

# CPC COOPERATIVE PATENT CLASSIFICATION

## G PHYSICS (NOTES omitted)

### NUCLEONICS

## G21 NUCLEAR PHYSICS; NUCLEAR ENGINEERING

## G21D NUCLEAR POWER PLANT

### 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.

- |             |  |             |   |
|-------------|--|-------------|---|
| <b>1/00</b> | <b>Details of nuclear power plant</b> ( <a href="#">control G21D 3/00</a> )  | 5/08        | . . with engine working medium heated in a heat exchanger by the reactor coolant  |
| 1/003       | . { <a href="#">Nuclear facilities decommissioning arrangements (decontamination arrangements, treating radioactively contaminated material G21F 9/00)</a> } | 5/10        | . . . Liquid working medium partially heated by reactor and vaporised by heat source external to the core, e.g. with oil heating  |
| 1/006       | . { <a href="#">primary side of steam generators (secondary side of steam generators F22B 1/00, F22B 35/00 or F22B 37/00)</a> }                              | 5/12        | . . . Liquid working medium vaporised by reactor coolant  |
| 1/02        | . Arrangements of auxiliary equipment  | 5/14        | . . . . and also superheated by reactor coolant   |
| 1/04        | . Pumping arrangements ( <a href="#">within the reactor pressure vessel G21C 15/24</a> ; <a href="#">electrodynamic pumps H02K 44/02</a> )                   | 5/16        | . . . . superheated by separate heat source   |
| <b>3/00</b> | <b>Control of nuclear power plant</b> ( <a href="#">control of nuclear reaction in general G21C 7/00</a> )   | <b>7/00</b> | <b>Arrangements for direct production of electric energy from fusion or fission reactions</b> ( <a href="#">obtaining electric energy from radioactive sources G21H 1/00</a> )  |
| 3/001       | . { <a href="#">Computer implemented control</a> }   | 7/02        | . using magneto-hydrodynamic generators {( <a href="#">MHD-generators with thermodynamic cycles F02C 7/00</a> ; <a href="#">magneto-hydrodynamic generators H02K 44/08</a> )}   |
| 3/002       | . . { <a href="#">Core design; core simulations; core optimisation</a> }   | 7/04        | . using thermoelectric elements { <a href="#">or thermoionic converters</a> } ( <a href="#">structural combination of fuel element with thermoelectric element {or with thermoionic converters} G21C 3/40 {, G21H 1/10}</a> ; <a href="#">thermoelectric elements per se H10N 10/00, H10N 15/00</a> ) |
| 3/004       | . . { <a href="#">Fuel shuffle simulation; fuel shuffle optimisation</a> }   |             |   |
| 3/005       | . . { <a href="#">Thermo-hydraulic simulations</a> }   | <b>9/00</b> | <b>Arrangements to provide heat for purposes other than conversion into power, e.g. for heating buildings</b>   |
| 3/007       | . { <a href="#">Expert systems</a> }   |             |   |
| 3/008       | . { <a href="#">Man-machine interface, e.g. control room layout</a> }  |             |   |
| 3/02        | . Manual control   |             |   |
| 3/04        | . Safety arrangements ( <a href="#">emergency protection of reactor G21C 9/00</a> )  |             |   |
| 3/06        | . . responsive to faults within the plant ( <a href="#">in the reactor G21C 9/00</a> )   |             |   |
| 3/08        | . Regulation of any parameters in the plant  |             |   |
| 3/10        | . . by a combination of a variable derived from neutron flux with other controlling variables, e.g. derived from temperature, cooling flow, pressure         |             |   |
| 3/12        | . . by adjustment of the reactor in response only to changes in engine demand  |             |   |
| 3/14        | . . . Varying flow of coolant  |             |   |
| 3/16        | . . . Varying reactivity   |             |   |
| 3/18        | . . by adjustment of plant external to the reactor only in response to change in reactivity  |             |   |
| <b>5/00</b> | <b>Arrangements of reactor and engine in which reactor-produced heat is converted into mechanical energy</b>   |             |   |
| 5/02        | . Reactor and engine structurally combined, e.g. portable  |             |   |
| 5/04        | . Reactor and engine not structurally combined   |             |   |
| 5/06        | . . with engine working medium circulating through reactor core  |             |   |