

## SECTION G — PHYSICS

### G21 NUCLEAR PHYSICS; NUCLEAR ENGINEERING

#### G21D NUCLEAR POWER PLANT

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| <p><b>1/00 Details of nuclear power plant</b> (control G21D 3/00)</p> <p>1/02 • Arrangements of auxiliary equipment</p> <p>1/04 • Pumping arrangements (by means within the reactor pressure vessel G21C 15/24)</p> <p><b>3/00 Control of nuclear power plant</b> (control of nuclear reaction G21C 7/00)</p> <p>3/02 • Manual control</p> <p>3/04 • Safety arrangements (emergency protection of reactor G21C 9/00)</p> <p>3/06 • • responsive to faults within the plant (in the reactor G21C 9/02)</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 Arrangements of reactor and engine in which reactor-produced heat is converted into mechanical energy</b></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 Arrangements for direct production of electric energy from fusion or fission reactions</b> (obtaining electric energy from radioactive sources G21H 1/00)</p> <p>7/02 • using magneto-hydrodynamic generators</p> <p>7/04 • using thermoelectric elements (structural combination of fuel element with thermoelectric element G21C 3/40)</p> <p><b>9/00 Arrangements to provide heat for purposes other than conversion into power, e.g. for heating buildings</b></p> |
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