

TABLE 4.2-1

REACTOR PRESSURE VESSEL MATERIALS

<u>Component</u>	<u>Form</u>	<u>Material</u>	<u>*Spec. (ASTM/ASME)</u>
Heads, Shell	rolled plate	low-alloy steel	SA-302 B cc 1339
Closure Flange	forged rings	low-alloy steel	A-508 CL 2 cc 1332-2
Cladding	weld overlay	austenitic stainless steel -inconel	SA-371 type ER309-type ER308 (and carbon content <0.08 w/o)-Inconel 82 and 182
Nozzles.....	forged shapes	low-alloy steel	A-508-CL2 cc 1332-2
Control Rod Drive	forged tubes	Inconel	SB-166 cc 1336
Stub Tubes			
Control Rod Drive	pipe	austenitic stainless steel	--
Housings			
In-Core Housings	pipe	austenitic stainless steel	--
Vessel Supports-	rolled plate	low-alloy steel	SA-302 Gr.B
External			
Shroud Support-	forging	Inconel	SB-168 Annealed cc 1336
Internal			
Nozzle Safe Thermal	pipe	austenitic stainless steel	SA-312 TP.304
Sleeves			
Nozzle Safe Ends	forging	austenitic stainless steel and some low-carbon steel	SA-336-F8/F8M SA-105-2 cc 1332-1
Nozzle for Instrument	forging	Inconel	SB-166 cc 1336 para. 1
Penetrations			

*cc - Code Case that modifies/augments the material specification.

Table 4.2-2
REACTOR VESSEL DATA

Reactor Vessel	
Inside Diameter, in. (min.)	251 3/8 in.
Inside Length	73 ft 11-1/2 in.
Design Pressure and Temperature, psig @ °F	1250 @ 575
Vessel Nozzles (number and size)	
Recirculation Outlet	2-36 in. to 28 in.
Steam Outlet	4-26 in.
Recirculation Inlet	10-12 in.
Feedwater Inlet	6-12 in.
Core Spray Inlet	2-10 in.
Instrument (one of these is Head Spray)**	2- 6 in.
Control Rod Drive	185- 6 in.
Jet Pump Instrumentation	2- 4 in.
Vent	1- 4 in.
Instrumentation	6- 2 in.
Control Rod Drive Hydraulic System Return *	1- 4 in.
Core Differential Pressure and Liquid Control	1- 2 in.
Drain	1- 2 in.
In-Core Flux Instrumentation	55- 2 in.
Head Seal Leak Detection	2- 1 in.
Approximate Weights (in pounds)	
Bottom Head	207,500
Vessel Shell	842,000
Vessel Flange	106,000
Support Skirt	28,000
Other Vessel Components	65,500
Total Vessel without Top Head	1,249,000
Top Head ¹	252,000
Total Vessel	1,501,000

Table 4.2-3
REACTOR VESSEL ATTACHMENTS

	Qty.
Internal Attachments	
Guide Rod Bracket	2
Steam Dryer Support Bracket	4
Dryer Holddown Bracket	4
Feedwater Sparger Bracket	12
Jet Pump Riser Support Pads	20
Jet Pump Diffuser Bracket	20
Core Spray Bracket	4
External Attachments	
Stabilizer Bracket	8
Top Head Lifting Lug	4
Insulation Supports	2
Insulation Support Brackets	12 ea; 2 places
Thermocouple Pad	36

¹This weight includes 60,095 lbs. which is the weight of the reactor pressure vessel studs, nuts and washers.

* CRD Return Line nozzle is capped.

** Unit 1, 2, and 3 head spray nozzle line is capped.