

Table of Structural Strengths at Maximum Velocity 800 Gal Seismic Motion
(Prepared based on Hamaoka Unit 3 Backcheck Report (February 2007))

Facility	Equipment	Part	Force type	Generated Value [MPa] (x)	Reference Value [MPa] (y)	Assessment Method	Urgency (x/y)
Nuclear reactor	Outer cylinder	Outer cylinder	Combined stress	291	427	B	0.68
	Anchor bolt	Anchor bolt	Retention power	1001 [kN/bolt]	1518 [kN/bolt]	B	0.66
Instrumentation and control systems	Power range monitor (LPRM detector assembly)	Cover tube	Membrane + bending stress	240	254	B	0.94
Reactor cooling systems	Residual heat removal heat exchanger	Foundation bolt	Tensile stress	161	202	B	0.8
Reactor containment vessel	Containment vessel stabilizer (including the shear lug)	Inside female shear lug	Combined stress	267	275	B	0.97
	Containment vessel penetrations	X-139F	Moment	0.83 [kN.m]	1.23 [kN.m]	B	0.67
Fuel facilities	Refueling machine	Body frame	Combined stress	205	276	B	0.74
		Runway girder	Combined stress	245	325	B	0.75
Piping	Main steam pipe	Piping	Primary stress	337	375	B	0.9
		Support structure	Combined stress	172	245	B	0.7
	Reactor coolant cleanup system	Piping	Primary stress	269	366	B	0.73
	Control rod drive hydraulic piping	Support structure (welded part)	Combined stress	114	141	B	0.81
	Borated water injection system	Piping	Primary stress	285	335	B	0.85
	Residual heat removal system	Piping	Primary stress	280	326	B	0.86
	Reactor core isolation cooling system piping	Support structure	Combined stress	205	245	B	0.84
	High pressure core spray system piping	Support structure	Combined stress	200	245	B	0.82
	Component cooling water piping system	Piping	Primary stress	352	366	B	0.96
		Support structure	Combined stress	202	245	B	0.82
	Reactor auxiliary cooling seawater system piping	Support structure	Combined stress	209	245	B	0.85
	Combustible gas treatment system	Piping	Primary stress	244	363	B	0.67
	Emergency diesel generator system piping	Support structure	Combined stress	161	245	B	0.66

Table of Structural Strengths at Maximum Velocity 800 Gal Seismic Motion
(Prepared based on Hamaoka Unit 4 Backcheck Report (February 2007))

Facility	Equipment	Part	Force type	Generated Value [MPa] (x)	Reference Value [MPa] (y)	Assessment Method	Urgency (x/y)
Instrumentation and control systems	Power range monitor (LPRM detector assembly)	Cover tube	Membrane + bending stress	236	254	B	0.93
Reactor containment vessel	Box support	Flange plate and base plate	Combined stress	257	343	B	0.75
Fuel facilities	Refueling machine	Body frame	Combined stress	206	276	B	0.75
	Reactor building overhead crane	Runway girder	Combined stress	171	235	B	0.73
Piping	Primary loop recirculation system piping	Piping	Primary stress	280	354	B	0.79
		Support structure	Rod restraint load capacity	61	67	B	0.91
	Reactor coolant cleanup system piping	Support structure	Combined stress	175	245	B	0.71
	Radioactive drain transfer system piping	Support structure	Combined stress	226	245	B	0.92
	Residual heat removal system piping	Support structure	Combined stress	191	245	B	0.78
	High pressure core spray system piping	Support structure	Combined stress	224	245	B	0.91
	Low pressure core spray system piping	Support structure	Combined stress	217	245	B	0.89
	Component cooling water piping system	Support structure	Combined stress	191	245	B	0.78
	Reactor auxiliary cooling seawater system piping	Support structure	Combined stress	179	245	B	0.73
	High pressure core spray equipment cooling water system piping	Support structure	Combined stress	200	245	B	0.82
	High pressure core spray equipment cooling seawater system piping	Support structure	Combined stress	216	245	B	0.88
	Combustible gas treatment system piping	Support structure	Combined stress	225	245	B	0.92
	Inert gas treatment system piping	Support structure	Combined stress	217	245	B	0.89
	Emergency diesel generator system piping	Piping	Primary stress	116	158	B	0.73
		Support structure	Combined stress	191	245	B	0.78