CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS

(NOTES omitted)

NUCLEONICS

G21 NUCLEAR PHYSICS; NUCLEAR ENGINEERING

G21D NUCLEAR POWER PLANT

WARNING

portable

reactor core

. Reactor and engine not structurally combined

. . with engine working medium circulating through

5/04

5/06

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.

1/00	Details of nuclear power plant (control G21D 3/00)	5/08	with engine working medium heated in a heat
1/003	• {Nuclear facilities decommissioning arrangements		exchanger by the reactor coolant
	(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
1/006	• {primary side of steam generators (secondary side		the core, e.g. with oil heating
	of steam generators <u>F22B 1/00</u> , <u>F22B 35/00</u> or <u>F22B 37/00</u>)}	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 	5/16	superheated by separate heat source
	vessel <u>G21C 15/24</u> ; electrodynamic pumps <u>H02K 44/02</u>)	7/00	Arrangements for direct production of electric energy from fusion or fission reactions (obtaining
3/00	Control of nuclear power plant (control of nuclear		electric energy from radioactive sources <u>G21H 1/00</u>)
2,00	reaction in general G21C 7/00)	7/02	• using magneto-hydrodynamic generators {(MHD-
3/001	• {Computer implemented control}	,, 02	generators with thermodynamic cycles <u>F02C 7/00</u> ;
3/002	• • {Core design; core simulations; core		magneto-hydrodynamic generators <u>H02K 44/08</u>)}
	optimisation}	7/04	• using thermoelectric elements {or thermoionic
3/004	• • {Fuel shuffle simulation; fuel shuffle		converters}(structural combination of fuel
	optimisation}		element with thermoelectric element {or with
3/005	{Thermo-hydraulic simulations}		thermoionic converters} $\underline{G21C 3/40}$ {, $\underline{G21H 1/10}$ };
3/007	• {Expert systems}		thermoelectric elements per se H10N 10/00,
3/008	• {Man-machine interface, e.g. control room layout}		<u>H10N 15/00</u>)
3/02	. Manual control	9/00	Arrangements to provide heat for purposes other
3/04	 Safety arrangements (emergency protection of reactor <u>G21C 9/00</u>) 		than conversion into power, e.g. for heating buildings
3/06	• responsive to faults within the plant (in the reactor <u>G21C 9/00</u>)		
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.		

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