



**INDIANA AND MICHIGAN POWER
D. C. COOK NUCLEAR PLANT
UPDATED FINAL SAFETY ANALYSIS REPORT**

Revision: 21.2

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MATERIALS OF CONSTRUCTION OF THE REACTOR COOLANT SYSTEM COMPONENTS

Component	Section	Material	
		Unit 1	Unit 2
Reactor Vessel	Pressure Plate	ASTM A-533 Grade B Class 1	ASTM A-533 Grade B Class 1
	Pressure Forgings (excl. RVCH)	ASTM A508, Class 2	ASTM A508, Class 2
	RVCH	SA-508 Grade 3, Class 1	SA-508 Grade 3, Class 1
	Primary Nozzle Safe Ends	Type 316 forging overlaid on I.D. and O.D. with Type 308L and Inconel weld metal after final post-weld heat treatment	Type 316 forging overlaid on I.D. and O.D. with Type 316 weld metal prior to final post-weld heat treatment
	Cladding, Stainless	Combination of Type 308, Type 309 and Type 312	Type 308L, Type, 309L
	Stainless Weld Rod	Type 308, Type 309	Type 308L, Type 309, Type 309L, Type 316
	O-Ring Head Seals	Inconel - 718	Inconel - 718
	CRDM's	Inconel and Stainless Type 304	Inconel and Stainless Type 304
	Studs	SA - 540 Grade B - 24	SA - 540 Grade B - 24
	Instrumentation Nozzles	Inconel and Stainless End Type 304	Inconel and Stainless End Type 304
Steam Generator	Insulation	Stainless Steel	Stainless Steel
	Pressure Plate	ASTM A 533 Grade A Class 1	ASTM A 533 Grade A Class 1 for upper assembly (steam dome), ASTM
	Pressure Forgings Tubesheets	SA-508 Class 3a	ASTM A - 508 Class 2 A
	Transition Cone & Stub Barrels	SA-508 3a	ASTM A - 508 Class 3
	Primary Nozzle Safe Ends	SA-336 Class F316N/F316LN	Stainless steel weld metal - carbon steel to stainless steel juncture on O.D. overlaid with Type 309 and 308L weld metal
	Cladding, Stainless	ER 308L, ER309L	Type ER 309L
	Stainless Weld Rod	Type 308L, Type 309	Type 308L, Type 309L
	Cladding for Tube Sheets	UNS NO6082	Inconel
	Tubes	SB-163 Alloy 690 TT	Inconel - 690 (TT)



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	Channel Head Castings (Unit 1 Forging)	SA-508 Class 3A	ASTM A – 216 Grade WCC
Pressurizer	Shell	SA - 533 Grade A (Class 1)	SA - 533 Grade A (Class 2)
	Heads	SA – 216 Grade WCC	SA - 533 Grade A (Class 2)
	Support Skirt	SA - 516 Grade 70	SA - 516 Grade 70
	Nozzle Weld Ends	SA – 182 F316	SA – 182 F316
	Inst. Tube Coupling	SA – 182 F316	SA – 182 F316
	Cladding, Stainless	Type 308, Type 309 (modified)	Type 308 Type 309 (modified)
	Nozzle Forgings	Integrally cast with head	SA - 508 Class 2 Mn - Mo
	Heater Support Baffle Plate	SA - 240 Type 304	SA - 240 Type 304
	Inst. Tubing	SA - 213 Type 316	SA - 213 Type 316
	Heater Well Tubing	SA – 213 Type 316 Seamless	SA - 213 Type 316 Seamless
	Heater Well Adaptor	SA - 182 F316	
Pressurizer Relief Tank	Shell	ASTM A- 285 Grade C	ASTM A- 285 Grade C
	Heads	ASTM A-285 Grade C	ASTM A -285 Grade C
	Internal Coating	Amercoat 55	Amercoat 55
Pipe	Pipes	ASTM A-351 Grade CF8M ASTM A - 376 Grade TP 304 or TP 316	ASTM A-351 Grade CF8M ASTM A- 376 Grade TP 304 or TP 316
	Fittings	ASTM A-351 Grade CF8M	ASTM A-351 Grade CF8M
	Nozzles	ASTM A- 182 Grade F316	ASTM A- 182 Grade F316
Pump	Shaft	ASTM A-182 Grade F347	ASTM A- 182 Grade F347
	Impeller	ASTM A-351 Grade CF8M	ASTM A- 351 Grade CF8M
	Casing	ASTM A-351 Grade CF8M	ASTM A- 351 Grade CF8M
Valves	Pressure Containing Parts	ASTM A-351 Grade CF8M and ASTM A-182 Grade F316	ASTM A- 351 Grade CF8M and ASTM A- 182 Grade F316