

# CPC COOPERATIVE PATENT CLASSIFICATION

## G PHYSICS (NOTES omitted)

### NUCLEONICS

#### G21 NUCLEAR PHYSICS; NUCLEAR ENGINEERING

#### G21D NUCLEAR POWER PLANT

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| <p><b>1/00</b> Details of nuclear power plant (control <a href="#">G21D 3/00</a>)</p> <p>1/003 . {Nuclear facilities decommissioning arrangements (decontamination arrangements, treating radioactively contaminated material <a href="#">G21F 9/00</a>)}</p> <p>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>)}</p> <p>1/02 . Arrangements of auxiliary equipment</p> <p>1/04 . Pumping arrangements (within the reactor pressure vessel <a href="#">G21C 15/24</a>; electrodynamic pumps <a href="#">H02K 44/02</a>)</p> <p><b>3/00</b> Control of nuclear power plant (control of nuclear reaction in general <a href="#">G21C 7/00</a>)</p> <p>3/001 . {Computer implemented control}</p> <p>3/002 . . {Core design; core simulations; core optimisation}</p> <p>3/004 . . {Fuel shuffle simulation; fuel shuffle optimisation}</p> <p>3/005 . . {Thermo-hydraulic simulations}</p> <p>3/007 . {Expert systems}</p> <p>3/008 . {Man-machine interface, e.g. control room layout}</p> <p>3/02 . Manual control</p> <p>3/04 . Safety arrangements (emergency protection of reactor <a href="#">G21C 9/00</a>)</p> <p>3/06 . . responsive to faults within the plant (in the reactor <a href="#">G21C 9/00</a>)</p> <p>3/08 . Regulation of any parameters in the plant</p> <p>3/10 . . by a combination of a variable derived from neutron flux with other controlling variables, e.g. derived from temperature, cooling flow, pressure</p> <p>3/12 . . by adjustment of the reactor in response only to changes in engine demand</p> <p>3/14 . . . Varying flow of coolant</p> <p>3/16 . . . Varying reactivity</p> <p>3/18 . . by adjustment of plant external to the reactor only in response to change in reactivity</p> <p><b>5/00</b> Arrangements of reactor and engine in which reactor-produced heat is converted into mechanical energy</p> <p>5/02 . Reactor and engine structurally combined, e.g. portable</p> <p>5/04 . Reactor and engine not structurally combined</p> <p>5/06 . . with engine working medium circulating through reactor core</p> <p>5/08 . . with engine working medium heated in a heat exchanger by the reactor coolant</p> | <p>5/10 . . . Liquid working medium partially heated by reactor and vaporised by heat source external to the core, e.g. with oil heating</p> <p>5/12 . . . Liquid working medium vaporised by reactor coolant</p> <p>5/14 . . . . and also superheated by reactor coolant</p> <p>5/16 . . . . superheated by separate heat source</p> <p><b>7/00</b> Arrangements for direct production of electric energy from fusion or fission reactions (obtaining electric energy from radioactive sources <a href="#">G21H 1/00</a>)</p> <p>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>)}</p> <p>7/04 . using thermoelectric elements {or thermoionic converters} (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 per se <a href="#">H01L 35/00</a>, <a href="#">H01L 37/00</a>)</p> <p><b>9/00</b> Arrangements to provide heat for purposes other than conversion into power, e.g. for heating buildings</p> |
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