

# CPC COOPERATIVE PATENT CLASSIFICATION

## G PHYSICS (NOTES omitted)

### NUCLEONICS

#### G21 NUCLEAR PHYSICS; NUCLEAR ENGINEERING

#### G21D NUCLEAR POWER PLANT (electric or magnetic analogue computers, e.g. simulators, for nuclear physics [G06G 7/54](#))

|             |  |                |   |
|-------------|--|----------------|---|
| <b>1/00</b> | <b>Details of nuclear power plant</b> (control <a href="#">G21D 3/00</a> )   | 5/12           | . . . Liquid working medium vaporised by reactor coolant  |
| 1/003       | . { <a href="#">Nuclear facilities decommissioning arrangements</a> ( <a href="#">decontamination arrangements</a> , treating radioactively contaminated material <a href="#">G21F 9/00</a> )} | 5/14           | . . . . and also superheated by reactor coolant   |
| 1/006       | . {primary side of steam generators (secondary side of steam generators <a href="#">F22B 1/00</a> , <a href="#">F22B 35/00</a> or <a href="#">F22B 37/00</a> )}                                | 5/16           | . . . . superheated by separate heat source   |
| 1/02        | . Arrangements of auxiliary equipment  | <b>7/00</b>    | <b>Arrangements for direct production of electric energy from fusion or fission reactions</b> (obtaining electric energy from radioactive sources <a href="#">G21H 1/00</a> )   |
| 1/04        | . Pumping arrangements (within the reactor pressure vessel <a href="#">G21C 15/24</a> ; electrodynamic pumps <a href="#">H02K 44/02</a> )  | 7/02           | . using magneto-hydrodynamic generators {(MHD-generators with thermodynamic cycles <a href="#">F02C 7/00</a> ; magneto-hydrodynamic generators <a href="#">H02K 44/08</a> )}  |
| <b>3/00</b> | <b>Control of nuclear power plant</b> (control of nuclear reaction in general <a href="#">G21C 7/00</a> )  | 7/04           | . using thermoelectric elements {or <a href="#">thermoionic converters</a> } (structural combination of fuel element with thermoelectric element {or with thermoionic converters} <a href="#">G21C 3/40</a> {, <a href="#">G21H 1/10</a> }; thermoelectric elements <i>per se</i> <a href="#">H01L 35/00</a> , <a href="#">H01L 37/00</a> ) |
| 3/001       | . {Computer implemented control}   | <b>9/00</b>    | <b>Arrangements to provide heat for purposes other than conversion into power, e.g. for heating buildings</b>   |
| 2003/002    | . . {Core design; Core simulations}  | <b>2010/00</b> | <b>Protection of plant or environment from mutual hazards : means for monitoring the effects of plant or environment upon each other</b>  |
| 2003/004    | . . {Fuel shuffle simulations}   |                |   |
| 2003/005    | . . {Thermo-hydraulic simulations}   |                |   |
| 2003/007    | . {Expert systems}   |                |   |
| 3/008       | . {Man-machine interface, e.g. control room layout}  |                |   |
| 3/02        | . Manual control   |                |   |
| 3/04        | . Safety arrangements ( <a href="#">emergency protection of reactor</a> <a href="#">G21C 9/00</a> )  |                |   |
| 3/06        | . . responsive to faults within the plant ( <a href="#">in the reactor</a> <a href="#">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  |                |   |
| 5/08        | . . with engine working medium heated in a heat exchanger by the reactor coolant   |                |   |
| 5/10        | . . . Liquid working medium partially heated by reactor and vaporised by heat source external to the core, e.g. with oil heating   |                |   |