

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.

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|-------------|--|-------------|---|
| 1/00 | Details of nuclear power plant (control G21D 3/00) | 5/08 | . . with engine working medium heated in a heat exchanger by the reactor coolant |
| 1/003 | . { Nuclear facilities decommissioning arrangements (decontamination arrangements, treating radioactively contaminated material G21F 9/00) } | 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 | . { primary side of steam generators (secondary side of steam generators F22B 1/00, F22B 35/00 or F22B 37/00) } | 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 (within the reactor pressure vessel G21C 15/24 ; electrodynamic pumps H02K 44/02) | 5/16 | superheated by separate heat source |
| 3/00 | Control of nuclear power plant (control of nuclear reaction in general G21C 7/00) | 7/00 | Arrangements for direct production of electric energy from fusion or fission reactions (obtaining electric energy from radioactive sources G21H 1/00) |
| 3/001 | . { Computer implemented control } | 7/02 | . using magneto-hydrodynamic generators {(MHD-generators with thermodynamic cycles F02C 7/00 ; magneto-hydrodynamic generators H02K 44/08)} |
| 3/002 | . . { Core design; core simulations; core optimisation } | 7/04 | . using thermoelectric elements { or thermoionic converters } (structural combination of fuel element with thermoelectric element {or with thermoionic converters} G21C 3/40 {, G21H 1/10} ; thermoelectric elements per se H10N 10/00, H10N 15/00) |
| 3/004 | . . { Fuel shuffle simulation; fuel shuffle optimisation } | | |
| 3/005 | . . { Thermo-hydraulic simulations } | 9/00 | Arrangements to provide heat for purposes other than conversion into power, e.g. for heating buildings |
| 3/007 | . { Expert systems } | | |
| 3/008 | . { Man-machine interface, e.g. control room layout } | | |
| 3/02 | . Manual control | | |
| 3/04 | . Safety arrangements (emergency protection of reactor G21C 9/00) | | |
| 3/06 | . . responsive to faults within the plant (in the reactor G21C 9/00) | | |
| 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 | | |
| 5/00 | Arrangements of reactor and engine in which reactor-produced heat is converted into mechanical energy | | |
| 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 | | |