AdvancedBWB

Technical data

Type Boiling water reactor

Rock inspection to

commercial turnover

Net electrical output Gross thermal power Reactor core

Active diameter Number of fuel elements Average power rating Average core power density

Fuel assemblies Fuel material Average reload enrichment at equilibrium Number of rods per assembly

Fuel rod diameter Cladding material Cladding thickness Fuel discharge burnup

(equilibrium)—reference case Control system

Number of control rods Form of control rods Neutron absorber Control rod drive motion

Other control system Primary coolant system

Operating pressure Feedwater inlet temperature Steam outlet temperature Number of recirculation pumps Recirculation mass flow (100% rated) 52 200 t/hr

Reactor pressure vessel

Internal height Internal diameter Wall thickness minimum

Type Design pressure

Containment

Number

Height Inside diameter maximum Turbine

Maximum rating (@ 722 mm Hg) Turbine inlet pressure Turbine inlet temperature

48 months

1356 MWe 3926 MWt

5.16 m 196 W/cm 50.6 kW/litre

UO2, UO2-Gd2O3

3.2 per cent 8×8 12.3 mm Zircaloy 2

32 000 MWd/t Cruciform

Electric—fine motion Hydraulic—scram Burnable poison (Gd₂O₃)

Internal recirculation pump system 73.1 kg/cm²a 215.5°C 287.4°C

7.1 m Low alloy steel/stainless steel cladding

Reinforced concrete containment vessel (steel lined) 3.16 kg/cm² 36.1 m

1381 MWe 1500 rpm 69.2 kg/cm² 283.7°C

29 m

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