#)>
- D G01N 2015/1465 {image analysis on colour image}
<administratively transferred to [G01N 15/1433](#)>
- U G01N 15/1468 {with spatial resolution of the texture or inner structure of the particle}
- NOTE**
{ References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:
- counting objects disposed at random with size distinction [G06M 11/04](#)
 - extraction of features from image for pattern recognition [G06V 10/40](#)
 - specific image analysis method for the recognition of microscopic objects [G06V 20/69](#)
 - image enhancement [G06T 5/00](#)
 - image analysis [G06T 7/00](#)
- }
- D G01N 15/1475 {using image analysis for extracting features of the particle}
<administratively transferred to [G01N 15/1433](#)>

- C G01N 2015/1481 . . . {Optical analysis of ~~particle in droplet~~ particles within droplets (sorting particles within droplets [G01N 15/1492](#))}
- WARNING**
Group [G01N 2015/1481](#) is impacted by reclassification into group [G01N 15/1492](#).
Groups [G01N 2015/1481](#) and [G01N 15/1492](#) should be considered in order to perform a complete search.
- D G01N 2015/149 . . . {Sorting the particles}
<administratively transferred to [G01N 15/149](#)>
- N [G01N 15/149](#) . . . specially adapted for sorting particles, e.g. by their size or optical properties
- N [G01N 15/1492](#) . . . within droplets
- WARNING**
Group [G01N 15/1492](#) is incomplete pending reclassification of documents from group [G01N 2015/1481](#).
Groups [G01N 2015/1481](#) and [G01N 15/1492](#) should be considered in order to perform a complete search.

Project: RP10478-F (G01N)

- U G01N 30/00 Investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography {or field flow fractionation} ([G01N 3/00](#), [G01N 5/00](#), [G01N 7/00](#), [G01N 9/00](#), [G01N 11/00](#), [G01N 13/00](#), [G01N 15/00](#), [G01N 17/00](#), [G01N 19/00](#), [G01N 21/00](#), [G01N 22/00](#), [G01N 23/00](#), [G01N 24/00](#), [G01N 25/00](#), [G01N 27/00](#), [G01N 29/00](#) take precedence)
- NOTE**
In this group, the following term is used with the meaning indicated:
- "conditioning" refers to the adjustment or control of environmental parameters, e.g. temperature or pressure.
- U G01N 30/02 . Column chromatography
- D G01N 30/48 . . {Sorbent materials therefor}
—(Frozen)
- WARNING**
Group [G01N 30/48](#) is no longer used for the classification of documents as of May 1, 2022.
The content of this group is being reclassified into groups [B01J 20/281](#)–[B01J 20/29](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- D G01N 30/482 . . {Solid sorbents}
—(Frozen)
- WARNING**
Group [G01N 30/482](#) is no longer used for the classification of documents as of May 1, 2022.
The content of this group is being reclassified into groups [B01J 20/281](#)–[B01J 20/29](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- D G01N 2030/484 . . {Solid sorbents}
—(Frozen)
- WARNING**
Group [G01N 2030/484](#) is no longer used for the classification of documents as of May 1, 2022.

The content of this group is being reclassified into groups B01J 20/281--B01J 20/29.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: Unknown (G01R)

G01R

MEASURING ELECTRIC VARIABLES; MEASURING MAGNETIC VARIABLES (indicating correct tuning of resonant circuits [H03J 3/12](#))

NOTES

1. This subclass covers:

- measuring all kinds of electric or magnetic variables directly or by derivation from other electric or magnetic variables;
- measuring all kinds of electric or magnetic properties of materials;
- testing electric or magnetic devices, apparatus or networks, (e.g. discharge tubes, amplifiers) or measuring their characteristics;
- indicating presence or sign of current or voltage;
- NMR, EPR or other spin-effect apparatus, not specially adapted for a particular application;
- equipment for generating signals to be used for carrying out such tests and measurements.

2. In this subclass, the following terms or expressions are used with the meanings indicated:-

- "measuring" includes investigating;
- "instruments" or "measuring instruments" means electro-mechanical measuring mechanisms;
- "arrangements for measuring" means apparatus, circuits, or methods for measuring;

3. Attention is drawn to the Notes following the title of class [G01](#).

4. In this subclass, instruments or arrangements for measuring electric variables are classified in the following way:

- Electromechanical instruments where the measured electric variables directly effect the indication of the measured value, including combined effects of two or more values, are classified in groups [G01R 5/00](#) - [G01R 11/00](#).
- Details common to different types of the instruments covered by groups [G01R 5/00](#) - [G01R 11/00](#) are classified in group [G01R 1/00](#).
- Arrangements involving circuitry to obtain an indication of a measured value by deriving, calculating or otherwise processing electric variables, e.g. by comparison with another value, are classified in groups [G01R 17/00](#) - [G01R 29/00](#).
- Details common to different types of arrangements covered by groups [G01R 17/00](#) - [G01R 29/00](#) are classified in group [G01R 15/00](#).

5. In this subclass, group [G01R 17/00](#) takes precedence over groups [G01R 19/00](#) - [G01R 31/00](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

U G01R 29/00

Arrangements for measuring or indicating electric quantities not covered by groups [G01R 19/00](#) - [G01R 27/00](#)

U G01R 29/08

• Measuring electromagnetic field characteristics

U G01R 29/0864

• • {characterised by constructional or functional features}

U G01R 29/0878

• • • {Sensors; antennas; probes; detectors (wave guide measuring sections [G01R 1/24](#))}

- M G01R 29/0885 . . . {using optical probes, e.g. electro-optical, ~~luminiscent~~*luminescent*, glow discharge, or optical interferometers}

Project: RP12199 (G01S)

- U G01S 5/00** **Position-fixing by co-ordinating two or more direction or position line determinations; Position-fixing by co-ordinating two or more distance determinations {(using active systems [G01S 13/00](#), [G01S 15/00](#), [G01S 17/00](#))}**
- U G01S 5/16 . using electromagnetic waves other than radio waves
- M G01S 5/163 . {Determination of attitude (using inertial means [G01C 9/00](#); control of attitude ~~G05D 1/08~~*G05D 1/49*)}
- U G01S 5/18 . using ultrasonic, sonic, or infrasonic waves
- M G01S 5/186 . {Determination of attitude (using inertial means [G01C 9/00](#); control of attitude ~~G05D 1/08~~*G05D 1/49*)}
- U G01S 13/00** **Systems using the reflection or reradiation of radio waves, e.g. radar systems; Analogous systems using reflection or reradiation of waves whose nature or wavelength is irrelevant or unspecified**

NOTES

- This group covers :
 - systems for detecting the presence of an object, e.g. by reflection or reradiation from the object itself, or from a transponder associated with the object, for determining the distance or relative velocity of an object, for providing a co-ordinated display of the distance and direction of an object or for obtaining an image thereof;
 - systems arranged for mounting on a moving craft or vehicle and using the reflection of waves from an extended surface external to the craft, e.g. the surface of the earth, to determine the velocity and direction of motion of the craft relative to the surface.
- This group does not cover :
 - systems for determining the direction of an object by means not employing reflection or reradiation, which are covered by groups [G01S 1/00](#) or [G01S 3/00](#);
 - systems for determining distance or velocity of an object by means not employing reflection or reradiation, which are covered by group [G01S 11/00](#).

- U G01S 13/87 . Combinations of radar systems, e.g. primary radar and secondary radar
- M G01S 13/874 . {Combination of several systems for attitude determination (in general [G01C](#), control of attitude ~~G05D 1/08~~*G05D 1/49*)}

- U G01S 15/00** **Systems using the reflection or reradiation of acoustic waves, e.g. sonar systems**

NOTES

- This group covers :
 - systems for detecting the presence of an object, e.g. by reflection or reradiation from the object itself, or from a transponder associated with the object, for determining the distance or relative velocity of an object, for providing a co-ordinated display of the distance and direction of an object or for obtaining an image thereof;
 - systems arranged for mounting on a moving craft or vehicle and using the reflection of waves from an extended surface external to the craft, e.g. the surface of the earth, to determine the velocity and direction of motion of the craft relative to the surface.
- This group does not cover :

- systems for determining the direction of an object by means not employing reflection or reradiation, which are covered by groups [G01S 1/00](#) or [G01S 3/00](#);
- systems for determining distance or velocity of an object by means not employing reflection or reradiation, which are covered by group [G01S 11/00](#).

- U G01S 15/87 · Combinations of sonar systems
- M G01S 15/872 · {Combination of several systems for attitude determination (using inertial means [G01C 9/00](#), control of attitude ~~G05D 1/08~~[G05D 1/49](#))}

Project: RP11851 (G01T)

- U G01T 1/00 **Measuring X-radiation, gamma radiation, corpuscular radiation, or cosmic radiation ([G01T 3/00](#), [G01T 5/00](#) take precedence)**
- U G01T 1/16 · Measuring radiation intensity ([G01T 1/29](#) takes precedence {; self-powered detectors [G01T 3/006](#); using an ionisation chamber filled with a liquid or solid, e.g. frozen liquid, dielectric [G01T 3/008](#)})
- U G01T 1/161 · · Applications in the field of nuclear medicine, e.g. *in vivo* counting {(apparatus for radiation diagnosis [A61B 6/00](#))}
- M G01T 1/1611 · · · {using both transmission and emission sources sequentially (SPECT imaging [G01T 1/1642](#); PET imaging [G01T 1/2985](#); ~~detecting hidden objects, e.g. weapons, explosives G01V 5/0008~~; *detecting prohibited goods, e.g. weapons, explosives, hazardous substances, contraband or smuggled objects G01V 5/20*)}
- M G01T 1/1615 · · · {using both transmission and emission sources simultaneously (SPECT imaging [G01T 1/1642](#); PET imaging [G01T 1/2985](#); ~~detecting hidden objects, e.g. weapons, explosives G01V 5/0008~~; *detecting prohibited goods, e.g. weapons, explosives, hazardous substances, contraband or smuggled objects G01V 5/20*)}

Project: RP0287-F (G01T)

- U G01T 1/20 · · with scintillation detectors
- M G01T 1/2018 · · · {Scintillation-photodiode combinations}

WARNING

Group G01T 1/2018 is impacted by reclassification into groups G01T 1/20181 - G01T 1/2019.

All groups listed in this Warning should be considered in order to perform a complete search.

- M G01T 1/20181 · · · · {Stacked detectors, e.g. for measuring energy and positional information (using a combination of different types of scintillation detectors, e.g. phoswich detectors, [G01T 1/2008](#))}

WARNING

Group G01T 1/20181 is incomplete pending reclassification from group G01T 1/2018.

Group G01T 1/2018 and G01T 1/20181 should be considered in order to perform a complete search.

- M G01T 1/20182 · · · · {Modular detectors, e.g. tiled scintillators or tiled photodiodes (stacked detectors [G01T 1/20181](#))}

WARNING

Group G01T 1/20182 is incomplete pending reclassification from group G01T 1/2018.

Groups G01T 1/2018 and G01T 1/20182 should be considered in order to perform a complete search.

- M G01T 1/20183 . . . {Arrangements for preventing or correcting crosstalk, e.g. optical or electrical arrangements for correcting crosstalk}

WARNING

Group G01T 1/20183 is incomplete pending reclassification from group G01T 1/2018.
Groups G01T 1/2018 and G01T 1/20183 should be considered in order to perform a complete search.

- M G01T 1/20184 . . . {Detector read-out circuitry, e.g. for clearing of traps, compensating for traps or compensating for direct hits}

WARNING

Group G01T 1/20184 is incomplete pending reclassification from group G01T 1/2018.
Groups G01T 1/2018 and G01T 1/20184 should be considered in order to perform a complete search.

- M G01T 1/20185 . . . {Coupling means between the photodiode and the scintillator, e.g. optical couplings using adhesives with wavelength-shifting fibres}

WARNING

Group G01T 1/20185 is incomplete pending reclassification from group G01T 1/2018.
Groups G01T 1/2018 and G01T 1/20185 should be considered in order to perform a complete search.

- M G01T 1/20186 . . . {Position of the photodiode with respect to the incoming radiation, e.g. in the front of, below or sideways the scintillator}

WARNING

Group G01T 1/20186 is incomplete pending reclassification from group G01T 1/2018.
Groups G01T 1/2018 and G01T 1/20186 should be considered in order to perform a complete search.

- M G01T 1/20187 . . . {Position of the scintillator with respect to the photodiode, e.g. photodiode surrounding the crystal, the crystal surrounding the photodiode, shape or size of the scintillator}

WARNING

Group G01T 1/20187 is incomplete pending reclassification from group G01T 1/2018.
Groups G01T 1/2018 and G01T 1/20187 should be considered in order to perform a complete search.

- M G01T 1/20188 . . . {Auxiliary details, e.g. casings or cooling}

WARNING

Groups G01T 1/20188, G01T 1/20189, and G01T 1/2019 are incomplete pending reclassification from group G01T 1/2018.
All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP11851 (G01T)

- U G01T 1/24 . . with semiconductor detectors

- M G01T 1/249 . . . {specially adapted for use in SPECT or PET (SPECT imaging [G01T 1/1642](#); PET imaging [G01T 1/2985](#); ~~detecting hidden objects, e.g. weapons, explosives G01V 5/0008~~; *detecting prohibited goods, e.g. weapons, explosives, hazardous substances, contraband or smuggled objects G01V 5/20*)}

Project: Unknown (G01T)

- U G01T 7/00** **Details of radiation-measuring instruments**
- U G01T 7/12 . Provision for actuation of an alarm
- M G01T 7/125 . . {Alarm- or controlling circuits using ionisation chambers, proportional counters or Geiger-Mueller tubes, also functioning as UV detectors (measuring radiation intensity with counting tubes [G01T 1/18](#); measuring radiation intensity with ionisation chambers [G01T 1/185](#); ~~fire alarms actuated by presence of radiation of particles, e.g. of infra-red radiation, of ions G08B 17/11~~; flame monitoring in combustion devices [F23Q 7/00](#), [F23N](#); *fire alarms actuated by presence of radiation of particles, e.g. of infrared radiation, of ions G08B 17/11*; discharge tubes per se [H01J 47/00](#))}

Project: RP11851 (G01V)

- M G01V** **GEOPHYSICS; GRAVITATIONAL MEASUREMENTS; DETECTING MASSES OR OBJECTS; TAGS (means for indicating the location of accidentally buried, e.g. snow-buried, persons [A63B 29/02](#))**

NOTES

1. This subclass covers radar, sonar, lidar or analogous systems specifically designed for geophysical use. Radar, sonar, lidar or analogous systems, or details of such systems, if of a general interest, are also classified in subclass [G01S](#).
2. In this subclass, the following term is used with the meaning indicated:
 - "tags" means arrangements cooperating with a detecting field, e.g. near field, and designed to produce a specific detectable effect; "tags" also means active markers capable of generating a detectable field.
3. In this subclass, the geophysical methods apply both to the earth and to other celestial objects, e.g. planets.
4. Attention is drawn to the Notes following the title of class [G01](#).

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
[G01V 3/11](#) covered by [G01V 3/101](#), [G01V 3/104](#)
2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- U G01V 1/00** **Seismology; Seismic or acoustic prospecting or detecting**

NOTE

Groups [G01V 1/44](#) - [G01V 1/52](#) take precedence over groups [G01V 1/001](#) - [G01V 1/393](#) [G01V 1/42](#)

- M G01V 1/001 . {Acoustic presence detection (~~measurement of sonic vibrations G01H~~; ~~alarm systems G08B~~)}
- M G01V 1/003 . {Seismic data acquisition in general, e.g. survey design ([G01V 1/3808](#), [G01V 1/42](#) *takes take* precedence)}
- M G01V 1/006 . . {generating single signals by using more than one generator, e.g. beam steering or ~~focussing~~*focusing* arrays ([G01V 1/13](#), [G01V 1/3861](#) *takes take* precedence)}

- D G01V 1/008
- {Earthquake measurement or prediction (event detection for microseismic events G01V 1/288)}
- <administratively transferred to [G01V 1/01](#)>
- N G01V 1/01
- *Measuring or predicting earthquakes*
- M G01V 1/28
- Processing seismic data, e.g. ~~analysis, for interpretation, for correction for interpretation or for event detection~~ ([G01V 1/48](#) takes precedence)
- M G01V 1/288
- • {Event detection in seismic signals, e.g. microseismics (~~earthquakes G01V 1/008; G01V 1/36~~ takes precedence)}
- M G01V 1/38
- specially adapted for water-covered areas (~~G01V 1/28; G01V 1/42~~ take takes precedence)
- M G01V 1/3808
- • {Seismic data acquisition, e.g. survey design (~~in general G01V 1/003~~)}
- M G01V 5/00**
- Prospecting or detecting by the use of ~~nuclear~~ionising radiation, e.g. of natural or induced radioactivity**
- D G01V 5/0008
- {~~Detecting hidden objects, e.g. weapons, explosives (sorting of materials or articles according to radioactive properties B07C 5/342; investigating or analysing materials by the use of wave or particle radiation G01N 23/00)~~}
- <administratively transferred to [G01V 5/20](#)>
- D G01V 5/0016
- • {Active interrogation, i.e. using an external radiation source, e.g. using pulsed, continuous or cosmic rays}
- <administratively transferred to [G01V 5/22](#)>
- D G01V 5/0025
- • • {Measuring scattered radiation}
- <administratively transferred to [G01V 5/222](#)>
- D G01V 5/0033
- • • {Mixed interrogation beams, e.g. using more than one type of radiation beam}
- <administratively transferred to [G01V 5/223](#)>
- D G01V 5/0041
- • • {Multiple energy techniques using one type of radiation, e.g. X-rays of different energies (multi-beam applications, e.g. X-rays and neutrons G01V 5/0033; spectroscopic applications G01V 5/0016)}
- <administratively transferred to [G01V 5/224](#)>
- D G01V 5/005
- • • {using Tomography, e.g. CT or SPECT (detector details in CT applications G01T 1/2985)}
- <administratively transferred to [G01V 5/226](#)>
- D G01V 5/0058
- • • {using stereoscopic means}
- <administratively transferred to [G01V 5/228](#)>
- D G01V 5/0066
- • • {having relative motion between the source, detector and object other than by conveyor (G01V 5/005 takes precedence)}
- <administratively transferred to [G01V 5/232](#)>
- D G01V 5/0069
- • • {Measuring induced radiation, e.g. thermal neutron activation analysis (investigating or analysing materials by the use of neutrons G01N 23/222)}
- <administratively transferred to [G01V 5/234](#)>
- D G01V 5/0075
- • {Passive interrogation (for hand, feet or portals G01T 1/167; for contaminated surface areas G01T 1/169)}
- <administratively transferred to [G01V 5/26](#)>
- D G01V 5/0083
- • {utilizing a network, e.g. a remote expert, accessing remote data or the like}
- <administratively transferred to [G01V 5/271](#)>

- D G01V 5/0091
- • {detecting special nuclear material [SNM], e.g. Uranium-235, Uranium-233 or Plutonium-239}
 - <administratively transferred to [G01V 5/281](#)>
- U G01V 5/04
- specially adapted for well-logging
- U G01V 5/08
- • using primary nuclear radiation sources or X-rays {(, e.g. for inducing radioactivity; investigating or analysing materials by the use of wave or particle radiation, e.g. X-rays, neutrons [G01N 23/00](#))}
- U G01V 5/14
- • • using a combination of several sources, e.g. a neutron and a gamma source
- U G01V 5/145
- • • • {using a neutron source combined with a gamma- or X-ray source}
- N G01V 5/20
- *Detecting prohibited goods, e.g. weapons, explosives, hazardous substances, contraband or smuggled objects*
- N G01V 5/22
- • *Active interrogation, i.e. by irradiating objects or goods using external radiation sources, e.g. using gamma rays or cosmic rays*
- N G01V 5/222
- • • *measuring scattered radiation*
- N G01V 5/223
- • • {Mixed interrogation beams, e.g. using more than one type of radiation beam}
- N G01V 5/224
- • • {Multiple energy techniques using one type of radiation, e.g. X-rays of different energies}
- N G01V 5/226
- • • using tomography
- N G01V 5/228
- • • {using stereoscopic means}
- N G01V 5/232
- • • {having relative motion between the source, detector and object other than by conveyor ([G01V 5/226](#) takes precedence)}
- N G01V 5/234
- • • {Measuring induced radiation, e.g. thermal neutron activation analysis}
- N G01V 5/26
- *Passive interrogation, i.e. by measuring radiation emitted by objects or goods*
- N G01V 5/271
- • {using a network, e.g. a remote expert, accessing remote data or the like}
- N G01V 5/281
- • {detecting special nuclear material [SNM], e.g. Uranium-235, Uranium-233 or Plutonium-239}
- N G01V 20/00**
- Geomodelling in general**
- NOTE
- This group covers geomodelling or geomodels wherein no prospecting, detecting or measuring technique is specified or relevant.*
- U G01V 99/00**
- Subject matter not provided for in other groups of this subclass**
- D G01V 99/005
- {Geomodels or geomodelling, not related to particular measurements}
 - <administratively transferred to [G01V 20/00](#)>

Project: MP12192 (G02F)

- U G02F 1/00**
- Devices or arrangements for the control of the intensity, colour, phase, polarisation or direction of light arriving from an independent light source, e.g. switching, gating or modulating; Non-linear optics**
- NOTE
- This group covers only :
- devices or arrangements, e.g. cells, the optical operation of which is modified by changing the optical properties of the medium of the devices or arrangements by the influence or control of physical parameters, e.g. electric fields, electric current, magnetic fields, sound or mechanical vibrations, stress or thermal effects;

- devices or arrangements in which the electric or magnetic field component of the light beams influences the optical properties of the medium, i.e. non-linear optics;
 - control of light by electromagnetic waves, e.g. radio waves, or by electrons or other elementary particles.
- U G02F 1/01 · for the control of the intensity, phase, polarisation or colour ([G02F 1/29](#), [G02F 1/35](#) take precedence)
- M G02F 1/015 · · based on semiconductor elements ~~with at least one potential jump barrier~~ *having potential barriers*, e.g. ~~PN~~; *having a PN or PIN* junction ([G02F 1/03](#) takes precedence)

Project: MP12088 (G02F)

- U G02F 1/15 · · based on an electrochromic effect
- U G02F 1/153 · · · Constructional details
- U G02F 1/155 · · · · Electrodes
- M G02F 2001/1552 · · · · {Inner electrode, e.g. the electrochromic layer being sandwiched between the inner electrode and the support substrate ~~---- this group; now to be changed; should already been created by implementation of a previous DOC14 ----~~ } (prior to the one referred to above) ~~----~~}

Project: Unknown (G03B)

- U G03B 15/00 Special procedures for taking photographs; Apparatus therefor**
- U G03B 15/02 · Illuminating scene
- U G03B 15/03 · · Combinations of cameras with lighting apparatus; Flash units
- U G03B 15/04 · · · Combinations of cameras with non-electronic flash apparatus; Non-electronic flash units
- U G03B 15/0452 · · · · {Electrical ignition means connected to the shutter}
- M G03B 15/0463 · · · · {~~Piezo-electric~~ *Piezoelectric* ignition mechanisms}

Project: RP12181 (G03B)

- U G03B 42/00 Obtaining records using waves other than optical waves; Visualisation of such records by using optical means**
- U G03B 42/02 · using X-rays
- U G03B 42/04 · · Holders for X-ray films
- M G03B 42/042 · · · {~~for dental applications (see also A61B 6/14);~~ *for dental applications (radiation diagnosis specially adapted for dentistry A61B6/51;* individual packages for X-ray film [G03C 3/003](#))}

Project: Unknown (G03C)

- U G03C 5/00 Photographic processes or agents therefor; Regeneration of such processing agents (multicolour processes or agents therefor [G03C 7/00](#); diffusion-transfer processes or agents therefor [G03C 8/00](#); stereo-photographic processes [G03C 9/00](#); photomechanical processes [G03F](#))**
- U G03C 5/16 · X-ray, infrared, or ultraviolet ray processes
- M G03C 5/164 · · {~~Infra-red~~ *Infrared* processes}

Project: Unknown (G03F)

G03F

PHOTOMECHANICAL PRODUCTION OF TEXTURED OR PATTERNED SURFACES, e.g. FOR PRINTING, FOR PROCESSING OF SEMICONDUCTOR DEVICES; MATERIALS THEREFOR; ORIGINALS THEREFOR; APPARATUS SPECIALLY ADAPTED THEREFOR; (phototypographic composing devices [B41B](#); photosensitive materials or processes for photographic purposes [G03C](#); electrophotography, sensitive layers or processes therefor [G03G](#))

NOTE

In this subclass, the following terms or expressions are used with the meanings indicated:-

- "photosensitive" means not only sensitive to electro- magnetic radiation but also to corpuscular radiation;
- "photosensitive compositions" covers photosensitive substances, e.g. quinonediazides, and, if applicable, binders or additives;
- "photosensitive materials" covers the photosensitive compositions, e.g. photoresists, the bases carrying them and, if applicable, auxiliary layers.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

| | | |
|----------------------------|------------|---------------------------|
| G03F 3/08 | covered by | H04N 1/46 |
| G03F 7/207 | covered by | G03F 7/20 |
| G03F 7/23 | covered by | G03F 7/22 |
| G03F 9/02 | covered by | G03F 9/00 |

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP10463-F (G04B)

U G04B 13/00

Gearwork {(gearwork for driving the hands [G04B 19/02](#); calibers [G04B 33/00](#); dispositions and components for transmission in general [F16H](#))}

M G04B 13/02

- Wheels; Pinions; Spindles; Pivots (bearings [G04B 31/00](#) {; chain wheels, spindles for chain wheels, also chains and driving weights [G04B 1/08](#))}

WARNING

~~Groups [G04B 13/02](#), [G04B 13/021](#), [G04B 13/022](#), [G04B 13/023](#), [G04B 13/025](#), [G04B 13/027](#) and [G04B 13/028](#) are incomplete pending reclassification of documents from group [G04B 13/026](#).~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

D G04B 13/026
—(Frozen)

- {Assembly and manufacture (assembly and manufacture of springs [G04B 1/145](#); machines and tools for the manufacture of chain wheels for clocks [G04D 3/00](#); component parts and manufacture of the escape wheel [G04B 15/14](#); steel alloys [C22C 33/00](#) - [C22C 38/00](#); manufacture of pinions from synthetic material [B29](#); non-ferrous alloys [C22C](#); pinions manufactured by milling and planing [B23F](#))}

WARNING

~~Group [G04B 13/026](#) is no longer used for the classification of documents as of May 1, 2022.~~

~~The content of this group is being reclassified into groups [G04B 13/02](#), [G04B 13/021](#), [G04B 13/022](#), [G04B 13/023](#), [G04B 13/025](#), [G04B 13/027](#) and [G04B 13/028](#).~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

Project: MP12185 (G04B)

- U G04B 17/00 Mechanisms for stabilising frequency {(for setting frequency [G04B 18/00](#); magnetic [G04C 5/005](#); in striking mechanisms [G04B 21/06](#); stopping and regulating of the running [G04B 23/023](#); electrically driven mechanical regulation [G04C 3/165](#); electrical and thermo-electric regulating mechanisms [G04C 5/00](#))}
- U G04B 17/20 · Compensation of mechanisms for stabilising frequency
- M G04B 17/28 · · for the effect of ~~unbalance~~*imbalance* of the weights, e.g. tourbillon
{~~(construction of the balance G04B 17/063; setting the frequency by adjusting devices fixed on the balance G04B 18/006)~~}

Project: RP10463-F (G04B)

- U G04B 37/00 Cases {(cases with a special shape [G04B 45/0069](#); ornamentation of the case [G04B 47/04](#); cartridges [A45C 11/00](#) - [A45C 11/38](#))}
- M G04B 37/22 · Materials or processes of manufacturing pocket watch or wrist watch cases {(machines or tools for the manufacture of clockwork cases [G04D 3/0064](#), [G04D 3/0097](#), [G04D 3/029](#); decoration or tools therefor [G04B 45/0076](#))}
- WARNING**
Groups [G04B 37/22](#), [G04B 37/223](#), [G04B 37/225](#), [G04B 37/226](#) and [G04B 37/228](#) are incomplete pending reclassification of documents from group [G04B 37/221](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- D G04B 37/221
—(Frozen) · · {Wear resistant cases}
- WARNING**
Group [G04B 37/221](#) is no longer used for the classification of documents as of May 1, 2022.
The content of this group is being reclassified into groups [G04B 37/22](#), [G04B 37/223](#), [G04B 37/225](#), [G04B 37/226](#) and [G04B 37/228](#).
All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP12212 (G04R)

- U G04R 20/00 Setting the time according to the time information carried or implied by the radio signal
- M G04R 20/14 · the radio signal being a telecommunication standard signal, e.g. GSM, ~~UMTS~~
~~or 3G~~

Project: MP12208 (G05B)

| | | |
|---|-----------|--|
| M | G05B | <p>CONTROL OR REGULATING SYSTEMS IN GENERAL; FUNCTIONAL ELEMENTS OF SUCH SYSTEMS; MONITORING OR TESTING ARRANGEMENTS FOR SUCH SYSTEMS OR ELEMENTS (fluid-pressure actuators or systems acting by means of fluids in general F15B; valves per se F16K; characterised by mechanical features only G05G; sensitive elements, see the appropriate subclass, e.g. G12B, subclass of G01, H01; correcting units, see the appropriate subclass, e.g. H02Ksystems for controlling or regulating non-electric variables G05D; systems for regulating electric or magnetic variables G05F; control devices or systems insofar as characterised by mechanical features only G05G)</p> <p>NOTES</p> <ol style="list-style-type: none"> 1. This subclass <u>covers</u> features of control systems or elements for regulating specific variables, which are clearly more generally applicable. 2. This subclass <u>does not cover</u>: <ol style="list-style-type: none"> a. systems for controlling or regulating non-electric<i>nonelectric</i> variables in general, which are covered by subclass G05D; b. systems for regulating electric or magnetic variables in general, which are covered by subclass G05F; c. systems specially adapted for the control of particular machines or apparatus provided for in a single other subclass, which are classified in the relevant subclass for such machines or apparatus, provided that there is specific provision for control or regulation relevant to the special adaptation. Otherwise, classification is made in the most appropriate place in this subclass. 3. In<i>In</i> this subclass, the following terms or expressions are used with the meanings indicated: <ul style="list-style-type: none"> • "automatic controller" means a system, circuit, or device in which a signal from the detecting element is compared with a signal representing the desired value and which operates in such a way as to reduce the deviation. The automatic controller generally does not include the sensitive element, i.e. that element which measures the value of the condition to be corrected, or the correcting element, i.e. that element which adjusts the condition to be corrected; • "electric" includes "electromechanical", "electrohydraulic" or "electropneumatic". 4. In this subclass, details of<i>of</i> specific control systems are classified in the group relevant to that<i>the</i> system, if not otherwise provided for. <p>WARNING</p> <p>In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.</p> |
| M | G05B 1/00 | Comparing elements, i.e. elements for effecting comparison directly or indirectly between a desired value and existing or anticipated values (comparing phase or frequency of two electric signals H03D 13/00) |
| U | G05B 1/01 | • electric |
| M | G05B 1/02 | • for comparing analogue signals (<i>circuits for comparing the phase or frequency of two mutually-independent oscillations H03D 13/00</i>) |
| M | G05B 6/00 | Internal feedback arrangements for obtaining particular characteristics, e.g. proportional, integral, differential or <i>differential</i>(in automatic controllers G05B 11/00) |
| M | G05B 9/00 | Safety arrangements (G05B 7/00 takes precedence; safety arrangements in programme-control systems G05B 19/048 , G05B 19/406 ; safety valves F16K 17/00; emergency protective circuit arrangements in general H02H) |

| | | |
|----------|-------------------|---|
| U | G05B 11/00 | Automatic controllers (G05B 13/00 takes precedence) |
| U | G05B 11/01 | · electric |
| U | G05B 11/14 | · · in which the output signal represents a discontinuous function of the deviation from the desired value, i.e. discontinuous controllers (G05B 11/26 takes precedence) |
| M | G05B 11/16 | · · · Two-step controllers, e.g. with on-/off action |
| U | G05B 11/36 | · · with provision for obtaining particular characteristics, e.g. proportional, integral, differential |
| M | G05B 11/42 | · · · for obtaining a characteristic which is both proportional and time-dependent, e.g. P.I., P.I.D. <i>P. I., P. I. D.</i> |
| U | G05B 11/44 | · pneumatic only |
| U | G05B 11/48 | · · with auxiliary power |
| U | G05B 11/52 | · · · in which the output signal represents a discontinuous function of the deviation from the desired value, i.e. discontinuous controllers |
| M | G05B 11/54 | · · · · Two-step controllers, e.g. with on-/off action |
| M | G05B 13/00 | Adaptive control systems, i.e. systems automatically adjusting themselves to have a performance which is optimum according to some preassigned criterion (G05B 19/00 takes precedence; machine learning G06N 20/00) |
| M | G05B 15/00 | Systems controlled by a computer (G05B 13/00, G05B 19/00 take precedence; automatic controllers with particular characteristics G05B 11/00; computers per se G06) |
| M | G05B 17/00 | Systems involving the use of models or simulators of said systems (G05B 13/00, G05B 15/00, G05B 19/00 take precedence; analogue computers for specific processes, systems, or devices, e.g. simulators G06G 7/48) |
| M | G05B 19/00 | Programme-control systems (specific applications see the relevant places, e.g. A47L 15/46; clocks with attached or built-in means operating any device at a preselected time interval G04C 23/00; marking or sensing record carriers with digital information G06K; information storage G11; time or time-programme switches which automatically terminate their operation after the programme is completed H01H 43/00) |
| U | G05B 19/02 | · electric |
| M | G05B 19/04 | · · Programme control other than numerical control, i.e. in sequence controllers or logic controllers (G05B 19/418 takes precedence; numerical control G05B 19/18) |
| M | G05B 19/0405 | · · · {Programme-control specially adapted for machine tool control and not otherwise provided for (B23Q takes precedence; G05B 19/06 - G05B 19/16 take precedence)} |
| M | G05B 19/06 | · · · using cams, discs, rods, drums; or the like (mechanical programme-control apparatus G05G 21/00) |
| U | G05B 19/07 | · · · where the programme is defined in the fixed connection of electrical elements, e.g. potentiometers, counters, transistors |
| M | G05B 19/075 | · · · · {for delivering a step function, a slope or a continuous function (G05B 19/06 takes precedence; function generators per se H03K, G06G)} |
| U | G05B 19/18 | · Numerical control [NC], i.e. automatically operating machines, in particular machine tools, e.g. in a manufacturing environment, so as to execute positioning, movement or co-ordinated operations by means of programme data in numerical form (G05B 19/418 takes precedence) |

- U G05B 19/19
- • • characterised by positioning or contouring control systems, e.g. to control position from one programmed point to another or to control movement along a programmed continuous path
- NOTE
In this group, the measuring system for an axis is used to measure the displacement along that axis. This measurement is used as position-feedback in the servo-control system.
- M G05B 19/39
- • • using a combination of the means covered by at least two of the preceding sub-groups [G05B 19/21](#), [G05B 19/27](#); and [G05B 19/33](#)
- M G05B 19/409
- • • characterised by using manual *data* input [MDI] or by using control panel, e.g. controlling functions with the panel; characterised by control panel details; *or* by setting parameters ([G05B 19/408](#), [G05B 19/4093](#) take precedence)
- U G05B 19/4093
- • • characterised by part programming, e.g. entry of geometrical information as taken from a technical drawing, combining this with machining and material information to obtain control information, named part programme, for the NC machine
- M G05B 19/4097
- • • characterised by using design data to control NC machines, e.g. CAD/CAM ([G05B 19/4093](#) takes precedence; *CAD in general G06F 30/00*)

Project: MP11853 (G05B)

- M G05B 19/418
- • Total factory control, i.e. centrally controlling a plurality of machines, e.g. direct or distributed numerical control [DNC], flexible manufacturing systems [FMS], integrated manufacturing systems [IMS]; *or* computer integrated manufacturing [CIM]

Project: MP12208 (G05B)

- M G05B 21/00
- Systems involving sampling of the variable controlled ([G05B 13/00](#) - [G05B 19/00](#) take precedence; *transmission systems for measured values G08C; electronic switching or gating H03K 17/00*)**

Project: RP12199 (G05D)

- C G05D 1/00
- Control of position, course *or altitude*, *altitude or attitude* of land, water, air; or space vehicles, e.g. *automatic pilot using automatic pilots (radio navigation systems or analogous systems using other waves G01S drive control systems specially adapted for autonomous road vehicles B60W 60/00)***

NOTE

In this main group, it is desirable to add the indexing codes of groups {[G05D 2101/00](#) - [G05D 2111/00](#)}.

WARNING

Group [G05D 1/00](#) is incomplete pending reclassification of documents from groups [G05D 1/0005](#) - [G05D 1/12](#).

Group [G05D 1/00](#) is also impacted by reclassification into groups [G05D 1/20](#) - [G05D 1/249](#), [G05D 1/40](#) - [G05D 1/498](#), [G05D 1/60](#) - [G05D 1/6987](#), [G05D 1/80](#) - [G05D 1/87](#), [G05D 2101/00](#) - [G05D 2101/26](#), [G05D 2103/00](#), [G05D 2105/00](#) - [G05D 2105/93](#), [G05D 2107/00](#) - [G05D 2107/95](#), [G05D 2109/00](#) - [G05D 2109/50](#) and [G05D 2111/00](#) - [G05D 2111/67](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- F G05D 1/0005
(Frozen) • {with arrangements to save energy}
- WARNING**
Group G05D 1/0005 is no longer used for the classification of documents as of January 1, 2024.
The content of this group is being reclassified into groups G05D 1/00, G05D 1/20 - G05D 1/249, G05D 1/40 - G05D 1/498, G05D 1/60 - G05D 1/6987, G05D 1/80 - G05D 1/87, G05D 2101/00 - G05D 2101/26, G05D 2103/00, G05D 2105/00 - G05D 2105/93, G05D 2107/00 - G05D 2107/95, G05D 2109/00 - G05D 2109/50 and G05D 2111/00 - G05D 2111/67.
All groups listed in this Warning should be considered in order to perform a complete search.
- F G05D 1/0011
(Frozen) • {associated with a remote control arrangement}
- WARNING**
Groups G05D 1/0011 – G05D 1/005 are no longer used for the classification of documents as of January 1, 2024.
The content of these groups is being reclassified into groups G05D 1/00, G05D 1/20 - G05D 1/249, G05D 1/40 - G05D 1/498, G05D 1/60 - G05D 1/6987, G05D 1/80 - G05D 1/87, G05D 2101/00 - G05D 2101/26, G05D 2103/00, G05D 2105/00 - G05D 2105/93, G05D 2107/00 - G05D 2107/95, G05D 2109/00 - G05D 2109/50 and G05D 2111/00 - G05D 2111/67.
All groups listed in this Warning should be considered in order to perform a complete search.
- F G05D 1/0016
(Frozen) • • {characterised by the operator's input device (input arrangements for computing systems in general [G06F 3/00](#))}
- F G05D 1/0022
(Frozen) • • {characterised by the communication link (data switching networks in general [H04L 12/00](#))}
- F G05D 1/0027
(Frozen) • • {involving a plurality of vehicles, e.g. fleet or convoy travelling (*fleet control of land vehicles from a control room* [G05D 1/0297](#); traffic control systems for road vehicles [G08G 1/00](#); for marine craft [G08G 3/00](#); for aircraft [G08G 5/00](#); *fleet control of land vehicles from a control room* [G05D 1/0297](#))}
- F G05D 1/0033
(Frozen) • • {by having the operator tracking the vehicle either by direct line of sight or via one or more cameras located remotely from the vehicle}
- F G05D 1/0038
(Frozen) • • {by providing the operator with simple or augmented images from one or more cameras located onboard the vehicle, e.g. tele-operation (images analyzed by a computer and used for automatic navigation [G05D 1/0246](#))}
- F G05D 1/0044
(Frozen) • • {by providing the operator with a computer generated representation of the environment of the vehicle, e.g. virtual reality, maps (maps used for automatic navigation [G05D 1/0274](#); flight directors [G01C 23/005](#))}
- F G05D 1/005
(Frozen) • • {by providing the operator with signals other than visual, e.g. acoustic, haptic}
- F G05D 1/0055
(Frozen) • {with safety arrangements}
- WARNING**
Groups G05D 1/0055 – G05D 1/0077 are no longer used for the classification of documents as of January 1, 2024.
The content of these groups is being reclassified into groups G05D 1/00, G05D 1/20 - G05D 1/249, G05D 1/40 - G05D 1/498, G05D 1/60 - G05D 1/6987, G05D 1/80 - G05D 1/87, G05D 2101/00 - G05D 2101/26, G05D 2103/00, G05D 2105/00 - G05D 2105/93, G05D 2107/00 - G05D 2107/95, G05D 2109/00 - G05D 2109/50 and G05D 2111/00 - G05D 2111/67.

All groups listed in this Warning should be considered in order to perform a complete search.

- F G05D 1/0061
(Frozen)
 - {for transition from automatic pilot to manual pilot and vice versa}

WARNING
Group [G05D 1/0061](#) is impacted by reclassification into groups [B60W 10/00](#) - [B60W 50/16](#), [B60W 60/005](#) - [B60W 60/0061](#), [B60W 2300/00](#) - [B60W 2530/213](#), [B60W 2540/041](#) - [B60W 2540/049](#), [B60W 2552/00](#) - [B60W 2556/65](#), [B60W 2710/00](#) - [B60W 2720/406](#), and [B60W 2754/00](#) - [B60W 2900/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- F G05D 1/0066
(Frozen)
 - {for limitation of acceleration or stress}
- F G05D 1/0072
(Frozen)
 - {to counteract a motor failure}
- F G05D 1/0077
(Frozen)
 - {using redundant signals or controls}
- F G05D 1/0083
(Frozen)
 - {to help an aircraft pilot in the rolling phase}

WARNING
*Group [G05D 1/0083](#) is no longer used for the classification of documents as of January 1, 2024.
The content of this group is being reclassified into groups [G05D 1/00](#), [G05D 1/20](#) - [G05D 1/249](#), [G05D 1/40](#) - [G05D 1/498](#), [G05D 1/60](#) - [G05D 1/6987](#), [G05D 1/80](#) - [G05D 1/87](#), [G05D 2101/00](#) - [G05D 2101/26](#), [G05D 2103/00](#), [G05D 2105/00](#) - [G05D 2105/93](#), [G05D 2107/00](#) - [G05D 2107/95](#), [G05D 2109/00](#) - [G05D 2109/50](#) and [G05D 2111/00](#) - [G05D 2111/67](#).
All groups listed in this Warning should be considered in order to perform a complete search.*

- F G05D 1/0088
(Frozen)
 - {characterized by the autonomous decision making process, e.g. artificial intelligence, predefined behaviours (using knowledge based models [G06N 5/00](#))}

WARNING
Group [G05D 1/0088](#) is *no longer used for the classification of documents as of January 1, 2024.*
The content of this group is being reclassified into groups [G05D 1/00](#), [G05D 1/20](#) - [G05D 1/249](#), [G05D 1/40](#) - [G05D 1/498](#), [G05D 1/60](#) - [G05D 1/6987](#), [G05D 1/80](#) - [G05D 1/87](#), [G05D 2101/00](#) - [G05D 2101/26](#), [G05D 2103/00](#), [G05D 2105/00](#) - [G05D 2105/93](#), [G05D 2107/00](#) - [G05D 2107/95](#), [G05D 2109/00](#) - [G05D 2109/50](#) and [G05D 2111/00](#) - [G05D 2111/67](#).
Group [G05D 1/0088](#) is impacted by reclassification into groups [B60W 10/00](#) - [B60W 60/00276](#), [B60W 2300/00](#) - [B60W 2530/213](#), [B60W 2540/041](#) - [B60W 2540/049](#), [B60W 2552/00](#) - [B60W 2556/65](#), [B60W 2710/00](#) - [B60W 2720/406](#); and [B60W 2754/00](#) - [B60W 2900/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- F G05D 1/0094
(Frozen) • {involving pointing a payload, e.g. camera, weapon, sensor, towards a fixed or moving target}
- WARNING**
Group G05D 1/0094 is no longer used for the classification of documents as of January 1, 2024.
The content of this group is being reclassified into groups G05D 1/00, G05D 1/20 - G05D 1/249, G05D 1/40 - G05D 1/498, G05D 1/60 - G05D 1/6987, G05D 1/80 - G05D 1/87, G05D 2101/00 - G05D 2101/26, G05D 2103/00, G05D 2105/00 - G05D 2105/93, G05D 2107/00 - G05D 2107/95, G05D 2109/00 - G05D 2109/50 and G05D 2111/00 - G05D 2111/67.
All groups listed in this Warning should be considered in order to perform a complete search.
- F G05D 1/02
(Frozen) • Control of position or course in two dimensions
- WARNING**
Groups G05D 1/02 - G05D 1/03 are no longer used for the classification of documents as of January 1, 2024.
The content of these groups is being reclassified into groups G05D 1/00, G05D 1/20 - G05D 1/249, G05D 1/40 - G05D 1/498, G05D 1/60 - G05D 1/6987, G05D 1/80 - G05D 1/87, G05D 2101/00 - G05D 2101/26, G05D 2103/00, G05D 2105/00 - G05D 2105/93, G05D 2107/00 - G05D 2107/95, G05D 2109/00 - G05D 2109/50 and G05D 2111/00 - G05D 2111/67.
All groups listed in this Warning should be considered in order to perform a complete search.
- F G05D 1/0202
(Frozen) • • {specially adapted to aircraft}
- F G05D 1/0204
(Frozen) • • • {to counteract a sudden perturbation, e.g. cross-wind, gust}
- F G05D 1/0206
(Frozen) • • {specially adapted to water vehicles}
- F G05D 1/0208
(Frozen) • • • {dynamic anchoring}
- F G05D 1/021
(Frozen) • • {specially adapted to land vehicles}
- NOTES**
1. This group ~~covers~~ control of position or course in two dimensions specially adapted for land vehicles, i.e. control systems to define a trajectory for a land vehicle, and to take suitable actions to make the vehicle follow said trajectory.
2. Relationships with other classification places.
Subclass ~~G01C~~ covers navigation in general, i.e. determining the position and course of land vehicles, ships, aircraft, and space vehicles.
Subclass ~~G01S~~ covers radio, sonar or lidar navigation systems, i.e. navigation by use of radio, acoustic or optical waves, or analogue arrangements using other electromagnetic waves.
Subclass ~~G08G~~ covers navigation systems for traffic control purposes, i.e. systems in which the navigation is not performed autonomously by or in the vehicle, but where the vehicles are guided by instructions transmitted to them.
Aspects of navigation systems that are important ~~per se~~ should also be classified in the relevant groups of ~~G01C~~ (see for example list under "Informative References" below).
Aspects of radio, sonar or lidar navigation systems that are important ~~per se~~ should also be classified in the relevant groups of ~~G01S~~ (see for example list under "Informative References" below).

Aspects of navigation systems for traffic purposes that are important *per se* should also be classified in the relevant groups of G08G (see for example list under "Informative References" below).

3. Informative References.

Attention is drawn to the following places, which could be of interest for search:

- navigation, i.e. determining the position and course of land vehicles, ships, aircraft, and space vehicles G01C 21/00
- measuring distance traversed on the ground by vehicles, e.g. using odometers G01C 22/00
- position-fixing by co-ordinating a plurality of determinations of direction or position lines G01S 5/00
- determining distance or velocity using waves and not using reflection or reradiation of waves G01S 11/00
- radar systems specially designed for traffic control G01S 13/91
- radar systems specially designed for for anti-collision purposes G01S 13/93
- sonar systems specially designed for for anti-collision purposes G01S 15/93
- lidar systems specially designed for for anti-collision purposes G01S 17/93
- traffic control systems for road vehicles G08G 1/00
- monitoring the location of fleet of vehicles in traffic control systems G08G 1/127
- anti-collision traffic control systems G08G 1/16

WARNING

Group [G05D 1/021](#) is impacted by reclassification into groups [B60W 10/00](#) - [B60W 60/00276](#), [B60W 2300/00](#) - [B60W 2530/213](#), [B60W 2540/041](#) - [B60W 2540/049](#), [B60W 2552/00](#) - [B60W 2556/65](#), [B60W 2710/00](#) - [B60W 2720/406](#), and [B60W 2754/00](#) - [B60W 2900/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

F G05D 1/0212 (Frozen) . . . {with means for defining a desired trajectory (involving a plurality of land vehicles [G05D 1/0287](#))}

F G05D 1/0214 (Frozen) {in accordance with safety or protection criteria, e.g. avoiding hazardous areas (monitoring the location of vehicles within a certain area, e.g. forbidden or allowed areas, in traffic control systems for road vehicles [G08G 1/13](#))}

WARNING

Group [G05D 1/0214](#) is impacted by reclassification into groups [B60W 10/00](#) - [B60W 60/00276](#), [B60W 2300/00](#) - [B60W 2530/213](#), [B60W 2540/041](#) - [B60W 2540/049](#), [B60W 2552/00](#) - [B60W 2556/65](#), [B60W 2710/00](#) - [B60W 2720/406](#), and [B60W 2754/00](#) - [B60W 2900/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

F G05D 1/0217 (Frozen) {in accordance with energy consumption, time reduction or distance reduction criteria}

F G05D 1/0219 (Frozen) {ensuring the processing of the whole working surface}

F G05D 1/0221 (Frozen) {involving a learning process}

WARNING

Group [G05D 1/0221](#) is impacted by reclassification into groups [B60W 10/00](#) - [B60W 60/00276](#), [B60W 2300/00](#) - [B60W 2530/213](#),

G05D 1/0221

(Frozen)

(continued)

[B60W 2540/041](#) - [B60W 2540/049](#), [B60W 2552/00](#) - [B60W 2556/65](#),
[B60W 2710/00](#) - [B60W 2720/406](#), and [B60W 2754/00](#) - [B60W 2900/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- F G05D 1/0223
(Frozen)
- . . . {involving speed control of the vehicle (vehicle fittings for automatically controlling, i.e. preventing speed from exceeding an arbitrarily established velocity or maintaining speed at a particular velocity, as selected by the vehicle operator [B60K 31/00](#))}
- WARNING**
- Group [G05D 1/0223](#) is impacted by reclassification into groups [B60W 10/00](#) - [B60W 60/00276](#), [B60W 2300/00](#) - [B60W 2530/213](#), [B60W 2540/041](#) - [B60W 2540/049](#), [B60W 2552/00](#) - [B60W 2556/65](#), [B60W 2710/00](#) - [B60W 2720/406](#), and [B60W 2754/00](#) - [B60W 2900/00](#). All groups listed in this Warning should be considered in order to perform a complete search.
- F G05D 1/0225
(Frozen)
- . . . {involving docking at a fixed facility, e.g. base station or loading bay (parking aids [B62D 15/027](#))}
- F G05D 1/0227
(Frozen)
- . . . {using mechanical sensing means, e.g. for sensing treated area}
- F G05D 1/0229
(Frozen)
- . . . {in combination with fixed guiding means}
- F G05D 1/0231
(Frozen)
- . . . {using optical position detecting means (position-fixing by using electromagnetic waves other than radio waves, e.g. optical position detecting means [G01S 5/16](#))}
- F G05D 1/0234
(Frozen)
- . . . {using optical markers or beacons (optical beacons per se [G01S 1/70](#))}
- F G05D 1/0236
(Frozen)
- {in combination with a laser (lasers per se [H01S](#))}
- F G05D 1/0238
(Frozen)
- . . . {using obstacle or wall sensors ([G05D 1/0246](#) and [G05D 1/0289](#) take precedence; lidar systems designed for anti-collision purposes [G01S 17/93](#))}
- F G05D 1/024
(Frozen)
- {in combination with a laser (lasers per se [H01S](#))}
- F G05D 1/0242
(Frozen)
- {using non-visible light signals, e.g. IR or UV signals}
- F G05D 1/0244
(Frozen)
- {using reflecting strips}
- F G05D 1/0246
(Frozen)
- {using a video camera in combination with image processing means}
- F G05D 1/0248
(Frozen)
- {in combination with a laser (lasers per se [H01S](#))}
- F G05D 1/0251
(Frozen)
- {extracting 3D information from a plurality of images taken from different locations, e.g. stereo vision (stereoscopic image analysis [H04N 13/00](#); depth recovery from images [G06T 7/593](#))}
- F G05D 1/0253
(Frozen)
- {extracting relative motion information from a plurality of images taken successively, e.g. visual odometry, optical flow (determining position or orientation from images [G06T 7/70](#))}
- F G05D 1/0255
(Frozen)
- . . . {using acoustic signals, e.g. ultra-sonic signals (sonar systems designed for anti-collision purposes [G01S 15/93](#))}
- F G05D 1/0257
(Frozen)
- . . . {using a radar (radar systems designed for anti-collision purposes between land vehicles or between land vehicle and fixed obstacles [G01S 13/931](#))}

- F G05D 1/0259 (Frozen) . . . {using magnetic or electromagnetic means}
- F G05D 1/0261 (Frozen) {using magnetic plots}
- F G05D 1/0263 (Frozen) {using magnetic strips}
- F G05D 1/0265 (Frozen) {using buried wires}
- F G05D 1/0268 (Frozen) . . . {using internal positioning means}
- F G05D 1/027 (Frozen) {comprising inertial navigation means, e.g. azimuth detector (inertial navigation [G01C 21/16](#); inertial navigation combined with non-inertial navigation instruments [G01C 21/165](#))}
- F G05D 1/0272 (Frozen) {comprising means for registering the travel distance, e.g. revolutions of wheels (measuring distance traversed on the ground by vehicles, e.g. using odometers [G01C 22/00](#))}
- F G05D 1/0274 (Frozen) {using mapping information stored in a memory device (navigation using map-matching [G01C 21/30](#))}
- F G05D 1/0276 (Frozen) . . . {using signals provided by a source external to the vehicle (involving a plurality of vehicles [G05D 1/0287](#); automatically controlling vehicle speed responsive to ~~externally~~*externally* generated signals [B60K 31/0058](#))}
- F G05D 1/0278 (Frozen) {using satellite positioning signals, e.g. GPS}
- F G05D 1/028 (Frozen) {using a RF signal}
- F G05D 1/0282 (Frozen) {generated in a local control room}
- F G05D 1/0285 (Frozen) {using signals transmitted via a public communication network, e.g. GSM network}
- F G05D 1/0287 (Frozen) . . . {involving a plurality of land vehicles, e.g. fleet or convoy travelling (traffic control systems for road vehicles [G08G 1/00](#), particularly anticollision systems [G08G 1/16](#))}

NOTE

In this group, the following terms or expressions are used with the meaning indicated:

- ~~fleet means a plurality of vehicles controlled in a coordinated manner or under unified control;~~
- ~~convoy (or platooning) means a plurality of vehicles following an identical trajectory, said vehicles being separated by a predetermined distance maintained by a control system~~

- F G05D 1/0289 (Frozen) {with means for avoiding collisions between vehicles (vehicle fittings for automatically controlling speed ~~including~~*including* means for detecting potential obstacles [B60K 31/0008](#); avoiding obstacles by action on the steering system [B62D](#); radar, sonar, lidar systems designed for anti-collision purposes [G01S 13/93](#), [G01S 15/93](#), [G01S 17/93](#))}
- F G05D 1/0291 (Frozen) {Fleet control (monitoring fleets in traffic control systems for road vehicles [G08G 1/127](#), [G08G 1/127](#))}
- F G05D 1/0293 (Frozen) {Convoy travelling}
- F G05D 1/0295 (Frozen) {by at least one leading vehicle of the fleet}

- F G05D 1/0297
(Frozen) {by controlling means in a control room}
- F G05D 1/03
(Frozen) . . using near-field transmission systems, e.g. inductive-loop type {(G05D 1/021 and subgroups take precedence)}
- F G05D 1/04
(Frozen) . Control of altitude or depth
- WARNING**
*Groups G05D 1/04 – G05D 1/0692 are no longer used for the classification of documents as of January 1, 2024.
 The content of these groups is being reclassified into groups G05D 1/00, G05D 1/20 - G05D 1/249, G05D 1/40 - G05D 1/498, G05D 1/60 - G05D 1/6987, G05D 1/80 - G05D 1/87, G05D 2101/00 - G05D 2101/26, G05D 2103/00, G05D 2105/00 - G05D 2105/93, G05D 2107/00 - G05D 2107/95, G05D 2109/00 - G05D 2109/50 and G05D 2111/00 - G05D 2111/67.
 All groups listed in this Warning should be considered in order to perform a complete search.*
- F G05D 1/042
(Frozen) . . {specially adapted for aircraft}
- F G05D 1/044
(Frozen) . . . {during banks}
- F G05D 1/046
(Frozen) . . . {to counteract a perturbation, e.g. gust of wind}
- F G05D 1/048
(Frozen) . . {specially adapted for water vehicles}
- F G05D 1/06
(Frozen) . . Rate of change of altitude or depth
- F G05D 1/0607
(Frozen) . . . {specially adapted for aircraft}
- F G05D 1/0615
(Frozen) {to counteract a perturbation, e.g. gust of wind}
- F G05D 1/0623
(Frozen) {by acting on the pitch}
- F G05D 1/063
(Frozen) {by acting on the motors}
- F G05D 1/0638
(Frozen) {by combined action on the pitch and on the motors}
- F G05D 1/0646
(Frozen) {to follow the profile of undulating ground}
- F G05D 1/0653
(Frozen) {during a phase of take-off or landing}
- F G05D 1/0661
(Frozen) {specially adapted for take-off}
- F G05D 1/0669
(Frozen) {specially adapted for vertical take-off}
- F G05D 1/0676
(Frozen) {specially adapted for landing}
- F G05D 1/0684
(Frozen) {on a moving platform, e.g. aircraft carrier}
- F G05D 1/0688
(Frozen) {Emergency descent}

- F G05D 1/0692
(Frozen) . . . {specially adapted for under-water vehicles}
- F G05D 1/08
(Frozen) . Control of attitude, i.e. control of roll, pitch, or yaw
- WARNING**
*Groups G05D 1/08 – G05D 1/0891 are no longer used for the classification of documents as of January 1, 2024.
 The content of these groups is being reclassified into groups G05D 1/00, G05D 1/20 - G05D 1/249, G05D 1/40 - G05D 1/498, G05D 1/60 - G05D 1/6987, G05D 1/80 - G05D 1/87, G05D 2101/00 - G05D 2101/26, G05D 2103/00, G05D 2105/00 - G05D 2105/93, G05D 2107/00 - G05D 2107/95, G05D 2109/00 - G05D 2109/50 and G05D 2111/00 - G05D 2111/67.
 All groups listed in this Warning should be considered in order to perform a complete search.*
- F G05D 1/0808
(Frozen) . . {specially adapted for aircraft}
- F G05D 1/0816
(Frozen) . . . {to ensure stability}
- F G05D 1/0825
(Frozen) {using mathematical models}
- F G05D 1/0833
(Frozen) {using limited authority control}
- F G05D 1/0841
(Frozen) {to prevent a coupling between different modes}
- F G05D 1/085
(Frozen) {to ensure coordination between different movements}
- F G05D 1/0858
(Frozen) . . . {specially adapted for vertical take-off of aircraft}
- F G05D 1/0866
(Frozen) . . . {specially adapted to captive aircraft}
- F G05D 1/0875
(Frozen) . . {specially adapted to water vehicles}
- F G05D 1/0891
(Frozen) . . {specially adapted for land vehicles}
- F G05D 1/10
(Frozen) . Simultaneous control of position or course in three dimensions ([G05D 1/12](#) takes precedence)
- WARNING**
*Groups G05D 1/10 – G05D 1/108 are no longer used for the classification of documents as of January 1, 2024.
 The content of these groups is being reclassified into groups G05D 1/00, G05D 1/20 - G05D 1/249, G05D 1/40 - G05D 1/498, G05D 1/60 - G05D 1/6987, G05D 1/80 - G05D 1/87, G05D 2101/00 - G05D 2101/26, G05D 2103/00, G05D 2105/00 - G05D 2105/93, G05D 2107/00 - G05D 2107/95, G05D 2109/00 - G05D 2109/50 and G05D 2111/00 - G05D 2111/67.
 All groups listed in this Warning should be considered in order to perform a complete search.*
- F G05D 1/101
(Frozen) . . {specially adapted for aircraft}
- F G05D 1/102
(Frozen) . . . {specially adapted for vertical take-off of aircraft}

- F G05D 1/104 (Frozen) . . . {involving a plurality of aircrafts, e.g. formation flying (traffic control systems for aircraft [G08G 5/00](#))}
- F G05D 1/105 (Frozen) . . . {specially adapted for unpowered flight, e.g. glider, parachuting, forced landing (parachutes *per se* [B64D 17/00](#))}
- F G05D 1/106 (Frozen) . . . {Change initiated in response to external conditions, e.g. avoidance of elevated terrain or of no-fly zones}
- F G05D 1/1062 (Frozen) {specially adapted for avoiding bad weather conditions}
- F G05D 1/1064 (Frozen) {specially adapted for avoiding collisions with other aircraft}
- F G05D 1/107 (Frozen) . . {specially adapted for missiles}
- F G05D 1/108 (Frozen) . . . {animated with a rolling movement}
- F G05D 1/12 (Frozen) . Target-seeking control
- WARNING
*Group G05D 1/12 is no longer used for the classification of documents as of January 1, 2024.
 The content of this group is being reclassified into groups [G05D 1/00](#), [G05D 1/20 - G05D 1/249](#), [G05D 1/40 - G05D 1/498](#), [G05D 1/60 - G05D 1/6987](#), [G05D 1/80 - G05D 1/87](#), [G05D 2101/00 - G05D 2101/26](#), [G05D 2103/00](#), [G05D 2105/00 - G05D 2105/93](#), [G05D 2107/00 - G05D 2107/95](#), [G05D 2109/00 - G05D 2109/50](#) and [G05D 2111/00 - G05D 2111/67](#).
 All groups listed in this Warning should be considered in order to perform a complete search.*
- N G05D 1/20 . Control system inputs
- WARNING
*Groups [G05D 1/20 - G05D 1/249](#) are incomplete pending reclassification of documents from groups [G05D 1/00 - G05D 1/12](#).
 All groups listed in this Warning should be considered in order to perform a complete search.*
- N G05D 1/22 . . Command input arrangements
- N G05D 1/221 . . . Remote-control arrangements
- N G05D 1/222 operated by humans
- N G05D 1/223 Command input arrangements on the remote controller, e.g. joysticks or touch screens
- N G05D 1/2232 {Touch screens}
- N G05D 1/2234 {Neurological interfaces}
- N G05D 1/2235 {involving the operator tracking the vehicle by direct line of sight}
- N G05D 1/224 Output arrangements on the remote controller, e.g. displays, haptics or speakers
- N G05D 1/2242 {Haptics}
- N G05D 1/2243 {Acoustic}
- N G05D 1/2244 {Optic}
- N G05D 1/2245 {providing the operator with a purely computer-generated representation of the environment of the vehicle, e.g. virtual reality}
- N G05D 1/2246 {displaying a map of the environment}

- N G05D 1/2247 {providing the operator with simple or augmented images from one or more cameras}
- N G05D 1/2248 {the one or more cameras located remotely from the vehicle}
- N G05D 1/2249 {using augmented reality}
- N G05D 1/225 operated by off-board computers
- N G05D 1/226 Communication links with the remote-control arrangements
- N G05D 1/2265 {involving protocol translation}
- N G05D 1/227 Handing over between remote control and on-board control; Handing over between remote control arrangements
- N G05D 1/2272 {in response to remote override by external entities, e.g. authorities}
- N G05D 1/2274 {in response to the communication link being lost, degraded or compromised, e.g. anti-spoofing}
- N G05D 1/2276 {for keeping or re-establishing line of sight}
- N G05D 1/2278 {for returning to designated location}
- N G05D 1/2279 {involving allocation of control between two or more remote operators, e.g. tele-assistance}
- N G05D 1/228 Command input arrangements located on-board unmanned vehicles
- N G05D 1/2285 using voice or gesture commands
- N G05D 1/2287 {using an external force applied to the vehicle}
- N G05D 1/229 Command input data, e.g. waypoints
- N G05D 1/2295 {defining restricted zones, e.g. no-flight zones or geofences}
- N G05D 1/2297 {positional data taught by the user, e.g. paths ([G05D 1/2295](#) takes precedence)}
- N G05D 1/24 Arrangements for determining position or orientation
- N G05D 1/241 Means for detecting physical contact, e.g. touch sensors or bump sensors
- N G05D 1/242 Means based on the reflection of waves generated by the vehicle (using passive navigation aids external to the vehicle [G05D 1/244](#); using signals provided by artificial sources external to the vehicle [G05D 1/247](#))
- N G05D 1/2424 {for monitoring a plurality of zones}
- N G05D 1/2427 {for monitoring a zone of adjustable size or form}
- N G05D 1/243 Means capturing signals occurring naturally from the environment, e.g. ambient optical, acoustic, gravitational or magnetic signals (using passive navigation aids external to the vehicle [G05D 1/244](#); using signals from positioning sensors located off-board the vehicle [G05D 1/249](#))
- N G05D 1/2435 {Extracting 3D information}
- N G05D 1/2437 {Extracting relative motion information}
- N G05D 1/244 using passive navigation aids external to the vehicle, e.g. markers, reflectors or magnetic means
- N G05D 1/2446 {the passive navigation aids having encoded information, e.g. QR codes or ground control points}
- N G05D 1/245 using dead reckoning
- N G05D 1/246 using environment maps, e.g. simultaneous localisation and mapping [SLAM]
- N G05D 1/2462 {using feature-based mapping}
- N G05D 1/2464 {using an occupancy grid}
- N G05D 1/2465 {using a 3D model of the environment}
- N G05D 1/2467 {using a semantic description of the environment}

- N G05D 1/2469 {using a topologic or simplified map}
- N G05D 1/247 using signals provided by artificial sources external to the vehicle, e.g. navigation beacons
- N G05D 1/248 generated by satellites, e.g. GPS
- N G05D 1/249 from positioning sensors located off-board the vehicle, e.g. from cameras
- N G05D 1/40 . Control within particular dimensions
- WARNING
Groups [G05D 1/40](#) - [G05D 1/498](#) are incomplete pending reclassification of documents from groups [G05D 1/00](#) – [G05D 1/12](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G05D 1/43 . . Control of position or course in two dimensions
- N G05D 1/435 resulting in a change of level, e.g. negotiating lifts or stairs
- N G05D 1/437 for aircraft during their ground movement {, e.g. taxiing}
- N G05D 1/439 {on the runway during take-off or landing}
- N G05D 1/46 . . Control of position or course in three dimensions
- N G05D 1/461 for unpowered vehicles, e.g. gliders or parachutes
- N G05D 1/467 for movement inside a confined volume, e.g. indoor flying
- N G05D 1/48 . . Control of altitude or depth
- N G05D 1/482 {utilising or compensating for ground effect}
- N G05D 1/484 {during banking manoeuvres}
- N G05D 1/485 Control of rate of change of altitude or depth
- N G05D 1/49 . . Control of attitude, i.e. control of roll, pitch or yaw
- N G05D 1/495 to ensure stability
- N G05D 1/496 {compensating for coupling between different axes of movement}
- N G05D 1/498 {involving adjustment of the relative position of the centre of gravity of the vehicle}
- N G05D 1/60 . Intended control result
- WARNING
Groups [G05D 1/60](#) - [G05D 1/6987](#) are incomplete pending reclassification of documents from groups [G05D 1/00](#) – [G05D 1/12](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G05D 1/606 . . Compensating for or utilising external environmental conditions, e.g. wind or water currents (station keeping [G05D 1/611](#))
- N G05D 1/611 . . Station keeping, e.g. for hovering or dynamic anchoring
- N G05D 1/617 . . Safety or protection, e.g. defining protection zones around obstacles or avoiding hazards (arrangements for controlling the position or course of two or more vehicles for avoiding collisions therebetween [G05D 1/693](#); arrangements for reacting to or preventing system or operator failure [G05D 1/80](#))
- N G05D 1/618 {for cargo or occupants}
- N G05D 1/619 {Minimising the exposure of a vehicle to threats, e.g. avoiding interceptors}
- N G05D 1/621 {responding to weather conditions, e.g. storms or wind shear}
- N G05D 1/622 Obstacle avoidance (predicting or avoiding probable or impending collision of road vehicles [B60W 30/08](#))
- N G05D 1/628 following the obstacle profile, e.g. a wall or undulated terrain

- N G05D 1/633 *Dynamic obstacles*
- N G05D 1/637 *{using safety zones of adjustable size or shape}*
- N G05D 1/639 *Resolving or avoiding being stuck or obstructed*
- N G05D 1/642 *{involving obstacle removal, e.g. opening doors or pushing furniture}*
- N G05D 1/644 *Optimisation of travel parameters, e.g. of energy consumption, journey time or distance*
- N G05D 1/6445 *{for optimising payload operation, e.g. camera or spray coverage}*
- N G05D 1/645 *{Vehicle-induced nuisance abatement, e.g. minimising noise or visual impact}*
- N G05D 1/646 *Following a predefined trajectory, e.g. a line marked on the floor or a flight path*
- N G05D 1/648 *Performing a task within a working area or space, e.g. cleaning*
- N G05D 1/6482 *{by dividing the whole area or space in sectors to be processed separately}*
- N G05D 1/6484 *{by taking into account parameters or characteristics of the working area or space, e.g. size or shape}*
- N G05D 1/6485 *{by taking into account surface type, e.g. carpeting}*
- N G05D 1/6486 *{by taking into account surface condition, e.g. soiled}*
- N G05D 1/65 *Following a desired speed profile*
- N G05D 1/651 *{with controlled time of arrival at target points, e.g. 4D navigation}*
- N G05D 1/652 *Take-off (delivering or retrieving payloads [G05D 1/667](#))*
- N G05D 1/654 *Landing (docking at a base station [G05D 1/661](#))*
- N G05D 1/6542 *{on a moving platform, e.g. aircraft carrier}*
- N G05D 1/6545 *{during descent or approach phase}*
- N G05D 1/6546 *{Emergency landing}*
- N G05D 1/6548 *{Aborted landing, e.g. go-around}*
- N G05D 1/656 *Interaction with payloads or external entities*
- N G05D 1/661 *Docking at a base station (delivering or retrieving payloads [G05D 1/667](#))*
- N G05D 1/663 *{docking at a moving base station}*
- N G05D 1/665 *{Releasing payloads, e.g. parachutes}*
- N G05D 1/667 *Delivering or retrieving payloads*
- N G05D 1/672 *Positioning of towed, pushed or suspended implements, e.g. ploughs*
- N G05D 1/678 *for tethered vehicles (positioning towed, pushed or suspended implements [G05D 1/672](#))*
- N G05D 1/683 *Intercepting moving targets (docking at a base station [G05D 1/661](#))*
- N G05D 1/686 *Maintaining a relative position with respect to moving targets, e.g. following animals or humans (for pointing payloads towards targets [G05D 1/689](#); involving controlling the position or course of two or more vehicles [G05D 1/69](#))*
- N G05D 1/689 *Pointing payloads towards fixed or moving targets (positioning towed, pushed or suspended implements [G05D 1/672](#))*
- N G05D 1/6895 *{the payload being a manipulator arm}*
- N G05D 1/69 *Coordinated control of the position or course of two or more vehicles*
- N G05D 1/692 *involving a plurality of disparate vehicles*
- N G05D 1/693 *for avoiding collisions between vehicles*
- N G05D 1/695 *for maintaining a fixed relative position of the vehicles, e.g. for convoy travelling or formation flight*
- N G05D 1/696 *{involving a plurality of vehicles coupled together}*

- N G05D 1/697 . . . for rendezvous of two or more vehicles, e.g. for in-flight refuelling (docking at a base station [G05D 1/661](#))
- N G05D 1/698 . . . Control allocation
- N G05D 1/6983 {by distributed or sequential control}
- N G05D 1/6985 {using a lead vehicle, e.g. primary-secondary arrangements}
- N G05D 1/6987 {by centralised control off-board any of the vehicles}
- N G05D 1/80 . Arrangements for reacting to or preventing system or operator failure (handing over between remote control and on-board control, or handing over between remote control arrangements [G05D 1/227](#))

WARNING

Groups [G05D 1/80](#) – [G05D 1/87](#) are incomplete pending reclassification of documents from groups [G05D 1/00](#) – [G05D 1/12](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G05D 1/81 . . Handing over between on-board automatic and on-board manual control
- N G05D 1/815 . . . {to recover from unusual attitude conditions}
- N G05D 1/817 . . . {to recover from pilot incapacitation}
- N G05D 1/82 . . Limited authority control, e.g. enforcing a flight envelope (limitation of acceleration or structural stress [G05D 1/83](#))
- N G05D 1/83 . . Limitation of acceleration or structural stress
- N G05D 1/85 . . Fail-safe operations, e.g. limp home mode
- N G05D 1/852 . . . {in response to low power or low fuel conditions}
- N G05D 1/854 . . . {in response to motor or actuator failures}
- N G05D 1/857 . . . {in response to sensor failures}
- N G05D 1/86 . . Monitoring the performance of the system, e.g. alarm or diagnosis modules
- N G05D 1/87 . . using redundant control arrangements

Project: MP12185 (G05D)

- U G05D 16/00 Control of fluid pressure**
- M G05D 16/02 . Modifications to reduce the effects of instability, e.g. due to vibrations, friction, abnormal temperature, overloading or **unbalanceimbalance**

Project: RP12199 (G05D)

- U G05D 99/00 Subject matter not provided for in other groups of this subclass**
- N G05D 2101/00 - G05D 2111/00 Indexing scheme associated with group [G05D 1/00](#)**
- N G05D 2101/00 Details of software or hardware architectures used for the control of position**

WARNING

Groups [G05D 2101/00](#) - [G05D 2101/26](#) are incomplete pending reclassification of documents from groups [G05D 1/00](#) – [G05D 1/12](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G05D 2101/10 . using artificial intelligence [AI] techniques
- N G05D 2101/15 . . using machine learning, e.g. neural networks
- N G05D 2101/20 . using external object recognition

- N G05D 2101/22 · {using off-board distributed computer resources for performing calculations, e.g. cloud-based}
- N G05D 2101/24 · {decentralised arrangement of the on-board controllers}
- N G05D 2101/26 · {retrofitting existing legacy systems}
- N G05D 2103/00** **Adaptations for complying with regulatory restraints on the operations of the controlled vehicles, e.g. compliance with airspace or traffic regulations**
- WARNING
 Group [G05D 2103/00](#) is incomplete pending reclassification of documents from groups [G05D 1/00](#) – [G05D 1/12](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N G05D 2105/00** **Specific applications of the controlled vehicles**
- WARNING
 Groups [G05D 2105/00](#) - [G05D 2105/93](#) are incomplete pending reclassification of documents from groups [G05D 1/00](#) – [G05D 1/12](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N G05D 2105/05 · for soil shifting, building, civil engineering or mining, e.g. excavators
- N G05D 2105/10 · for cleaning, vacuuming or polishing
- N G05D 2105/12 · {for removing ice or snow}
- N G05D 2105/14 · {for collecting waste or trash}
- N G05D 2105/15 · for harvesting, sowing or mowing in agriculture or forestry
- N G05D 2105/17 · {for printing, painting or marking}
- N G05D 2105/20 · for transportation
- N G05D 2105/22 · · of humans
- N G05D 2105/24 · · · {personal mobility devices}
- N G05D 2105/28 · · of freight
- N G05D 2105/285 · · · {postal packages}
- N G05D 2105/29 · · · {garbage}
- N G05D 2105/30 · for social or care-giving applications
- N G05D 2105/31 · · {for attending to humans or animals, e.g. in health care environments}
- N G05D 2105/315 · · {for guiding or for guest attention}
- N G05D 2105/32 · · {for amusement, e.g. toys}
- N G05D 2105/34 · · {for telepresence or videoconferencing}
- N G05D 2105/345 · · {for photography}
- N G05D 2105/35 · for combat
- N G05D 2105/40 · for communications, e.g. wireless network relays
- N G05D 2105/45 · for manufacturing, maintenance or repairing
- N G05D 2105/47 · · {for maintenance or repairing, e.g. fuelling or battery replacement}
- N G05D 2105/50 · for animal husbandry or control, e.g. catching, trapping or scaring of animals
- N G05D 2105/55 · for emergency activities, e.g. search and rescue, traffic accidents or fire fighting
- N G05D 2105/57 · {for producing or harvesting energy}
- N G05D 2105/60 · for sport or gaming activities
- N G05D 2105/65 · for shows or performances
- N G05D 2105/70 · for displaying or announcing information

- N G05D 2105/80 · for information gathering, e.g. for academic research
- N G05D 2105/85 · · for patrolling or reconnaissance for police, security or military applications
- N G05D 2105/87 · · {for exploration, e.g. mapping of an area}
- N G05D 2105/89 · · {for inspecting structures, e.g. wind mills, bridges, buildings or vehicles}
- N G05D 2105/93 · · {for inventory}

N G05D 2107/00 Specific environments of the controlled vehicles

WARNING

Groups [G05D 2107/00](#) - [G05D 2107/95](#) are incomplete pending reclassification of documents from groups [G05D 1/00](#) – [G05D 1/12](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G05D 2107/10 · Outdoor regulated spaces
- N G05D 2107/13 · · Spaces reserved for vehicle traffic, e.g. roads, regulated airspace or regulated waters
- N G05D 2107/17 · · Spaces with priority for humans, e.g. populated areas, pedestrian ways, parks or beaches
- N G05D 2107/20 · Land use
- N G05D 2107/21 · · {Farming, e.g. fields, pastures or barns}
- N G05D 2107/22 · · {Forests}
- N G05D 2107/23 · · {Gardens or lawns}
- N G05D 2107/24 · · {Sports fields, e.g. golf courses}
- N G05D 2107/25 · {Aquatic environments}
- N G05D 2107/27 · · {Oceans}
- N G05D 2107/28 · · {Rivers}
- N G05D 2107/29 · · {Swimming pools}
- N G05D 2107/30 · Off-road
- N G05D 2107/34 · · {Battlefields}
- N G05D 2107/36 · · {Catastrophic areas}
- N G05D 2107/38 · {Extra-terrestrial environments, e.g. asteroids}
- N G05D 2107/40 · Indoor domestic environment
- N G05D 2107/50 · Confined spaces, e.g. tanks, pipelines, tunnels or containers
- N G05D 2107/60 · Open buildings, e.g. offices, hospitals, shopping areas or universities
- N G05D 2107/63 · · {Offices, universities or schools}
- N G05D 2107/65 · · {Hospitals}
- N G05D 2107/67 · · {Shopping areas}
- N G05D 2107/68 · {Research centers or laboratories}
- N G05D 2107/70 · Industrial sites, e.g. warehouses or factories
- N G05D 2107/73 · · {Mining}
- N G05D 2107/75 · · {Electric power generation plants}
- N G05D 2107/80 · Transportation hubs
- N G05D 2107/82 · · {Train or bus stations}
- N G05D 2107/84 · · {Harbours}
- N G05D 2107/85 · · {Airports}
- N G05D 2107/87 · {Recreational areas, e.g. amusement parks}
- N G05D 2107/90 · Building sites; Civil engineering

N G05D 2107/95 · {Interior or surroundings of another vehicle}

N G05D 2109/00 **Types of controlled vehicles**

WARNING

Groups [G05D 2109/00](#) - [G05D 2109/50](#) are incomplete pending reclassification of documents from groups [G05D 1/00](#) – [G05D 1/12](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G05D 2109/10 · Land vehicles

N G05D 2109/12 · · with legs

N G05D 2109/13 · · {with only one or two wheels, e.g. motor bikes or inverted pendulums}

N G05D 2109/135 · · {Spherical or cylindrical vehicles; Vehicles with spherical ground-engaging means}

N G05D 2109/14 · · {moving on a grid}

N G05D 2109/15 · · Climbing vehicles

N G05D 2109/16 · · {Articulated vehicles, e.g. snake-like robots}

N G05D 2109/18 · · Holonomic vehicles, e.g. with omni wheels

N G05D 2109/20 · Aircraft, e.g. drones

N G05D 2109/22 · · with fixed wings

N G05D 2109/23 · · · {Vertical take-off and landing [VTOL] aircraft; Short take-off and landing [STOL, STOVL] aircraft}

N G05D 2109/24 · · · · {Convertible aircraft, e.g. tiltrotor aircraft}

N G05D 2109/25 · · Rotorcrafts

N G05D 2109/254 · · · {Flying platforms, e.g. multicopters}

N G05D 2109/26 · · {Lighter-than-air aircraft}

N G05D 2109/265 · · {Ornithopters}

N G05D 2109/27 · · {with flexible wings, e.g. paragliders, kites or hang gliders}

N G05D 2109/28 · · Missiles

N G05D 2109/285 · · {Projectiles}

N G05D 2109/29 · · · {animated with rolling movements}

N G05D 2109/30 · Water vehicles

N G05D 2109/34 · · {operating on the water surface}

N G05D 2109/36 · · · {wind powered, e.g. sailing boats}

N G05D 2109/38 · · {operating under the water surface, e.g. submarines}

N G05D 2109/40 · Space vehicles

N G05D 2109/50 · Vehicles specially adapted for two or more of space, air, land or water environments, e.g. amphibious vehicles

N G05D 2111/00 **Details of signals used for control of position, course, altitude or attitude of land, water, air or space vehicles**

WARNING

Groups [G05D 2111/00](#) - [G05D 2111/67](#) are incomplete pending reclassification of documents from groups [G05D 1/00](#) – [G05D 1/12](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G05D 2111/10 · Optical signals

N G05D 2111/14 · · {Non-visible signals, e.g. IR or UV signals}

- N G05D 2111/17 · · {Coherent light, e.g. laser signals}
- N G05D 2111/20 · Acoustic signals, e.g. ultrasonic signals
- N G05D 2111/30 · Radio signals
- N G05D 2111/32 · · {transmitted via communication networks, e.g. cellular networks or wireless local area networks [WLAN]}
- N G05D 2111/34 · · {generated by transmitters powered by energy received from an external transceiver, e.g. generated by passive radio-frequency identification [RFID] tags}
- N G05D 2111/36 · · {generated or reflected by cables or wires carrying current, e.g. boundary wires or leaky feeder cables}
- N G05D 2111/40 · Inductive-loop type signals
- N G05D 2111/50 · Internal signals, i.e. from sensors located in the vehicle, e.g. from compasses or angular sensors
- N G05D 2111/52 · · {generated by inertial navigation means, e.g. gyroscopes or accelerometers}
- N G05D 2111/54 · · {for measuring the travel distances, e.g. by counting the revolutions of wheels}
- N G05D 2111/56 · · {for sensing properties of the surrounding medium of the vehicle, e.g. using airspeed sensors}
- N G05D 2111/58 · · {for sensing the relative position of different elements of a vehicle, e.g. of a steering mechanism or of articulated trailers}
- N G05D 2111/60 · Combination of two or more signals
- N G05D 2111/63 · · of the same type, e.g. stereovision or optical flow
- N G05D 2111/64 · · · {taken simultaneously from spaced apart sensors, e.g. stereovision}
- N G05D 2111/65 · · · {taken successively, e.g. visual odometry or optical flow}
- N G05D 2111/67 · · Sensor fusion

D G05D 2201/00**Application**

- D G05D 2201/02 · Control of position of land vehicles
- D G05D 2201/0201 · Agriculture or harvesting machine
- D G05D 2201/0202 · Building or civil engineering machine
- D G05D 2201/0203 · · Cleaning or polishing vehicle
- D G05D 2201/0204 · · Golf cart
- D G05D 2201/0205 · · Harbour vehicle, e.g. crane
- D G05D 2201/0206 · · Vehicle in a health care environment, e.g. for distribution of food or medicines in a hospital or for helping handicapped persons
- D G05D 2201/0207 · Unmanned vehicle for inspecting or visiting an area
- D G05D 2201/0208 · · Lawn mower
- D G05D 2201/0209 · · Combat or reconnaissance vehicle for military, police or security applications
- D G05D 2201/021 · · Mining vehicle
- D G05D 2201/0211 · · Vehicle in an office environment, e.g. for delivering mail or for videoconferencing
- D G05D 2201/0212 · · Driverless passenger transport vehicle
- D G05D 2201/0213 · · Road vehicle, e.g. car or truck
- D G05D 2201/0214 · · Position controlled toy
- D G05D 2201/0215 · · Vacuum cleaner
- D G05D 2201/0216 · · Vehicle for transporting goods in a warehouse, factory or similar
- D G05D 2201/0217 · · Anthropomorphic or bipedal robot

D G05D 2201/0218 · · Planetary exploration vehicle

Project: MP12180 (G06F)

- U G06F 9/00 Arrangements for program control, e.g. control units (program control for peripheral devices [G06F 13/10](#))**
- U G06F 9/06 · using stored programs, i.e. using an internal store of processing equipment to receive or retain programs
- U G06F 9/30 · · Arrangements for executing machine instructions, e.g. instruction decode (for executing microinstructions [G06F 9/22](#))
- M G06F 9/38 · · · Concurrent instruction execution, e.g. pipeline; **or** look ahead

WARNING

Group [G06F 9/38](#) is impacted by reclassification into group [G06F 9/3854](#). Groups [G06F 9/38](#) and [G06F 9/3854](#) should be considered in order to perform a complete search.

Project: MP11841 (G06Q)

M G06Q INFORMATION AND COMMUNICATION TECHNOLOGY [ICT] SPECIALLY ADAPTED FOR ADMINISTRATIVE, COMMERCIAL, FINANCIAL, MANAGERIAL OR SUPERVISORY PURPOSES; SYSTEMS OR METHODS SPECIALLY ADAPTED FOR ADMINISTRATIVE, COMMERCIAL, FINANCIAL, MANAGERIAL OR SUPERVISORY PURPOSES, NOT OTHERWISE PROVIDED FOR

NOTE

1. Groups [G06Q 10/00](#) - [G06Q 50/00](#) and [G06Q 99/00](#) only cover systems or methods that involve significant data processing operations, i.e. data processing operations that need to be carried out by a technological, e.g. computing, system or device.

~~1.2. Groups [G06Q 10/00](#) - [G06Q 50/00](#) and [G06Q 99/00](#) only cover systems or methods that involve significant data processing operations, i.e. data processing operations that need to be carried out by a technological, e.g. computing, system or device.~~ Group [G06Q 90/00](#) covers systems or methods that do not involve significant data processing, when both of the following conditions are fulfilled:

- the systems or methods are specially adapted for the purposes mentioned in the subclass title or the titles of groups [G06Q 10/00](#) - [G06Q 50/00](#); and
- the systems or methods cannot be classified elsewhere, for example by applying the principles described in paragraph 96 of the Guide to the IPC.

When classifying such systems or methods in group [G06Q 90/00](#), additional classification may be made in the most closely related group of this or any other subclass, if this classification gives information about the application of the systems or methods that could be of interest for search. Such non-obligatory classification must be given as "additional information".

~~2. When classifying such systems or methods in group [G06Q 90/00](#), additional classification may be made in the most closely related group of this or any other subclass, if this classification gives information about the application of the systems or methods that could be of interest for search. Such non-obligatory classification must be given as "additional information".~~

WARNINGS

1. [G06Q](#) has been largely refined to bring most of the former USPC 705 groups into ECLA, prior to CPC launch. Therefore, most of the new [G06Q](#) subdivisions are not complete pending reclassification. Users are invited to systematically consult also the hierarchically higher groups, up to the first valid IPC group. For

example, while searching in [G06Q 50/2053](#), it is appropriate to consult also [G06Q 50/205](#) and [G06Q 50/20](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP12195 (G06Q)

U G06Q 10/00

Administration; Management

U G06Q 10/08

- Logistics, e.g. warehousing, loading or distribution; Inventory or stock management

M G06Q 10/083

- • Shipping

WARNING

Group G06Q 10/083 is incomplete pending reclassification of documents from groups G06Q 50/40 and G06Q 50/60.

Groups G06Q 50/40, G06Q 50/60 and G06Q 10/083 should be considered in order to perform a complete search.

C G06Q 50/00

Systems or methods **Information and communication technology [ICT] specially adapted for implementation of business processes of specific business sectors, e.g. utilities or tourism (healthcare informatics G16H)**

WARNING

Group G06Q 50/00 is impacted by reclassification into groups G06Q 50/02, G06Q 50/06 and G06Q 50/22.

All groups listed in this Warning should be considered in order to perform a complete search.

T G06Q 50/02

- Agriculture; Fishing; *Forestry*; Mining

WARNING

Group G06Q 50/02 is incomplete pending reclassification of documents from group G06Q 50/00.

Groups G06Q 50/00 and G06Q 50/02 should be considered in order to perform a complete search.

U G06Q 50/04

- Manufacturing

T G06Q 50/06

- ~~Electricity, gas~~ *Energy* or water supply

WARNING

Group G06Q 50/06 is incomplete pending reclassification of documents from group G06Q 50/00.

Groups G06Q 50/00 and G06Q 50/06 should be considered in order to perform a complete search.

U G06Q 50/08

- Construction

U G06Q 50/10

- Services

U G06Q 50/12

- • Hotels or restaurants

U G06Q 50/14

- • Travel agencies

U G06Q 50/16

- • Real estate

M G06Q 50/163

- • • ~~{Property management}~~ *Real estate management*

M G06Q 50/18

- • Legal services; ~~Handling legal documents~~

U G06Q 50/20

- • Education

- T G06Q 50/22
- Social work *or social welfare, e.g. community support activities or counselling services*
- WARNING
Group [G06Q 50/22](#) is incomplete pending reclassification of documents from group [G06Q 50/00](#).
Groups [G06Q 50/00](#) and [G06Q 50/22](#) should be considered in order to perform a complete search.
- C G06Q 50/26
- Government or public services (*business processes related to the transportation industry [G06Q 50/40](#)*)
- WARNING
Group [G06Q 50/26](#) is impacted by reclassification into group [G06Q 50/40](#).
Groups [G06Q 50/26](#) and [G06Q 50/40](#) should be considered in order to perform a complete search.
- D G06Q 50/28
- Logistics, e.g. warehousing, loading, distribution or shipping
<administratively transferred to [G06Q 10/08](#)>
- D G06Q 50/30
- Transportation; Communications
<administratively transferred to [G06Q 50/40](#)>
- D G06Q 50/32
- Post and telecommunications (franking apparatus [G07B 17/00](#))
<administratively transferred to [G06Q 50/60](#)>
- U G06Q 50/34
- Betting or bookmaking, e.g. Internet betting
- NOTE
When classifying in this group, classification should also be made in group [G07F 17/32](#)
- Q G06Q 50/40
- Business processes related to the transportation industry (shipping [G06Q 10/083](#))
- WARNING
Group [G06Q 50/40](#) is incomplete pending reclassification of documents from group [G06Q 50/26](#). Group [G06Q 50/40](#) is also impacted by reclassification into groups [G06Q 10/083](#), [G06Q 50/43](#), [G06Q 50/47](#), [G06Q 50/50](#), [H04L 12/14](#), [H04M 3/00](#), [H04M 15/00](#), [H04M 17/00](#) and [H04W 4/24](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06Q 50/43
- Business processes related to the sharing of vehicles, e.g. car sharing
- WARNING
Groups [G06Q 50/43](#) and [G06Q 50/47](#) are incomplete pending reclassification of documents from group [G06Q 50/40](#).
Groups [G06Q 50/40](#), [G06Q 50/43](#) and [G06Q 50/47](#) should be considered in order to perform a complete search.
- N G06Q 50/47
- Passenger ride requests, e.g. ride-hailing
- N G06Q 50/50
- Business processes related to the communications industry (metering or billing arrangements [H04L 12/14](#); telephonic communication involving automatic or semi-automatic exchanges [H04M 3/00](#); arrangements for metering, time-control or time indication [H04M 15/00](#); prepayment telephone systems [H04M 17/00](#); accounting or billing for wireless communication networks [H04W 4/24](#))
- WARNING
Group [G06Q 50/50](#) is incomplete pending reclassification of documents from group [G06Q 50/40](#).

Groups [G06Q 50/40](#) and [G06Q 50/50](#) should be considered in order to perform a complete search.

- Q G06Q 50/60
- Business processes related to postal services (shipping [G06Q 10/083](#); franking apparatus [G07B 17/00](#))
- WARNING**
- Group [G06Q 50/60](#) is impacted by reclassification into group [G06Q 10/083](#). Groups [G06Q 50/60](#) and [G06Q 10/083](#) should be considered in order to perform a complete search.

Project: RP12197 (G06T)

- M G06T 3/00** **Geometric image ~~transformation~~transformations in the plane of the image**
- D G06T 3/0006
- {Affine transformations (G06T 3/4038, G06T 3/0068 take precedence)}
<administratively transferred to [G06T 3/02](#)>
- D G06T 3/0012
- {Context preserving transformation, e.g. by using an importance map (G06T 3/0062 takes precedence)}
<administratively transferred to [G06T 3/04](#)>
- D G06T 3/0018
- • {Fisheye, wide-angle transformation}
<administratively transferred to [G06T 3/047](#)>
- D G06T 3/0025
- • {Detail-in-context presentation (G06T 3/0018 takes precedence)}
<administratively transferred to [G06T 3/053](#)>
- D G06T 3/0031
- {for topological mapping of a higher dimensional structure on a lower dimensional surface}
<administratively transferred to [G06T 3/06](#)>
- D G06T 3/0037
- • {Reshaping or unfolding a 3D tree structure onto a 2D plane}
<administratively transferred to [G06T 3/067](#)>
- D G06T 3/0043
- • {Surface of revolution to planar image transformation}
<administratively transferred to [G06T 3/073](#)>
- D G06T 3/005
- {for projecting an image on a non-planar surface, e.g. a geodetic screen}
<administratively transferred to [G06T 3/08](#)>
- D G06T 3/0056
- {the transformation method being selected according to the characteristics of the input image}
<administratively transferred to [G06T 3/10](#)>
- D G06T 3/0062
- {Panospheric to cylindrical image transformation}
<administratively transferred to [G06T 3/12](#)>
- D G06T 3/0068
- {for image registration, e.g. elastic snapping}
<administratively transferred to [G06T 3/14](#)>
- D G06T 3/0075
- • {using affine transformations}
<administratively transferred to [G06T 3/147](#)>
- D G06T 3/0081
- • {by elastic snapping}
<administratively transferred to [G06T 3/153](#)>
- D G06T 3/0087
- {Spatio-temporal transformations, e.g. video cubism}
<administratively transferred to [G06T 3/16](#)>
- D G06T 3/0093
- {for image warping, i.e. transforming by individually repositioning each pixel}
<administratively transferred to [G06T 3/18](#)>

- N G06T 3/02 • Affine transformations (for image registration [G06T 3/147](#); for image mosaicing [G06T 3/4038](#))
- N G06T 3/04 • Context-preserving transformations, e.g. by using an importance map (panospheric to cylindrical image transformations [G06T 3/12](#))
- N G06T 3/047 • • Fisheye or wide-angle transformations
- N G06T 3/053 • • Detail-in-context presentations (fisheye or wide-angle transformations [G06T 3/047](#))
- N G06T 3/06 • Topological mapping of higher dimensional structures onto lower dimensional surfaces
- N G06T 3/067 • • Reshaping or unfolding 3D tree structures onto 2D planes
- N G06T 3/073 • • Transforming surfaces of revolution to planar images, e.g. cylindrical surfaces to planar images
- N G06T 3/08 • Projecting images onto non-planar surfaces, e.g. geodetic screens
- N G06T 3/10 • Selection of transformation methods according to the characteristics of the input images
- N G06T 3/12 • Panospheric to cylindrical image transformations
- N G06T 3/14 • Transformations for image registration, e.g. adjusting or mapping for alignment of images
- N G06T 3/147 • • using affine transformations
- N G06T 3/153 • • using elastic snapping
- N G06T 3/16 • Spatio-temporal transformations, e.g. video cubism
- N G06T 3/18 • Image warping, e.g. rearranging pixels individually
- M G06T 3/20 • Linear translation of ~~a whole image or part~~ *whole images or parts* thereof, e.g. panning
- M G06T 3/40 • Scaling ~~the whole image or part thereof~~ *of whole images or parts thereof*, e.g. *expanding or contracting*
- M G06T 3/4007 • • ~~{Interpolation-based scaling based on interpolation}~~, e.g. bilinear interpolation ([G06T 3/4015](#), [G06T 3/403](#) ~~take precedence~~ *image demosaicing [G06T 3/4015](#); edge-driven or edge-based scaling [G06T 3/403](#)*)
- M G06T 3/4015 • • ~~{Demosaicing Image demosaicing}~~, e.g. colour filter ~~array~~ *arrays* [CFA], ~~Bayer pattern~~ *or Bayer patterns*
- M G06T 3/4023 • • *based on decimating pixels or lines of pixels; {Decimation or insertion-based scaling, e.g. pixel or line decimation}* *based on inserting pixels or lines of pixels*
- M G06T 3/403 • • ~~{Edge-driven scaling}~~; *Edge-based scaling*
- M G06T 3/4038 • • ~~{for image mosaicing, i.e. plane images composed of}~~ *Image mosaicing, e.g. composing plane images from plane sub-images*
- M G06T 3/4046 • • ~~{using neural networks}~~
- M G06T 3/4053 • • ~~{Super}~~ *based on super-resolution*, i.e. *the* output image resolution *being* higher than *the* sensor resolution
- M G06T 3/4061 • • • ~~{by injecting details from a different spectral band}~~ *different spectral ranges*
- M G06T 3/4069 • • • ~~{by subpixel displacement}~~ *by subpixel displacements*
- M G06T 3/4076 • • • ~~{by iteratively correcting the provisional high-resolution image using the original low-resolution image}~~ *using the original low-resolution images to iteratively correct the high-resolution images*
- M G06T 3/4084 • • ~~{Transform-based scaling in the transform domain}~~, e.g. ~~FFT domain scaling~~ *fast Fourier transform [FFT] domain scaling*
- M G06T 3/4092 • • ~~{Image resolution transcoding, e.g. client/server architecture}~~ *by using client-server architectures*

- M G06T 3/60 • Rotation of ~~a whole image or part~~ *whole images or parts* thereof
- M G06T 3/602 • ~~{Block by block rotation, e.g. by recursive reversing or rotating}~~ *reversal or rotation*
- M G06T 3/604 • ~~{using a CORDIC [COordinate Rotation Digital Compute] device}~~ *using coordinate rotation digital computer [CORDIC] devices*
- M G06T 3/606 • ~~{Rotation by memory addressing or mapping}~~
- M G06T 3/608 • ~~{Skewing or deskewing by skew deformation, e.g. by two-pass or three-pass rotation}~~

Project: RP12200 (G06T)

C G06T 5/00 Image enhancement or restoration

WARNING

Group G06T 5/00 is impacted by reclassification into group G06T 5/60. Groups G06T 5/00 and G06T 5/60 should be considered in order to perform a complete search.

- D G06T 5/001 • {Image restoration}
<administratively transferred to [G06T 5/00](#)>
- D G06T 5/002 • ~~{Denoising; Smoothing (noise processing or correction adapted to be used in an image pickup device containing an electronic image sensor H04N 23/81, H04N 25/60 - H04N 25/67)}~~
<administratively transferred to [G06T 5/70](#)>
- D G06T 5/003 • ~~{Deblurring; Sharpening (vibration or motion blur correction for cameras comprising an electronic image sensor H04N 23/682)}~~
<administratively transferred to [G06T 5/73](#)>
- D G06T 5/004 • ~~{Unsharp masking}~~
<administratively transferred to [G06T 5/75](#)>
- D G06T 5/005 • ~~{Retouching; Inpainting; Scratch removal (detecting, correction, reducing or removing defects, e.g. non-responsive pixels of solid state image sensors H04N 25/68, scratch removal for cinematographic films scanned by electronic image sensor H04N 5/253)}~~
<administratively transferred to [G06T 5/77](#)>
- D G06T 5/006 • ~~{Geometric correction (correction of chromatic aberrations adapted to be used in an image pickup device containing an electronic image sensor H04N 23/10; detecting, correcting, reducing or removing artefacts resulting only from the lens unit, e.g. flare, shading, vignetting or "cos4" H04N 25/61)}~~
<administratively transferred to [G06T 5/80](#)>
- D G06T 5/007 • ~~{Dynamic range modification (applied in cameras using an electronic image sensor H04N 23/741, H04N 23/743)}~~
<administratively transferred to [G06T 5/90](#)>
- D G06T 5/008 • ~~{Local, e.g. shadow enhancement}~~
<administratively transferred to [G06T 5/94](#)>
- D G06T 5/009 • ~~{Global, i.e. based on properties of the image as a whole (applied in cameras using an electronic image sensor H04N 23/80, H04N 23/70)}~~
<administratively transferred to [G06T 5/92](#)>
- M G06T 5/10 • ~~by using~~ *non-spatial domain filtering* ~~{(applied in cameras using an electronic image sensor H04N 23/80, H04N 23/70, H04N 5/253, H04N 25/68)}~~
- M G06T 5/20 • ~~by the use of local operators~~ *using local operators* ~~(applied in cameras using an electronic image sensor H04N 23/80, H04N 23/70, H04N 5/253, H04N 25/68)}~~

- U G06T 5/30 · · Erosion or dilatation, e.g. thinning
- M G06T 5/40 · ~~by the use of histogram techniques~~ {*using histogram techniques* (applied in cameras using an electronic image sensor H04N 23/80, H04N 23/70)}
- M G06T 5/50 · ~~by the use of more than one image~~ *using two or more images*, e.g. averaging; subtraction { *or subtraction* (applied in cameras using an electronic image sensor H04N 23/80, H04N 23/70)}
- N G06T 5/60 · *using machine learning, e.g. neural networks*
WARNING
 Group [G06T 5/60](#) is incomplete pending reclassification of documents from group [G06T 5/00](#).
 Groups [G06T 5/00](#) and [G06T 5/60](#) should be considered in order to perform a complete search.
- N G06T 5/70 · *Denoising; Smoothing*
- N G06T 5/73 · *Deblurring; Sharpening*
- N G06T 5/75 · · *Unsharp masking*
- N G06T 5/77 · *Retouching; Inpainting; Scratch removal*
- N G06T 5/80 · *Geometric correction*
- N G06T 5/90 · *Dynamic range modification of images or parts thereof*
- N G06T 5/92 · · *based on global image properties*
- N G06T 5/94 · · *based on local image properties, e.g. for local contrast enhancement*
- U G06T 11/00 2D [Two Dimensional] image generation**
- M G06T 11/001 · {Texturing; Colouring; Generation of texture or colour (inpainting [G06T 5/005](#) [G06T 5/77](#))}

Project: RP12201 (G08B)

- U G08B 3/00 Audible signalling systems; Audible personal calling systems**
- U G08B 3/10 · using electric transmission; using electromagnetic transmission
- U G08B 3/1008 · · {Personal calling arrangements or devices, i.e. paging systems (selective calling systems and call receivers [H04W 84/00](#), [H04W 68/00](#))}
- M G08B 3/1016 · · · {using wireless transmission (calling systems using transmission by inductive loop [H04B 5/04](#) [H04B 5/00](#))}

Project: MP12212 (G09G)

M G09G

ARRANGEMENTS OR CIRCUITS FOR CONTROL OF INDICATING DEVICES USING STATIC MEANS TO PRESENT VARIABLE INFORMATION (~~lighting in general F21; arrangements for displaying electric variables or waveforms G01R 3/00; devices or arrangements for the control of light beams G02F 1/00; indicating of time by visual means G04B 19/00, G04C 17/00, G04G 9/00; arrangements for transferring data between computers and peripheral equipment G06F 3/00~~*arrangements for transferring data between digital computers and displays G06F 3/14; visible signalling arrangements or devices G08B 5/00; traffic control systems G08G; display, advertising, signs G09F, e.g. static indicating arrangements comprising an association of a number of separate sources or light control cells G09F 9/00; ; static indicating arrangements comprising an association of a number of separate sources or light control cells G09F 9/00; static indicating arrangements comprising integral associations of a number of light sources H01J, H01K, H01L, H05B 33/12; circuits in pulse counters for indicating the result H03K 21/18; coding, decoding or code conversion, in general H03M; reproducing a picture or pattern using electric signals representing parts thereof and produced by scanning an original H04N; scanning, transmission or reproduction of documents or the like, e.g. facsimile transmission, details thereof H04N 1/00*)

NOTES

1. This subclass covers indicator consoles, i.e. arrangements or circuits for processing control signals to achieve the display, e.g. for the calling up, reception, storage, regeneration, coding, decoding, addressing of control signals.
2. This subclass does not cover the structural details of the indicating devices, such as panels or tubes per se, or assemblies of individual light sources, which are covered by the relevant subclasses, e.g. [H01J](#), [H01K](#), [H01L](#), [H10K](#), [G02F](#), [G09F](#), [H05B](#).
3. Contrary to subclass [H04N](#), in which are classified display devices capable of representing continuous brightness value scales, this subclass is limited to devices using only a discrete number of brightness values, e.g. visible/non-visible.
4. The visual effect may be produced by a luminescent screen scanned by an electron beam, directly by controlled light sources, by projection of light, from controlled light sources onto characters, symbols, or elements thereof drawn on a support, or by electric, magnetic, or acoustic control of the parameters of light rays from an independent source.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP12088 (G10F)

U G10F 1/00

Automatic musical instruments

M G10F 1/06

- Musical boxes with plucked teeth, blades, or the like (~~combinations with other articles, see the relevant classes for the articles~~)

Project: MP11841 (G10K)

M G10K

SOUND-PRODUCING DEVICES; METHODS OR DEVICES FOR PROTECTING AGAINST, OR FOR DAMPING, NOISE OR OTHER ACOUSTIC WAVES IN GENERAL; ACOUSTICS NOT OTHERWISE PROVIDED FOR

NOTE

~~1. This subclass *covers* arrangements for generating mechanical vibrations in fluids:~~

~~2. This subclass *covers* also the production of sounds which may not be audible to human beings but which are audible to animals:~~

1. This subclass *covers*:

- *arrangements for generating mechanical vibrations in fluids;*
- *the production of sounds which may not be audible to human beings but which are audible to animals.*

~~3.2.~~ In this subclass, the following terms are used with the meanings indicated:

- "acoustics" and "sound" ~~cover~~*cover* the technical field dealing with mechanical vibrations at all infrasonic -, sonic - and ultrasonic frequencies. However, generation or transmission of mechanical waves, in general, is covered by subclass [B06B](#), subject to the exception specified in Note (1) above.

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

Project: MP12205 (G10L)

M G10L

SPEECH ANALYSIS ~~OR~~ *TECHNIQUES OR SPEECH* SYNTHESIS; SPEECH RECOGNITION; SPEECH OR VOICE PROCESSING *TECHNIQUES*; SPEECH OR AUDIO CODING OR DECODING

NOTE

This subclass *does not cover*:

- devices for the storage of speech or audio signals, which are covered by subclasses [G11B](#) and [G11C](#);
- encoding of compressed speech signals for transmission or storage, which is covered by group [H03M 7/30](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M G10L 17/00

Speaker identification or verification *techniques*

M G10L 21/00

~~Processing of the speech~~*Speech* or voice signal *processing techniques* to produce another audible or non-audible signal, e.g. visual or tactile, in order to modify its quality or its intelligibility ([G10L 19/00](#) takes precedence)

Project: Unknown (G11B)

U G11B 5/00

Recording by magnetisation or demagnetisation of a record carrier; Reproducing by magnetic means; Record carriers therefor ([G11B 11/00](#) {and [G11B 13/00](#)} take precedence)

NOTE

Subgroups [G11B 5/02](#) - [G11B 5/86](#) take precedence over subgroups [G11B 5/004](#) - [G11B 5/016](#)

- U G11B 5/48 · Disposition or mounting of heads {or head supports} relative to record carriers {(mounting of head within housing [G11B 5/105](#)); arrangements of heads, e.g. for scanning the record carrier to increase the relative speed (driving of both record carriers and head [G11B 15/18](#); guiding record carriers [G11B 15/60](#); head selecting circuits [G11B 15/12](#))}
- U G11B 5/4806 · · {specially adapted for disk drive assemblies, e.g. assembly prior to operation, hard or flexible disk drives ([G11B 5/488](#) - [G11B 5/54](#) take precedence)}
- U G11B 5/4826 · · · {Mounting, aligning or attachment of the transducer head relative to the arm assembly, e.g. slider holding members, gimbals, adhesive ([G11B 5/484](#) takes precedence; details of head housings or structures [G11B 5/10](#), [G11B 5/127](#); adjustment relative to the record carrier [G11B 5/56](#))}
- M G11B 5/483 · · · · {Piezo-electricPiezoelectric devices between head and arm, e.g. for fine adjustment}
- U G11B 7/00** **Recording or reproducing by optical means, e.g. recording using a thermal beam of optical radiation {by modifying optical properties or the physical structure}, reproducing using an optical beam at lower power {by sensing optical properties}; Record carriers therefor ([G11B 11/00](#), [G11B 13/00](#) take precedence)**
- U G11B 7/08 · Disposition or mounting of heads or light sources relatively to record carriers
- U G11B 7/09 · · with provision for moving the light beam or focus plane for the purpose of maintaining alignment of the light beam relative to the record carrier during transducing operation, e.g. to compensate for surface irregularities of the latter or for track following
- U G11B 7/0925 · · · {Electromechanical actuators for lens positioning ([G11B 7/0857](#) takes precedence)}
- M G11B 7/0937 · · · · {Piezo-electricPiezoelectric actuators}

Project: MP12214 (G11B)

- U G11B 7/24 · Record carriers characterised by shape, structure or physical properties, or by the selection of the material (characterised by the arrangement of information on the carrier [G11B 7/007](#))
- U G11B 7/241 · · characterised by the selection of the material
- U G11B 7/242 · · · of recording layers
- U G11B 7/243 · · · · comprising inorganic materials only, e.g. ablative layers
- M G11B 7/2433 · · · · · Metals or elements of **groupsGroups** 13, 14, 15 or 16 of the Periodic **SystemTable**, e.g. B, Si, Ge, As, Sb, Bi, Se or Te

Project: RP12181 (G16H)

- M G16H 30/00** **ICT specially adapted for the handling or processing of medical images (**computerised tomography A61B 6/03** **computed tomography A61B 6/03**)**

Project: MP12192 (H01C)

M H01C 7/00 Non-adjustable resistors formed as one or more layers or coatings; Non-adjustable resistors made from powdered conducting material or powdered semi-conducting material with or without insulating material (consisting of loose powdered or granular material [H01C 8/00](#) ~~}; measuring deformation in a solid state using the change in resistance formed by printed-circuit technique G01B 7/20; insulating materials H01B 3/00; passive thin-film or thick-film semiconductor or solid state devices H01L 27/00; resistors without a potential-jump or surface barrier specially adapted for integrated circuits, details thereof, multistep manufacturing processes therefor H01L 28/20~~}; resistors with a potential-jump barrier or surface barrier, e.g. field-effect resistors H01L 29/00; *resistors having potential barriers, e.g. field-effect resistors, H01L 29/00*; semiconductor devices sensitive to electromagnetic or corpuscular radiation, e.g. photoresistors, [H01L 31/00](#) ~~}; ohmic resistance heating H05B 3/00; printed circuits H05K~~}; devices using galvanomagnetic or similar magnetic effects, e.g. magnetic-field-controlled resistors, H10N 50/00; devices using superconductivity H10N 60/00; solid state devices for rectifying, amplifying, oscillating or switching without a potential-jump barrier or surface barrier H10N 70/00; *magnetic field controlled resistors H10N 50/10*; bulk negative resistance effect devices [H10N 80/00](#))

Project: MP12214 (H01F)

M H01F 1/00 Magnets or magnetic bodies characterised by the magnetic materials therefor; Selection of materials for their magnetic properties

NOTES

1. Attention is drawn to Note (3) after the title of section [C](#), which Note indicates to which version of the ~~periodic table~~*Periodic Table* of chemical elements the ~~IPC~~*CPC* refers. In this group, the ~~Periodic System~~*system* used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.
2. {Group [H01F 1/0036](#) takes precedence over groups [H01F 1/09](#), [H01F 1/11](#), [H01F 1/20](#), [H01F 1/33](#) and [H01F 1/36](#).}

Project: MP12192 (H01G)

M H01G CAPACITORS; CAPACITORS, RECTIFIERS, DETECTORS, SWITCHING DEVICES ~~OR~~, LIGHT-SENSITIVE DEVICES; *OR TEMPERATURE-SENSITIVE DEVICES* OF THE ELECTROLYTIC TYPE (selection of specified materials as dielectric [H01B 3/00](#); ~~capacitors with potential-jump or surface barrier H01L 29/00~~; *capacitors having potential barriers H01L 29/00*)

NOTE

In this subclass, group [H01G 11/00](#) takes precedence over groups [H01G 4/00](#) and [H01G 9/00](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: Unknown (H01H)

M H01H 57/00 Electrostrictive relays; ~~Piezo-electric~~*Piezoelectric* relays

Project: MP12185 (H01H)

- U H01H 83/00** **Protective switches, e.g. circuit-breaking switches, or protective relays operated by abnormal electrical conditions otherwise than solely by excess current**
- M H01H 83/14 · operated by ~~unbalance~~*imbalance* of two or more currents or voltages, e.g. for differential protection
- U H01H 83/20 · operated by excess current as well as by some other abnormal electrical condition
- M H01H 83/22 · · the other condition being ~~unbalance~~*imbalance* of two or more currents or voltages

Project: MP12212 (H01H)

- U H01H 2219/00** **Legends**
- U H01H 2219/002 · replaceable; adaptable
- M H01H 2219/0023 · · Images formed with electrophoretic technology, e.g. by charged pigment particles rearranged by applied electric field, e.g. electronic paper or e-paper, active ink, ~~gyricon~~

Project: MP11853 (H01J)

- U H01J 1/00** **Details of electrodes, of magnetic control means, of screens, or of the mounting or spacing thereof, common to two or more basic types of discharge tubes or lamps (details of electron-optical arrangements or of ion traps [H01J 3/00](#))**
- U H01J 1/02 · Main electrodes
- U H01J 1/30 · · Cold cathodes, e.g. field-emissive cathode
- M H01J 1/312 · · · having an electric field perpendicular to the surface, e.g. tunnel-effect cathodes of ~~Metal-Insulator-Metal~~*metal-insulator-metal* [MIM] type
{([H01J 1/304](#)- [H01J 1/308](#) take precedence)}

Project: Unknown (H01J)

- U H01J 49/00** **Particle spectrometers or separator tubes**
- NOTE
In classifying particle separators, no distinction is made between spectrometry and spectrography, the difference being only in the manner of detection which in the first case is electrical and in the second case is by means of a photographic film.
- U H01J 49/0013 · {Miniaturised spectrometers, e.g. having smaller than usual scale, integrated conventional components}
- M H01J 49/0018 · · {Microminiaturised spectrometers, e.g. chip-integrated devices, ~~MicroElectro-Micro-Electro~~-Mechanical Systems [MEMS]}
- U H01J 2231/00** **Cathode ray tubes or electron beam tubes ([H01J 2329/00](#) takes precedence)**
- U H01J 2231/50 · Imaging and conversion tubes
- U H01J 2231/50005 · · characterised by form of illumination
- U H01J 2231/5001 · · · Photons
- U H01J 2231/50015 · · · · Light
- M H01J 2231/50021 · · · · · ~~Ultra-violet~~*Ultraviolet*
- M H01J 2231/50026 · · · · · ~~Infra-red~~*Infrared*

Project: MP12214 (H01L)

M H01L

SEMICONDUCTOR DEVICES NOT COVERED BY CLASS H10 (use of semiconductor devices for measuring [G01](#); resistors in general [H01C](#); magnets, inductors or transformers [H01F](#); capacitors in general [H01G](#); electrolytic devices [H01G 9/00](#); batteries or accumulators [H01M](#); waveguides, resonators or lines of the waveguide type [H01P](#); line connectors or current collectors [H01R](#); stimulated-emission devices [H01S](#); electromechanical resonators [H03H](#); loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers [H04R](#); electric light sources in general [H05B](#); printed circuits, hybrid circuits, casings or constructional details of electrical apparatus, manufacture of assemblages of electrical components [H05K](#); use of semiconductor devices in circuits having a particular application, see the subclass for the application)

NOTES

1. This subclass is residual to class [H10](#).
2. This subclass covers:
 - semiconductor devices for rectifying, amplifying, oscillating or switching; their constructional details or arrangements; their assemblies or integrated devices; their manufacture or treatment;
 - semiconductor devices sensitive to radiation; their constructional details or arrangements; their assemblies or integrated devices; their manufacture or treatment;
 - semiconductor devices for light emission; their constructional details or arrangements; their assemblies or integrated devices; their manufacture or treatment;
 - processes or apparatus for the manufacture or treatment of semiconductor or solid-state devices where the type of device is not listed under bullets [a to c 1 to 3](#), above, or not essential;
 - constructional details or arrangements of semiconductor or solid-state devices not covered by class [H10](#) and not specific to types of devices listed under bullets [a to c 1 to 3](#), above;
 - packaging or assembling of semiconductor or solid-state devices covered by this subclass or by class [H10](#).
3. In this subclass, the following terms or expressions are used with the meaning indicated:
 - "wafer" means a slice of semiconductor or crystalline substrate material, which can be modified by impurity diffusion (doping), ion implantation or epitaxy, and whose active surface can be processed into arrays of discrete components or integrated circuits;
 - "solid state body" means the body of material within which, or at the surface of which, the physical effects characteristic of the device occur;
 - "electrode" is a region in or on the body of the device (other than the solid state body itself), which exerts an electrical influence on the solid state body, irrespective of whether or not an external electrical connection is made thereto. An electrode may include several portions and the term includes metallic regions which exert influence on the solid state body through an insulating region (e.g. capacitive coupling) and inductive coupling arrangements to the body. The dielectric region in a capacitive arrangement is regarded as part of the electrode. In arrangements including several portions, only those portions which exert an influence on the solid state body by virtue of their shape, size, or disposition or the material of which they are formed are considered to be part of the electrode. The other portions are considered to be "arrangements for conducting electric current to or from the solid state body" or "interconnections between solid state components formed in or on a common substrate", i.e. leads;

- "device" means an electric circuit element; where an electric circuit element is one of a plurality of elements formed in or on a common substrate; it is referred to as a "component";
- "complete device" is a device in its fully assembled state which may or may not require further treatment, e.g. electroforming, before it is ready for use but which does not require the addition of further structural units;
- "parts" includes all structural units which are included in a complete device;
- "container" is an enclosure forming part of the complete device and is essentially a solid construction in which the body of the device is placed, or which is formed around the body without forming an intimate layer thereon. An enclosure which consists of one or more layers formed on the body and in intimate contact therewith is referred to as an "encapsulation";
- "integrated circuit" is a device where all components, e.g. diodes or resistors, are built up on a common substrate and form the device including interconnections between the components;
- "assembly" of a device is the building up of the device from its constructional units; the term covers the provision of fillings in containers.

4. In this subclass, both the process or apparatus for the manufacture or treatment of a device and the device itself are classified, whenever both of these are described sufficiently to be of interest.

5. Attention is drawn to Note (3) after the title of section C, which Note indicates to which version of the Periodic Table of chemical elements the CPC refers. In this subclass, the system used is the 8 group system, indicated by Roman numerals in the Periodic Table thereunder.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

| | | |
|--|------------|--|
| H01L 21/301 | covered by | H01L 21/30 |
| H01L 21/328 | covered by | H01L 29/66075 |
| H01L 21/329 | covered by | H01L 29/66083 |
| H01L 21/33 | covered by | H01L 29/66227 |
| H01L 21/331 | covered by | H01L 29/66234 |
| H01L 21/332 | covered by | H01L 29/66363 |
| H01L 21/334 | covered by | H01L 29/66075 |
| H01L 21/335 | covered by | H01L 29/66409 |
| H01L 21/336 | covered by | H01L 29/66477 |
| H01L 21/337 | covered by | H01L 29/66893 |
| H01L 21/338 | covered by | H01L 29/66848 |
| H01L 21/339 | covered by | H01L 29/66946 |
| H01L 21/36-H01L 21/368 | covered by | H01L 21/02107 |
| H01L 21/58 | covered by | H01L 24/80 |
| H01L 21/66 | covered by | H01L 22/00 |
| H01L 21/98 | covered by | H01L 25/50 |
| H01L 29/38 | covered by | H01L 29/04-H01L 29/365 |
| H01L 29/96 | covered by | H01L 29/68-H01L 29/945 |

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

Project: MP12192 (H01L)

- U H01L 21/00 Processes or apparatus adapted for the manufacture or treatment of semiconductor or solid state devices or of parts thereof**
- U H01L 21/02 · Manufacture or treatment of semiconductor devices or of parts thereof

- M H01L 21/04
- the devices having ~~at least one potential-jump barrier or surface barrier~~*potential barriers*, e.g. a PN junction, depletion layer or carrier concentration layer ~~{(multistep manufacturing processes for semiconductor bodies of said devices H01L 29/02; multistep manufacturing processes for electrodes of said devices H01L 29/401; multistep manufacturing processes for said devices H01L 29/66007)}~~

Project: MP12214 (H01L)

- M H01L 21/18
- the devices having semiconductor bodies comprising elements of Group IV of the Periodic ~~System or A_{III}B_V Table or AIIIBV~~ compounds with or without impurities, e.g. doping materials ~~{(H01L 21/041 - H01L 21/0425, H01L 21/045 - H01L 21/048 take precedence)}~~
- NOTE
This group covers also processes and apparatus which, by using the appropriate technology, are clearly suitable for manufacture or treatment of devices whose bodies comprise elements of Group IV of the Periodic ~~System or A_{III}B_V Table or AIIIBV~~ compounds, even if the material used is not explicitly specified.
- U H01L 21/28
- Manufacture of electrodes on semiconductor bodies using processes or apparatus not provided for in groups H01L 21/20 - H01L 21/268 ~~{(etching for patterning the electrodes H01L 21/311, H01L 21/3213; multistep manufacturing processes for data storage electrodes H01L 29/4011)}~~
- U H01L 21/283
- Deposition of conductive or insulating materials for electrodes {conducting electric current}
- U H01L 21/285
- from a gas or vapour, e.g. condensation
- U H01L 21/28506
- {of conductive layers}
- M H01L 21/28512
- {on semiconductor bodies comprising elements of Group IV of the Periodic ~~System Table~~}

Project: MP12192 (H01L)

- M H01L 21/62
- the devices having no potential-jump barriers or surface barriers *barriers*
- U H01L 27/00
- Devices consisting of a plurality of semiconductor or other solid-state components formed in or on a common substrate (details thereof H01L 23/00, H01L 29/00 - H10K 10/00; assemblies consisting of a plurality of individual solid state devices H01L 25/00)**
- NOTE
In this group the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
- M H01L 27/02
- including semiconductor components specially adapted for rectifying, oscillating, amplifying or switching and having ~~at least one potential-jump barrier or surface barrier~~*potential barriers*; including integrated passive circuit elements ~~with at least one potential-jump barrier or surface barrier~~*having potential barriers*
- M H01L 27/15
- including semiconductor components ~~with at least one potential-jump barrier or surface barrier~~*having potential barriers*, specially adapted for light emission ~~{(monolithically integrated components including semiconductor laser components H01S 5/026)}~~

M H01L 29/00 Semiconductor devices *especially* adapted for rectifying, amplifying, oscillating or switching, *or capacitors or resistors with at least one potential-jump barrier or surface barrier, e.g. PN junction depletion layer or carrier concentration layer and having potential barriers; Capacitors or resistors having potential barriers, e.g. a PN-junction depletion layer or carrier concentration layer*; Details of semiconductor bodies or of electrodes thereof {; Multistep manufacturing processes therefor} ([H01L 31/00](#) - [H01L 33/00](#), [H10K 10/00](#), [H10N](#) take precedence; details other than of semiconductor bodies or of electrodes thereof [H01L 23/00](#); devices consisting of a plurality of solid state components formed in or on a common substrate [H01L 27/00](#) {; *passive two-terminal components without a potential-jump or surface barrier for integrated circuits, details thereof and multistep manufacturing processes therefor H01L 28/00; resistors in general H01C; capacitors in general H01G, e.g. ceramic barrier-layer capacitors H01G 4/1272*})

NOTE

In this main group, classification is made both in groups [H01L 29/02](#) - [H01L 29/51](#) and in groups [H01L 29/66](#) - [H01L 29/94](#) if both of these sets of groups are relevant.

Project: MP12214 (H01L)

- U H01L 29/02 · Semiconductor bodies {; Multistep manufacturing processes therefor}
- U H01L 29/12 · · characterised by the materials of which they are formed
- M H01L 29/16 · · · including, apart from doping materials or other impurities, only elements of Group IV of the Periodic *System Table*
- U H01L 29/22 · · · including, apart from doping materials or other impurities, only $A_{III}B_{VI}$ compounds
- M H01L 29/2203 · · · {Cd X compounds being one element of the 6th group of the Periodic *System Table* ([H01L 29/2206](#) takes precedence)}

Project: MP12192 (H01L)

- U H01L 29/66 · Types of semiconductor device {; Multistep manufacturing processes therefor}
- U H01L 29/86 · · controllable only by variation of the electric current supplied, or only the electric potential applied, to one or more of the electrodes carrying the current to be rectified, amplified, oscillated or switched
- M H01L 29/92 · · · Capacitors *with potential-jump barrier or surface barrier having potential barriers*

Project: MP12214 (H01L)

- U H01L 31/00 **Semiconductor devices sensitive to infrared radiation, light, electromagnetic radiation of shorter wavelength or corpuscular radiation and specially adapted either for the conversion of the energy of such radiation into electrical energy or for the control of electrical energy by such radiation; Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof; Details thereof ([H10K 30/00](#) takes precedence; devices consisting of a plurality of solid state components formed in, or on, a common substrate, other than combinations of radiation-sensitive components with one or more electric light sources, [H01L 27/00](#))**
- U H01L 31/0248 · characterised by their semiconductor bodies
- U H01L 31/0256 · · characterised by the material
- U H01L 31/0264 · · · Inorganic materials

- M H01L 31/028 . . . including, apart from doping material or other impurities, only elements of Group IV of the Periodic *System Table*
- U H01L 31/0328 . . . including, apart from doping materials or other impurities, semiconductor materials provided for in two or more of groups [H01L 31/0272](#) - [H01L 31/032](#)
- M H01L 31/0336 in different semiconductor regions, e.g. Cu₂X/CdX hetero- junctions, X being an element of Group VI of the Periodic *System Table*
- M H01L 31/03365 {comprising only Cu₂X / CdX heterojunctions, X being an element of Group VI of the Periodic *System Table*}
- U H01L 31/0352 . . characterised by their shape or by the shapes, relative sizes or disposition of the semiconductor regions
- U H01L 31/035236 . . . {Superlattices; Multiple quantum well structures}
- M H01L 31/035254 {including, apart from doping materials or other impurities, only elements of Group IV of the Periodic *System Table*, e.g. Si-SiGe superlattices}
- U H01L 31/036 . . characterised by their crystalline structure or particular orientation of the crystalline planes
- U H01L 31/0368 . . . including polycrystalline semiconductors ([H01L 31/0392](#) takes precedence)
- M H01L 31/03682 {including only elements of Group IV of the Periodic *System Table*}
- U H01L 31/0376 . . . including amorphous semiconductors ([H01L 31/0392](#) takes precedence)
- M H01L 31/03762 {including only elements of Group IV of the Periodic *System Table*}
- U H01L 31/0392 . . . including thin films deposited on metallic or insulating substrates {; characterised by specific substrate materials or substrate features or by the presence of intermediate layers, e.g. barrier layers, on the substrate (textured substrates [H01L 31/02366](#))}
- M H01L 31/03921 {including only elements of Group IV of the Periodic *System Table*}

Project: MP12192 (H01L)

- U H01L 31/04 . . adapted as photovoltaic [PV] conversion devices (testing thereof during manufacture {[H01L 22/00](#)}; testing thereof after manufacture [H02S 50/10](#))
- M H01L 31/06 . . characterised by *at least one potential-jump barrier or surface barrier potential barriers*

Project: MP12214 (H01L)

- U H01L 31/072 . . . the potential barriers being only of the PN heterojunction type
- M H01L 31/074 comprising a heterojunction with an element of Group IV of the Periodic *System Table*, e.g. ITO/Si, GaAs/Si or CdTe/Si solar cells

Project: MP12212 (H01L)

- U H01L 31/0745 comprising a A_{IV}B_{IV} heterojunction, e.g. Si/Ge, SiGe/Si or Si/SiC solar cells
- M H01L 31/0747 comprising a heterojunction of crystalline and amorphous materials, e.g. heterojunction with intrinsic thin layer-*or HIT® solar cells; solar cells*
- M H01L 31/075 . . . the potential barriers being only of the PIN type, *e.g. amorphous silicon PIN solar cells*

Project: MP12192 (H01L)

- U H01L 31/08 . . in which radiation controls flow of current through the device, e.g. photoresistors
- M H01L 31/10 . . characterised by *at least one potential-jump barrier or surface barrier potential barriers*, e.g. phototransistors

- U H01L 31/101 . . . Devices sensitive to infrared, visible or ultraviolet radiation
- M H01L 31/102 . . . characterised by only one potential barrier ~~or surface barrier~~

Project: MP12214 (H01L)

- U H01L 31/105 the potential barrier being of the PIN type
- M H01L 31/1055 {the devices comprising amorphous materials of Group IV of the Periodic **System Table**}

Project: MP12192 (H01L)

- M H01L 31/107 the potential barrier working in avalanche mode, e.g. avalanche ~~photodiode~~*photodiodes*
- M H01L 31/11 characterised by two potential barriers ~~or surface barriers~~, e.g. bipolar ~~phototransistor~~*phototransistors*
- M H01L 31/111 characterised by at least three potential barriers, e.g. ~~photothyristor~~*photothyristors*
- U H01L 31/12 . structurally associated with, e.g. formed in or on a common substrate with, one or more electric light sources, e.g. electroluminescent light sources, and electrically or optically coupled thereto (semiconductor devices with at least one potential barrier or surface barrier adapted for light emission [H01L 33/00](#); amplifiers using electroluminescent element and photocell [H03F 17/00](#); electroluminescent light sources *per se* [H05B 33/00](#))
- U H01L 31/14 . . the light source or sources being controlled by the semiconductor device sensitive to radiation, e.g. image converters, image amplifiers or image storage devices
- M H01L 31/147 . . . the light sources and the devices sensitive to radiation all being semiconductor devices characterised by ~~at least one potential or surface barrier~~*potential barriers*
- U H01L 31/16 . . the semiconductor device sensitive to radiation being controlled by the light source or sources
- M H01L 31/167 . . . the light sources and the devices sensitive to radiation all being semiconductor devices characterised by ~~at least one potential or surface barrier~~*potential barriers*

Project: MP12214 (H01L)

- U H01L 31/18 . Processes or apparatus specially adapted for the manufacture or treatment of these devices or of parts thereof
- M H01L 31/1804 . . {comprising only elements of Group IV of the Periodic **System Table**}
- U H01L 31/20 . . such devices or parts thereof comprising amorphous semiconductor materials
- M H01L 31/202 . . . {including only elements of Group IV of the Periodic **System Table**}

Project: MP12192 (H01L)

- M H01L 33/00** Semiconductor devices **with at least one potential-jump barrier or surface barrier** *having potential barriers* specially adapted for light emission; Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof; Details thereof ([H10K 50/00](#) takes precedence; devices consisting of a plurality of semiconductor components formed in or on a common substrate and including semiconductor components **with at least one potential-jump barrier or surface barrier** *having potential barriers*, specially adapted for light emission [H01L 27/15](#); semiconductor lasers [H01S 5/00](#))

NOTES

1. This group covers light-emitting diodes [LED] or superluminescent diodes [SLD], which emit visible light, infrared [IR] light or ultraviolet [UV] light.
2. In this group, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

Project: MP12214 (H01L)

- U H01L 33/02 · characterised by the semiconductor bodies
- U H01L 33/26 · · Materials of the light emitting region
- M H01L 33/28 · · · containing only elements of **group II and group VI** *Group II and Group VI of the periodic system* *Periodic Table*
- M H01L 33/30 · · · containing only elements of **group III and group V** *Group III and Group V of the periodic system* *Periodic Table*
- M H01L 33/34 · · · containing only elements of **group IV** *Group IV of the periodic system* *Periodic Table*

Project: MP12069 (H01M)

- U H01M 50/00** **Constructional details or processes of manufacture of the non-active parts of electrochemical cells other than fuel cells, e.g. hybrid cells**
- M H01M 50/10 · Primary casings; **jackets or wrappings of a single cell or a single battery**; *Jackets or wrappings*
- U H01M 50/102 · · characterised by their shape or physical structure
- M H01M 50/11 · · · having a **structure in the form of a chip** *chip structure, e.g. micro-sized batteries integrated on chips*
- M H01M 50/131 · · characterised by physical properties, e.g. gas-**permeability or size** *permeability, size or heat resistance*

Project: MP12185 (H01P)

- U H01P 5/00** **Coupling devices of the waveguide type**
- U H01P 5/08 · for linking dissimilar lines or devices ([H01P 1/16](#), [H01P 5/04](#) take precedence; linking lines of the same kind but with different dimensions [H01P 5/02](#))
- M H01P 5/10 · · for coupling balanced *lines or devices* with unbalanced lines or devices

Project: RP11758-F (H01S)

- U H01S 3/00** **Lasers, i.e. devices using stimulated emission of electromagnetic radiation in the infrared, visible or ultraviolet wave range (semiconductors lasers [H01S 5/00](#))**

- U H01S 3/10
- Controlling the intensity, frequency, phase, polarisation or direction of the emitted radiation, e.g. switching, gating, modulating or demodulating
- NOTE
Group [H01S 3/10007](#) takes precedence over groups [H01S 3/102](#) - [H01S 3/104](#)
- M H01S 3/11
- Mode locking; Q-switching; Other giant-pulse techniques, e.g. cavity dumping
- WARNING
Group H01S 3/11 is impacted by reclassification into group H01S 3/1123. Groups H01S 3/11 and H01S 3/1123 should be considered in order to perform a complete search.
- M H01S 3/1123
- Q-switching
- WARNING
Group H01S 3/1123 is incomplete pending reclassification of documents from group H01S 3/11. Groups H01S 3/11 and H01S 3/1123 should be considered in order to perform a complete search.

Project: MP12214 (H01S)

- M H01S 5/00
- Semiconductor lasers (superluminescent diodes [H01L 33/00](#))**
- NOTE
Attention is drawn to **Special Rules of classification at Note (3) after the title of C07F section C**, which **Special Rules indicate Note indicates** to which version of the **periodic table Periodic Table** of chemical elements **the** CPC refers. In this group, the **Periodic System system** used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.

Project: MP12088 (H02H)

- M H02H 7/00
- Emergency protective circuit arrangements specially adapted for specific types of electric machines or apparatus or for sectionalised protection of cable or line systems, and effecting automatic switching in the event of an undesired change from normal working conditions (~~structural association of protective devices with specific machines or apparatus and their protection without automatic disconnection, see the relevant subclass for the machine or apparatus~~)**
- M H02H 9/00
- Emergency protective circuit arrangements for limiting excess current or voltage without disconnection (~~structural association of protective devices with specific machines or apparatus, see the relevant subclass for the machine or apparatus~~)**

Project: RP0733-F (H02K)

- U H02K 1/00
- Details of the magnetic circuit (magnetic circuits for relays [H01H 50/16](#))**
- U H02K 1/06
- characterised by the shape, form or construction
- U H02K 1/22
- Rotating parts of the magnetic circuit
- U H02K 1/27
- Rotor cores with permanent magnets
- U H02K 1/2706
- Inner rotors
- U H02K 1/272
- the magnetisation axis of the magnets being perpendicular to the rotor axis
- U H02K 1/274
- the rotor consisting of two or more circumferentially positioned magnets

U H02K 1/2753 the rotor consisting of magnets or groups of magnets arranged with alternating polarity

M H02K 1/278 Surface mounted magnets; Inset magnets

WARNING
Group H02K 1/278 is impacted by reclassification into groups H02K 1/2781 and H02K 1/2783.
Groups H02K 1/278, H02K 1/2781 and H02K 1/2783 should be considered in order to perform a complete search.

M H02K 1/2781 Magnets shaped to vary the mechanical air gap between the magnets and the stator

WARNING
Group H02K 1/2781 is incomplete pending reclassification of documents from group H02K 1/278.
Groups H02K 1/278 and H02K 1/2781 should be considered in order to perform a complete search.

M H02K 1/2783 with magnets arranged in Halbach arrays

WARNING
Group H02K 1/2783 is incomplete pending reclassification of documents from group H02K 1/278.
Groups H02K 1/278 and H02K 1/2783 should be considered in order to perform a complete search.

M H02K 1/2786 Outer rotors

WARNING
Group H02K 1/2786 is impacted by reclassification into groups H02K 1/2787, H02K 1/2788, H02K 1/2789, H02K 1/279, H02K 1/2791, H02K 1/27915 and H02K 1/2792.
All groups listed in this Warning should be considered in order to perform a complete search.

M H02K 1/2787 the magnetisation axis of the magnets being perpendicular to the rotor axis

WARNING
Groups H02K 1/2787, H02K 1/2788, H02K 1/2789, H02K 1/279, H02K 1/2791, H02K 1/27915 and H02K 1/2792 are incomplete pending reclassification of documents from group H02K 1/2786.
All groups listed in this Warning should be considered in order to perform a complete search.

M H02K 1/2793 Rotors axially facing stators

WARNING
Group H02K 1/2793 is impacted by reclassification into groups H02K 1/2795, H02K 1/2796 and H02K 1/2798.
All groups listed in this Warning should be considered in order to perform a complete search.

M H02K 1/2795 the rotor consisting of two or more circumferentially positioned magnets

WARNING
Groups H02K 1/2795, H02K 1/2796 and H02K 1/2798 are incomplete pending reclassification of documents from group H02K 1/2793.
All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP12088 (H02P)

- U H02P 9/00** Arrangements for controlling electric generators for the purpose of obtaining a desired output (Ward-Leonard arrangements [H02P 7/34](#); vector control [H02P 21/00](#); feeding a network by two or more generators [H02J](#); for charging batteries [H02J 7/14](#))
- M H02P 9/04** • Control effected upon non-electric prime mover and dependent upon electric output value of the generator (~~effecting control of the prime mover in general; see the relevant class for such prime mover~~)
- M H02P 9/06** • Control effected upon clutch or other mechanical power transmission means and dependent upon electric output value of the generator (~~effecting control of the power transmission means; see the relevant class for such means~~)

Project: MP12209 (H03B)

- M H03B** GENERATION OF OSCILLATIONS, DIRECTLY OR BY FREQUENCY-CHANGING, BY CIRCUITS EMPLOYING ACTIVE ELEMENTS WHICH OPERATE IN A NON-SWITCHING MANNER; GENERATION OF NOISE BY SUCH CIRCUITS (~~measuring, testing G01R; generators adapted for electrophonic musical instruments G10H; Speech synthesis G10L; masers; or lasers H01S; dynamo-electric machines H02K; power inverter circuits H02M; by using pulse techniques H03K; automatic control of generators H03L; starting, synchronisation or stabilisation of generators where the type of generator is irrelevant or unspecified H03L; generation of oscillations in plasma H05H~~)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP11842 (H03F)

- M H03F** ~~AMPLIFIERS (measuring, testing G01R; optical parametric amplifiers G02F; circuit arrangement with secondary emission tubes H01J 43/30; masers, lasers H01S; control of amplification H03G; coupling arrangements independent of the nature of the amplifiers, voltage dividers H03H; amplifiers capable only of dealing with pulses H03K; repeater circuits in transmission lines H04B 3/36, H04B 3/58; application of speech amplifiers in telephonic communication H04M 1/60, H04M 3/40)~~

NOTE

This subclass covers:

- linear amplification, there being linear relationship between the amplitudes of input and output, and the output having substantially the same waveform as the input;
- dielectric amplifiers, magnetic amplifiers, and parametric amplifiers when used as oscillators or frequency-changers;
- constructions of active elements of dielectric amplifiers and parametric amplifiers if no provision exists elsewhere.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

| | | |
|---------------------------|------------|---------------------------|
| H03F 1/44 | covered by | H03F 1/42 |
| H03F 1/46 | covered by | H03F 1/42 |
| H03F 3/18 | covered by | H03F 3/00 |
| H03F 3/32 | covered by | H03F 3/30 |

H03F 7/06 covered by H03F 7/00

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

- U H03F 1/00** **Details of amplifiers with only discharge tubes, only semiconductor devices or only unspecified devices as amplifying elements**
- U H03F 1/02 · Modifications of amplifiers to raise the efficiency, e.g. gliding Class A stages, use of an auxiliary oscillation
- U H03F 1/0205 · · {in transistor amplifiers}
- M H03F 1/0283 · · · {Reducing the number of ~~De~~DC-current paths}
- M H03F 1/08 · Modifications of amplifiers to reduce detrimental influences of internal impedances of amplifying elements (wide-band amplifiers with inter-stage coupling networks incorporating these impedances [H03F 1/42](#); ~~eliminating transit-time effects in vacuum tubes H01J 21/34~~)
- U H03F 1/12 · · by use of attenuating means {(attenuators [H03G](#))}
- M H03F 1/13 · · · in discharge~~-~~tube amplifiers
- U H03F 1/14 · · by use of neutralising means
- M H03F 1/16 · · · in discharge~~-~~tube amplifiers
- M H03F 1/34 · Negative-feedback-circuit arrangements with or without positive feedback ([H03F 1/02](#) - [H03F 1/30](#), [H03F 1/38](#) - [H03F 1/50](#), [H03F 3/50](#) take precedence {; ~~for rejection of common mode signals [H03F 3/45479](#)~~)}
- U H03F 3/00** **Amplifiers with only discharge tubes or only semiconductor devices as amplifying elements**
- NOTE
Groups [H03F 3/20](#) - [H03F 3/72](#) take precedence over groups [H03F 3/02](#) - [H03F 3/189](#).
{This Note corresponds to IPC Note (1) relating to [H03F 3/02](#) - [H03F 3/189](#).}
- M H03F 3/02 · with tubes only ~~(subsequent sub-groups take precedence)~~
- M H03F 3/04 · with semiconductor devices only ~~(subsequent sub-groups take precedence)~~
- M H03F 3/181 · Low~~-~~frequency amplifiers, e.g. audio preamplifiers
- M H03F 3/189 · High~~-~~frequency amplifiers, e.g. radio frequency amplifiers
- M H03F 3/34 · ~~De~~DC amplifiers in which all stages are ~~de~~DC-coupled ([H03F 3/45](#) takes precedence)
- M H03F 3/38 · ~~De~~DC amplifiers with modulator at input and demodulator at output; Modulators or demodulators specially adapted for use in such amplifiers {(switched capacitor amplifiers [H03F 3/005](#)); ~~modulators in general H03C; demodulators in general H03D; amplitude modulation of pulses in general H03K 7/02; amplitude demodulation of pulses in general H03K 9/02~~}
- M H03F 7/00** **Parametric amplifiers ~~(H03F 19/00 takes precedence); devices or arrangements for the parametric generation or amplification of light, infrared or ultraviolet waves G02F 1/39~~**

Project: MP11843 (H03G)

- M H03G** **CONTROL OF AMPLIFICATION ~~(impedance networks, e.g. attenuators, H03H; control of transmission in lines H04B 3/04)~~**

NOTES

1. This subclass covers:
 - control of gain of amplifiers or frequency-changers;;
 - control of frequency range of amplifiers;;

- limiting amplitude or rate of change of amplitude.

2. Attention is drawn to the Note following the title of subclass [H03F](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- M H03G 1/00** **Details of arrangements for controlling amplification ~~{(for arrangements combined with means for generating a controlling signal, or these means per se, see the other main groups of H03G)}~~**
- M H03G 1/02
 - Remote control of amplification, tone, or bandwidth (~~remote control in general G05, G08;~~ combined with remote tuning or selection of resonant circuits [H03J](#))
- M H03G 3/00** **Gain control in amplifiers or frequency changers ~~{without distortion of the input signal}{gated amplifiers H03F 3/72; peculiar to television receivers H04N}~~**
- M H03G 3/20
 - Automatic control (~~{H03G 3/005 takes precedence};~~ combined with volume compression or expansion [H03G 7/00](#))
- U H03G 5/00** **Tone control or bandwidth control in amplifiers**
- M H03G 5/005
 - {of digital signals ~~(see provisionally also H03G 5/00)}~~
- M H03G 5/02
 - Manually-operated control ~~(variable bandpass or bandstop filters H03H 7/12)~~
- U H03G 7/00** **Volume compression or expansion in amplifiers ~~{(frequency dependent H03G 9/00)}~~**
- M H03G 7/007
 - {of digital or coded signals ~~(see provis. also H03G 7/00)}~~
- U H03G 9/00** **Combinations of two or more types of control, e.g. gain control and tone control**
- M H03G 9/02
 - in untuned amplifiers ~~(combined tone controls for low and high frequencies H03G 5/00 {; compression or expansion combined with volume control H03G 7/00})~~
- M H03G 9/26
 - in untuned amplifying stages as well as in frequency-selective amplifying stages ~~(gain control in both stages H03G 3/00; tone control or bandwidth control H03G 5/00 {; compression or expansion combined with volume control H03G 7/00})~~
- U H03G 11/00** **Limiting amplitude; Limiting rate of change of amplitude {; Clipping in general}**
- M H03G 11/002
 - {without controlling loop ([H03G 11/004](#), [H03G 11/006](#), [H03G 11/008](#), [H03G 11/02](#), [H03G 11/04](#), [H03G 11/06](#), [H03G 11/08](#) take precedence; ~~see provisional also H03G 11/00~~)}
- M H03G 11/008
 - {of digital or coded signals ~~(see provis. also H03G 11/00, H03G 11/02)}~~
- M H03G 11/06
 - {Limiters of angle-modulated signals}; such limiters combined with discriminators (~~H03G 11/00 takes precedence;~~ discriminators having an inherent limiting action [H03D 3/00](#))

Project: Unknown (H03H)

H03H **IMPEDANCE NETWORKS, e.g. RESONANT CIRCUITS; RESONATORS (measuring, testing [G01R](#); arrangements for producing a reverberation or echo sound [G10K 15/08](#); impedance networks or resonators consisting of distributed impedances, e.g. of the waveguide type, [H01P](#); control of amplification, e.g. bandwidth control of amplifiers, [H03G](#); tuning resonant circuits, e.g. tuning coupled resonant circuits, [H03J](#); networks for modifying the frequency characteristics of communication systems [H04B](#))**

NOTES

1. This subclass covers:-
 - networks comprising lumped impedance elements;
 - networks comprising distributed impedance elements together with lumped impedance elements;
 - networks comprising electromechanical or electro-acoustic elements;
 - networks simulating reactances and comprising discharge tubes or semiconductor devices;
 - constructions of electromechanical resonators.
2. In this subclass, the following expression is used with the meaning indicated: "passive elements" means resistors, capacitors, inductors, mutual inductors or diodes.
3. Attention is drawn to the Notes following the titles of class [B81](#) and subclass [B81B](#) relating to "microstructural devices" and "microstructural systems".
4. In this subclass, main groups with a higher number take precedence.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP12185 (H03H)

- U H03H 7/00** **Multiple-port networks comprising only passive electrical elements as network components (receiver input circuits [H04B 1/18](#); networks simulating a length of communication cable [H04B 3/40](#))**
- M H03H 7/42** **• ~~Balance/unbalance networks~~ *Networks for transforming balanced signals into unbalanced signals and vice versa, e.g. baluns***

Project: Unknown (H03H)

- U H03H 9/00** **Networks comprising electromechanical or electro-acoustic devices; Electromechanical resonators (making single crystals [C30B](#); selection of materials thereof [H01L](#); electromechanical transducers [H04R](#); piezoelectric, electrostrictive or magnetostrictive devices per se [H10N 30/00](#))**
- U H03H 9/46** **• Filters (multiple-port electromechanical filters [H03H 9/70](#))**
- M H03H 9/54** **• • comprising resonators of ~~piezo-electric~~ *piezoelectric* or electrostrictive material ([H03H 9/64](#) takes precedence)**

Project: MP12185 (H03H)

- U H03H 11/00** **Networks using active elements**
- U H03H 11/02** **• Multiple-port networks**
- M H03H 11/32** **• • ~~Balance-unbalance networks~~ *Networks for transforming balanced signals into unbalanced signals and vice versa, e.g. baluns***

Project: MP12192 (H03K)

- U H03K 3/00 **Circuits for generating electric pulses; Monostable, bistable or multistable circuits (H03K 4/00 takes precedence; for digital function generators in computers G06F 1/02)**
- U H03K 3/02 • Generators characterised by the type of circuit or by the means used for producing pulses (H03K 3/64 - H03K 3/84 take precedence)
- M H03K 3/313 • • by the use, as active elements, of semiconductor devices with two electrodes, one or two potential-jump barriers, and exhibiting a negative resistance characteristic

Project: Unknown (H03K)

- U H03K 17/00 **Electronic switching or gating, i.e. not by contact-making and –breaking (gated amplifiers H03F 3/72; switching arrangements for exchange systems using static devices H04Q 3/52)**
- U H03K 17/94 • characterised by the way in which the control signals are generated
- U H03K 17/96 • • Touch switches (specially adapted for electronic time-pieces with no moving parts G04G 21/08)
- M H03K 17/964 • • • {Piezo-electricPiezoelectric touch switches}

Project: MP12209 (H03L)

- M H03L **AUTOMATIC CONTROL, STARTING, SYNCHRONISATION, OR STABILISATION OF GENERATORS OF ELECTRONIC OSCILLATIONS OR PULSES (of dynamo-electric generators H02P generation of oscillations H03B)**

NOTES

1. This subclass covers:

- automatic control circuits for generators of electronic oscillations or pulses;
- starting, synchronisation, or stabilisation circuits for generators where the type of generator is irrelevant or unspecified.

~~2. This subclass does not cover stabilisation or starting circuits specially adapted to only one specific type of generator, which are covered by subclasses H03B, H03K.~~

~~3.2.~~ In this subclass, the following expression is used with the meaning indicated:

- "automatic control" covers only closed loop systems.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- M H03L 1/00 **Stabilisation of generator output against variations of physical values, e.g. power supply (automatic control H03L 5/00, H03L 7/00)**
- U H03L 1/02 • against variations of temperature only
- M H03L 1/028 • • {of generators comprising piezoelectric resonators (H03L 1/021 and, H03L 1/022 take precedence; oscillation generators with a piezoelectric resonator per se H03B 5/32)}
- M H03L 7/00 **Automatic control of frequency or phase; Synchronisation (tuning of resonant circuits in general H03J; synchronising in digital communication systems, see the relevant groups in class H04)**
- U H03L 7/06 • using a reference signal applied to a frequency- or phase-locked loop
- M H03L 7/07 • • using several loops, e.g. for redundant clock signal generation (for indirect frequency synthesis H03L 7/22)

- U H03L 7/08 · · Details of the phase-locked loop
- M H03L 7/083 · · · the reference signal being additionally directly applied to the generator
(~~direct frequency synchronisation without loop H03L 7/24~~)
- M H03L 7/085 · · · concerning mainly the frequency- or phase-detection arrangement including the filtering or amplification of its output signal (H03L 7/10 takes precedence; ~~frequency or phase detection comparison in general H03D 3/00, H03D 13/00~~; *circuits for comparing the phase or frequency of two mutually-independent oscillations H03D 13/00*)
- U H03L 7/10 · · · for assuring initial synchronisation or for broadening the capture range
- M H03L 7/12 · · · · using a scanning signal (~~tuning circuits with automatic scanning over a band of frequencies H03J 7/18~~)
- U H03L 7/16 · · Indirect frequency synthesis, i.e. generating a desired one of a number of predetermined frequencies using a frequency- or phase-locked loop
- U H03L 7/18 · · · using a frequency divider or counter in the loop (H03L 7/20, H03L 7/22 take precedence)
- U H03L 7/183 · · · · a time difference being used for locking the loop, the counter counting between fixed numbers or the frequency divider dividing by a fixed number {(H03L 7/1806 takes precedence)}
- M H03L 7/193 · · · · the frequency divider/counter comprising a commutable pre-divider, e.g. a two modulus divider (~~pulse counters/frequency dividers H03K 21/00 - H03K 29/00~~)
- M H03L 7/195 · · · · in which the counter of the loop counts between two different non zero numbers, e.g. for generating an offset frequency (H03L 7/193 takes precedence; ~~pulse counters for predetermined counting H03K 21/00 - H03K 29/00~~)

Project: MP12185 (H04B)

- U H04B 3/00 **Line transmission systems (combined with near-field transmission systems H04B 5/00)**
- U H04B 3/02 · Details
- M H04B 3/30 · · Reducing interference caused by ~~unbalance current~~*unbalanced currents* in a normally balanced line

Project: RP12201 (H04B)

- C H04B 5/00 **Near-field transmission systems, e.g. inductive ~~loop type~~ or *capacitive transmission systems***

WARNING

Group H04B 5/00 is impacted by reclassification into groups H04B 5/40, H04B 5/43 and H04B 5/45.

All groups listed in this Warning should be considered in order to perform a complete search.

- D H04B 5/0006 · {~~using a receiver structurally associated with a loudspeaker or an earphone~~}
<administratively transferred to H04B 5/00>
- D H04B 5/0012 · {~~using capacitive coupling~~}
<administratively transferred to H04B 5/22>
- D H04B 5/0018 · {~~using leaky or radiating cables, e.g. leaky coaxial cables or power lines for inductive transmission (leaky cables per se H01Q 13/20; for railways B61L 3/22)}~~}
<administratively transferred to H04B 5/28>

- D H04B 5/0025
- ~~{Near field system adaptations}~~
 - <administratively transferred to [H04B 5/70](#)>
- D H04B 5/0031
- ~~{for data transfer}~~
 - <administratively transferred to [H04B 5/72](#)>
- D H04B 5/0037
- ~~{for power transfer}~~
 - <administratively transferred to [H04B 5/79](#)>
- D H04B 5/0043
- ~~{for taking measurements, e.g. using sensor coils}~~
 - <administratively transferred to [H04B 5/73](#)>
- D H04B 5/005
- ~~{for isolation purposes}~~
 - <administratively transferred to [H04B 5/75](#)>
- D H04B 5/0056
- ~~{for use in interrogation, identification or read/write systems (record carriers G06K 7/00, G06K 19/00; for railways B61L 3/12)}~~
 - <administratively transferred to [H04B 5/77](#)>
- D H04B 5/0062
- ~~{in RFID [Radio Frequency Identification] Systems}~~
 - <administratively transferred to [H04B 5/77](#)>
- D H04B 5/0068
- ~~{in transponders}~~
 - <administratively transferred to [H04B 5/45](#)>
- D H04B 5/0075
- ~~{using inductive coupling (transformers or inductances adapted for inductive coupling H01F 38/14)}~~
 - <administratively transferred to [H04B 5/24](#)>
- D H04B 5/0081
- ~~{with antenna coils (loop aerials H01Q 7/00)}~~
 - <administratively transferred to [H04B 5/26](#)>
- D H04B 5/0087
- ~~{with multiple coils at either side}~~
 - <administratively transferred to [H04B 5/263](#)>
- D H04B 5/0093
- ~~{with one coil at each side, e.g. with primary and secondary coils}~~
 - <administratively transferred to [H04B 5/266](#)>
- D H04B 5/02
- using transceiver
 - <administratively transferred to [H04B 5/48](#)>
- D H04B 5/04
- ~~Calling systems, e.g. paging system~~
 - <administratively transferred to [H04B 5/00](#)>
- D H04B 5/06
- using a portable transmitter associated with a microphone
 - <administratively transferred to [H04B 5/00](#)>
- N H04B 5/20
- *characterised by the transmission technique; characterised by the transmission medium*
- WARNING**
- Groups [H04B 5/20](#), [H04B 5/22](#), [H04B 5/24](#), [H04B 5/26](#), [H04B 5/263](#), [H04B 5/266](#) and [H04B 5/28](#) are incomplete pending reclassification of documents from group [H04B 5/72](#). All groups listed in this Warning should be considered in order to perform a complete search.*
- N H04B 5/22
- *Capacitive coupling*
- N H04B 5/24
- *Inductive coupling*
- N H04B 5/26
- *using coils*
- N H04B 5/263
- *{Multiple coils at either side}*
- N H04B 5/266
- *{One coil at each side, e.g. with primary and secondary coils}*

- N H04B 5/28 • • using the near field of leaky cables, e.g. of leaky coaxial cables
- N H04B 5/40 • • characterised by components specially adapted for near-field transmission
- WARNING
Groups [H04B 5/40](#) and [H04B 5/43](#) are incomplete pending reclassification of documents from group [H04B 5/00](#).
Groups [H04B 5/00](#), [H04B 5/40](#) and [H04B 5/43](#) should be considered in order to perform a complete search.
- N H04B 5/43 • • Antennas
- N H04B 5/45 • • Transponders
- WARNING
Group [H04B 5/45](#) is incomplete pending reclassification of documents from groups [H04B 5/00](#) and [H04B 5/72](#).
Groups [H04B 5/00](#), [H04B 5/72](#) and [H04B 5/45](#) should be considered in order to perform a complete search.
- N H04B 5/48 • • Transceivers
- N H04B 5/70 • • specially adapted for specific purposes
- WARNING
Group [H04B 5/70](#) is incomplete pending reclassification of documents from group [H04B 5/72](#).
Groups [H04B 5/72](#) and [H04B 5/70](#) should be considered in order to perform a complete search.
- Q H04B 5/72 • • for local intradevice communication
- WARNING
Group [H04B 5/72](#) is impacted by reclassification into groups [H04B 5/20](#), [H04B 5/22](#), [H04B 5/24](#), [H04B 5/26](#), [H04B 5/263](#), [H04B 5/266](#), [H04B 5/28](#), [H04B 5/45](#) and [H04B 5/70](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H04B 5/73 • • for taking measurements, e.g. using sensing coils
- N H04B 5/75 • • for isolation purposes
- N H04B 5/77 • • for interrogation
- N H04B 5/79 • • for data transfer in combination with power transfer

Project: Unknown (H04B)

- U H04B 10/00 Transmission systems employing electromagnetic waves other than radio-waves, e.g. infrared, visible or ultraviolet light, or employing corpuscular radiation, e.g. quantum communication**
- NOTE
In this group, non-optical transmission systems are classified in group [H04B 10/90](#).
- U H04B 10/60 • Receivers
- U H04B 10/61 • • Coherent receivers
- M H04B 10/64 • • Heterodyne {, i.e. coherent receivers where, after the opto-electronic conversion, an electrical signal at an intermediate frequency [f_{IF}/F] is obtained}

Project: MP12212 (H04H)

- U H04H 20/00 Arrangements for broadcast or for distribution combined with broadcast
- U H04H 20/86 · Arrangements characterised by the broadcast information itself
- M H04H 20/95 · · characterised by a specific format, e.g. **MP3 (MPEG-1 Audio Layer 3) an encoded audio stream**

Project: RP12195 (H04L)

- U H04L 12/00 **Data switching networks (interconnection of, or transfer of information or other signals between, memories, input/output devices or central processing units [G06F 13/00](#))**
- U H04L 12/02 · Details
- M H04L 12/14 · · Charging {, metering or billing} arrangements {for data wireline or wireless communications}

WARNING

Group H04L 12/14 is incomplete pending reclassification of documents from group G06Q 50/40.

Groups G06Q 50/40 and H04L 12/14 should be considered in order to perform a complete search.

Project: MP11853 (H04L)

- U H04L 12/28 · characterised by path configuration, e.g. LAN [Local Area Networks] or WAN [Wide Area Networks] (wireless communication networks [H04W](#) {; arrangements for dividing the transmission path [H04W 40/00](#)})
- U H04L 12/40 · · Bus networks
- U H04L 12/407 · · · with decentralised control
- M H04L 12/413 · · · · with random access, e.g. carrier-sense multiple-access with collision detection ([CSMA-CD](#))

Project: MP12213 (H04L)

- M H04L 47/00 **Traffic control in data switching networks (arrangements for detecting or **correcting** preventing errors in the information received [H04L 1/00](#))**

NOTE

This group covers:

1. Flow control or congestion control
2. Queue scheduling
3. Admission control or resource allocation

Project: MP12212 (H04M)

- U H04M 1/00 **Substation equipment, e.g. for use by subscribers (subscriber services or facilities provided at exchanges [H04M 3/00](#); prepayment telephone coin boxes [H04M 17/00](#); current supply arrangements [H04M 19/08](#))**
- U H04M 1/72 · Mobile telephones; Cordless telephones, i.e. devices for establishing wireless links to base stations without route selection
- U H04M 1/724 · · User interfaces specially adapted for cordless or mobile telephones
- U H04M 1/72403 · · · with means for local support of applications that increase the functionality
- U H04M 1/7243 · · · · with interactive means for internal management of messages
- M H04M 1/72436 · · · · · for text messaging, e.g. **SMS short messaging services [SMS]** or **e-mail mails**

Project: RP12195 (H04M)

- M H04M 3/00 Automatic or semi-automatic exchanges**
- WARNING
*Group [H04M 3/00](#) is incomplete pending reclassification of documents from group [G06Q 50/40](#).
 Groups [G06Q 50/40](#) and [H04M 3/00](#) should be considered in order to perform a complete search.*
- M H04M 15/00 Arrangements for metering, time-control or time indication {; Metering, charging or billing arrangements for voice wireline or wireless communications, e.g. VoIP}**
- WARNING
*Group [H04M 15/00](#) is incomplete pending reclassification of documents from group [G06Q 50/40](#).
 Groups [G06Q 50/40](#) and [H04M 15/00](#) should be considered in order to perform a complete search.*
- M H04M 17/00 Prepayment {of wireline communication systems, wireless communication systems or} telephone systems (using a coded card to authorise calls from a telephone set [H04M 1/675](#))**
- WARNING
*Group [H04M 17/00](#) is incomplete pending reclassification of documents from group [G06Q 50/40](#).
 Groups [G06Q 50/40](#) and [H04M 17/00](#) should be considered in order to perform a complete search.*

Project: MP12212 (H04N)

- U H04N 21/00 Selective content distribution, e.g. interactive television or video on demand [VOD] (real-time bi-directional transmission of motion video data [H04N 7/14](#) {; broadcast or conference over packet switching networks [H04L 12/18](#)})**
- NOTES
1. This group covers :
- interactive video distribution processes, systems, or elements thereof, which are characterised by point-to-multipoint system configurations, and which are mainly used for motion video data unidirectional distribution or delivery resulting from interactions between systems operators, e.g. access or service providers, or users e.g. subscribers, and system elements.
 - such systems include dedicated communication systems, such as television distribution systems, which primarily distribute or deliver motion video data in the manner indicated, which may, in addition, provide a framework for further, diverse data communications or services in either unidirectional or bi-directional form. However, video will occupy most of the downlink bandwidth in the distribution process.
 - typically, system operators interface with transmitter-side elements or users' interface with receiver-side elements in order to facilitate, through interaction with such elements, the dynamic control of data processing or data flow at various points in the system. This interaction is typically occasional or intermittent in nature.
 - processes, systems or elements thereof specially adapted to the generation, distribution and processing of data, which is either associated with video content, e.g. metadata, ratings, or related to the user or his

environment and which has been actively or passively gathered. This data is either used to facilitate interaction or to alter or target the content.

2. In this main group, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

3. In this main group, the following terms and expressions are used with the meaning indicated:

additional data - designates still pictures, textual, graphical or executable data such as software. It is used to convey supplemental information and can be generated prior to or during the distribution process itself, e.g. metadata, keys.

content designates video or audio streams, which may be combined with additional data. Video data will always be present and occupy most of the downlink bandwidth in the distribution process

server - designates an apparatus designed for adapting the content received from the content provider to the distribution network. It also manages the distribution to client devices or intermediate components over a network. Further servers may also be present for gathering or generating additional data, e.g. rights management server

additional data server - designates a server, which sole purpose is the distribution or management of additional data. It is not in charge of the distribution of video or audio data

client - designates an apparatus such as a TV receiver, a set-top-box, a PC-TV, a mobile appliance (e.g. mobile phone or receiver in a vehicle), for receiving video, audio and possibly additional data from one or several servers or intermediate components via a network for further processing, storing or displaying. It can also transmit this data on a home-based local network to further devices, e.g. a home server transmitting video to PCs and set-top-boxes within a home.

local network - pertains to a restricted area, e.g. a home or a vehicle, and designates the link between a client and its peripheral devices

network - is to be distinguished from "local network": "network" designates the link between the server and the clients, or between the server and the intermediate components, or between the intermediate components and the clients, or between remotely located clients

distribution - encompasses broadcasting, multicasting and unicasting techniques for transmitting content from one or more sources to one or more receiving stations. The distribution follows a request by a receiving station to the source, e.g. VOD or from a customization of the content by the source, e.g. targeting advertisements to a demographic group in a unidirectional or bidirectional system. Additionally, distribution encompasses techniques where the client acts as a source and another client acts as a receiving station, e.g. a peer-to-peer system for sharing video among client devices

end-user - designates a physical person, e.g. a TV viewer, who consumes the content using the client device. He is the final recipient of the content distributed by the server

interaction - covers actions occurring between or among two or more objects that have an effect upon one another, wherein objects comprise users, system operators, system elements, or content. The user may interact with content locally at the client device, e.g. for requesting additional data stored within the client device. The user may interact with content remotely through a server e.g. for VOD playback control or for uploading video to a server. The client device may interact with the content e.g. selecting content based upon the user profile. The client device may interact with a server using a return channel, e.g. for authenticating client or uploading client hardware capabilities. The server may interact with a client device, e.g. to force a client to tune to an advertisement channel

upstream - designates the direction of data flow towards the source, e.g. a server receiving a request via a mobile phone network.
downstream - designates the direction of data flow towards a client, e.g. a client receiving data originating from a server elementary stream An elementary stream (ES) as defined by the MPEG system layer designates the output of an audio or video encoder.

- U H04N 21/20 · Servers specifically adapted for the distribution of content, e.g. VOD servers; Operations thereof
- U H04N 21/23 · · Processing of content or additional data; Elementary server operations; Server middleware
- M H04N 21/234 · · · Processing of video elementary streams, e.g. splicing of video streams; ~~manipulating MPEG-4~~ *or manipulating encoded video stream* scene graphs
- U H04N 21/40 · Client devices specifically adapted for the reception of or interaction with content, e.g. set-top-box [STB]; Operations thereof
- U H04N 21/43 · · Processing of content or additional data, e.g. demultiplexing additional data from a digital video stream; Elementary client operations, e.g. monitoring of home network or synchronising decoder's clock; Client middleware {(real-time communication protocols in data switching networks [H04L 65/00](#))}
- U H04N 21/436 · · · Interfacing a local distribution network, e.g. communicating with another STB {or one or more peripheral devices} inside the home
- M H04N 21/4363 · · · · Adapting the video ~~{or multiplex}~~ stream to a specific local network, e.g. a ~~IEEE 1394~~ *or* Bluetooth® network
- M H04N 21/438 · · · Interfacing the downstream path of the transmission network originating from a server, e.g. retrieving *MPEG encoded video stream* packets from an IP network ~~{(transmission of MPEG streams over ATM H04L 12/5601; flow control in data networks H04L 47/10; real-time communication protocols in data switching networks H04L 65/00)}~~
- M H04N 21/44 · · · Processing of video elementary streams, e.g. splicing a video clip retrieved from local storage with an incoming video stream; *or* rendering scenes according to ~~MPEG-4~~ *encoded video stream* scene graphs

Project: RP12195 (H04W)

U H04W 4/00 **Services specially adapted for wireless communication networks; Facilities therefor**

NOTES

1. This group covers mobile application services or application service signalling for communication over wireless networks.
2. This group focuses on application services specially adapted for wireless networks or adjusted to the wireless environment.

M H04W 4/24 · Accounting or billing

WARNING

*Group H04W 4/24 is incomplete pending reclassification of documents from group G06Q 50/40.
Groups G06Q 50/40 and H04W 4/24 should be considered in order to perform a complete search.*

Project: RP12202 (H04W)

M H04W 74/00 **Wireless channel access, e.g. ~~scheduled or random access~~**
M H04W 74/02 · Hybrid access ~~techniques~~

- M H04W 74/04 · Scheduled ~~{or contention-free}~~ access (~~H04W 74/02 takes precedence~~*hybrid access H04W 74/02*)
- U H04W 74/06 · · using polling
- M H04W 74/08 · Non-scheduled ~~{or contention-based}~~ access, e.g. ~~random access, ALOHA, CSMA [Carrier Sense Multiple Access] ALOHA~~ (~~H04W 74/02 takes precedence~~*hybrid access H04W 74/02*)
- M H04W 74/0808 · · ~~{using carrier sensing, e.g. as in CSMA}~~*carrier sense multiple access [CSMA]*
- M H04W 74/0816 · · · ~~{carrier sensing}~~ with collision avoidance}
- M H04W 74/0825 · · · ~~{carrier sensing}~~ with collision detection}
- C H04W 74/0833 · · ~~{using a random access procedure}~~*Random access procedures, e.g. with 4-step access*

WARNING

Group [H04W 74/0833](#) is impacted by reclassification into groups [H04W 74/0836](#) and [H04W 74/0838](#).

Groups [H04W 74/0833](#), [H04W 74/0836](#) and [H04W 74/0838](#) should be considered in order to perform a complete search.

- N [H04W 74/0836](#) · · · with 2-step access
WARNING
Group [H04W 74/0836](#) is incomplete pending reclassification of documents from group [H04W 74/0833](#).
Groups [H04W 74/0833](#) and [H04W 74/0836](#) should be considered in order to perform a complete search.
- N [H04W 74/0838](#) · · · using contention-free random access [CFRA]
WARNING
Group [H04W 74/0838](#) is incomplete pending reclassification of documents from group [H04W 74/0833](#).
Groups [H04W 74/0833](#) and [H04W 74/0838](#) should be considered in order to perform a complete search.
- U H04W 74/0841 · · · {with collision treatment}

Project: MP12088 (H05B)

- U H05B 3/00 **Ohmic-resistance heating**
- M H05B 3/10 · ~~Heater~~*Heating* elements characterised by the composition or nature of the materials or by the arrangement of the conductor-~~(compositions per se see the relevant subclasses)~~

Project: RP10453 (H05B)

- M H05B 3/62 · Heating elements specially adapted for furnaces ([H05B 3/60](#) takes precedence; ~~arrangements of such elements in furnaces F27, e.g. F27D 11/00; arrangements of elements for electric heating in or on furnaces using ohmic resistance heating F27D 11/02~~)
- U H05B 47/00 **Circuit arrangements for operating light sources in general, i.e. where the type of light source is not relevant**
- U H05B 47/10 · Controlling the light source
- U H05B 47/165 · · following a pre-assigned programmed sequence; Logic control [LC]

- C H05B 47/17
- Operational modes, e.g. switching from manual to automatic mode or prohibiting specific operations
- WARNING
Group [H05B 47/17](#) is impacted by reclassification into group [H05B 47/172](#). Groups [H05B 47/17](#) and [H05B 47/172](#) should be considered in order to perform a complete search.
- N H05B 47/172
- {Emergency operational modes}
- WARNING
Group [H05B 47/172](#) is incomplete pending reclassification of documents from group [H05B 47/17](#). Groups [H05B 47/17](#) and [H05B 47/172](#) should be considered in order to perform a complete search.
- C H05B 47/175
- by remote control
- WARNING
Group [H05B 47/175](#) is impacted by reclassification into groups [H05B 47/196 – H05B 47/1995](#). Groups [H05B 47/175](#) and [H05B 47/196 – H05B 47/1995](#) should be considered in order to perform a complete search.
- C H05B 47/18
- via data-bus transmission
- WARNING
Group [H05B 47/18](#) is impacted by reclassification into groups [H05B 47/183](#), [H05B 47/184](#), [H05B 47/196 - H05B 47/1975](#) and [H05B 47/198 - H05B 47/1995](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N H05B 47/183
- {using digital addressable lighting interface [DALI] communication protocols}
- WARNING
Group [H05B 47/183](#) is incomplete pending reclassification of documents from group [H05B 47/18](#). Groups [H05B 47/18](#) and [H05B 47/183](#) should be considered in order to perform a complete search.
- N H05B 47/184
- {using digital multiplexed [DMX] communication protocols}
- WARNING
Group [H05B 47/184](#) is incomplete pending reclassification of documents from group [H05B 47/18](#). Groups [H05B 47/18](#) and [H05B 47/184](#) should be considered in order to perform a complete search.
- C H05B 47/185
- via power line carrier transmission
- WARNING
Group [H05B 47/185](#) is impacted by reclassification into groups [H05B 47/187](#), [H05B 47/196 - H05B 47/1975](#) and [H05B 47/198 - H05B 47/1995](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N H05B 47/187 . . . {using power over ethernet [PoE] supplies}
- WARNING
Group [H05B 47/187](#) is incomplete pending reclassification of documents from group [H05B 47/185](#).
Groups [H05B 47/185](#) and [H05B 47/187](#) should be considered in order to perform a complete search.
- C H05B 47/19 . . . via wireless transmission
- WARNING
Group [H05B 47/19](#) is impacted by reclassification into groups [H05B 47/196 - H05B 47/1975](#) and [H05B 47/198 - H05B 47/1995](#).
Groups [H05B 47/19](#), [H05B 47/196 - H05B 47/1975](#) and [H05B 47/198 - H05B 47/1995](#) should be considered in order to perform a complete search.
- C H05B 47/195 . . . the transmission using visible or infrared light
- WARNING
Group [H05B 47/195](#) is impacted by reclassification into groups [H05B 47/196 - H05B 47/1975](#) and [H05B 47/198 - H05B 47/1995](#).
Groups [H05B 47/195](#), [H05B 47/196 - H05B 47/1975](#) and [H05B 47/198 - H05B 47/1995](#) should be considered in order to perform a complete search.
- N H05B 47/196 . . . {characterised by user interface arrangements}
- WARNING
Groups [H05B 47/196 - H05B 47/1975](#) are incomplete pending reclassification of documents from groups [H05B 47/175](#), [H05B 47/18](#), [H05B 47/185](#), [H05B 47/19](#) and [H05B 47/195](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H05B 47/1965 . . . {using handheld communication devices}
- N H05B 47/197 . . . {Sound control or voice control}
- N H05B 47/1975 . . . {Gesture control}
- N H05B 47/198 . . . {Grouping of control procedures or address assignation to light sources}
- WARNING
Groups [H05B 47/198 - H05B 47/1995](#) are incomplete pending reclassification of documents from groups [H05B 47/175](#), [H05B 47/18](#), [H05B 47/185](#), [H05B 47/19](#) and [H05B 47/195](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H05B 47/1985 . . . {Creation of lighting zones or scenes}
- N H05B 47/199 . . . {Commissioning of light sources}
- N H05B 47/1995 . . . {Auto-commissioning}

Project: MP12088 (H05F)**M H05F**

STATIC ELECTRICITY; NATURALLY-OCCURRING ELECTRICITY
(electrostatic machines H02N; uses of electricity in performing operations, e.g. precipitation, see the relevant subclasses for the operations)

NOTES

1. This subclass covers methods or arrangements for preventing the formation of electrostatic charges on bodies or for carrying-off these charges after their formation.
2. This subclass does not cover specific applications of the above-mentioned methods or arrangements, e.g. during the manufacture of artificial fibres or films, which are covered by the relevant subclasses.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP12192 (H10B)**M H10B****ELECTRONIC MEMORY DEVICES****NOTE**

In this subclass, the periodic system used is the I to VIII group system indicated in the Periodic Table under Note (3) of section C.

Project: MP12192 (H10K)**M H10K****ORGANIC ELECTRIC SOLID-STATE DEVICES****NOTES**

1. This subclass covers:
 - individual organic electric solid-state devices, i.e. electric solid-state devices comprising organic material in the active part;
 - integrated devices, or assemblies of multiple devices, comprising such elements.
2. This subclass does not cover:
 - organic electronic memory devices, which are covered by subclass [H10B](#);
 - organic thermoelectric, ~~piezoelectric, electrostrictive or devices,~~ *organic thermomagnetic devices, organic piezoelectric devices, organic electrostrictive devices, organic magnetostrictive devices, organic galvanomagnetic devices, organic Hall-effect devices, organic superconducting devices or organic solid-state devices having no potential barriers, and specially adapted for rectifying, amplifying, oscillating or switching,* which are covered by subclass [H10N](#);
 - organic resistors ~~without a potential-jump barrier or surface barrier~~ *having no potential barriers* and not specially adapted for integrated devices, which are covered by subclass [H01C](#);
 - organic capacitors ~~without a potential-jump barrier or surface barrier~~ *having no potential barriers* and not specially adapted for integrated devices, which are covered by subclass [H01G](#).

3. In this subclass, the periodic system used is the I to VIII group system indicated in the Periodic Table under Note (3) of section C.

~~3.~~ 4. In this subclass, it is desirable to add the indexing codes of groups [{H10K 2101/00 - H10K 2102/00}](#).

M H10K 10/00 Organic devices specially adapted for rectifying, amplifying, oscillating or switching; Organic capacitors or resistors having **a potential-jump barrier or a surface barrier** *potential barriers* (integrated devices or assemblies of multiple devices [H10K 19/00](#))

WARNING

Group [H10K 10/00](#) is impacted by reclassification into groups [H10K 10/10](#), [H10K 10/40](#) and [H10K 10/43](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M H10K 10/10 • Organic capacitors or resistors **comprising a potential-jump barrier or surface barrier** *having potential barriers*

WARNING

Group [H10K 10/10](#) is incomplete pending reclassification of documents from group [H10K 10/00](#).

Groups [H10K 10/00](#) and [H10K 10/10](#) should be considered in order to perform a complete search.

Project: MP12194 (H10K)

U H10K 59/00 Integrated devices, or assemblies of multiple devices, comprising at least one organic light-emitting element covered by group [H10K 50/00](#)

WARNING

Group [H10K 59/00](#) is impacted by reclassification into groups [H10K 59/70](#) and [H10K 59/80 - H10K 59/88](#).

Groups [H10K 59/00](#), [H10K 59/70](#) and [H10K 59/80 - H10K 59/88](#) should be considered in order to perform a complete search.

U H10K 59/90 • Assemblies of multiple devices comprising at least one organic light-emitting element

WARNING

Groups [H10K 59/90](#) and [H10K 59/95](#) are incomplete pending reclassification of documents from groups [H01L 25/065](#), [H01L 25/0652](#), [H01L 25/0655](#), [H01L 25/0657](#), [H01L 25/16](#), [H01L 25/162](#), [H01L 25/165](#), [H01L 25/167](#) and [H01L 25/18](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Group [H10K 59/90](#) is also impacted by reclassification into group [H10K 59/95](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M H10K 59/95 • **comprising only organic** *wherein all* light-emitting elements *are organic, e.g. assembled OLED displays*

WARNING

Group [H10K 59/95](#) is incomplete pending reclassification of documents from groups [H01L 25/04](#), [H01L 25/16](#), [H01L 25/162](#), [H01L 25/165](#), [H01L 25/167](#), [H01L 25/18](#) and [H10K 59/90](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP12192 (H10N)

M H10N ELECTRIC SOLID-STATE DEVICES NOT OTHERWISE PROVIDED FOR

NOTE

In this subclass, the periodic system used is the I to VIII group system indicated in the Periodic Table under Note (3) of section C.

M H10N 70/00 Solid-state devices ~~without a potential-jump barrier or surface barrier~~ **having no potential barriers**, and specially adapted for rectifying, amplifying, oscillating or switching (integrated devices or assemblies of multiple devices [H10N 79/00](#))

Project: Unknown (Y10S)

U Y10S 148/00 Metal treatment

M Y10S 148/08 · ~~Infra-red~~ **Infrared**