

Table C1: Characteristic values for steel tension resistance and steel shear resistance – threaded rods.

Size			M8	M10	M12	M16	M20	M24	M27	M30
Steel failure – characteristic tension resistance										
Steel class 4.8	$N_{Rk,s}$	[kN]	15	23	34	63	98	141	183	224
Steel class 5.8	$N_{Rk,s}$	[kN]	18	29	42	78	122	176	229	280
Steel class 8.8	$N_{Rk,s}$	[kN]	29	46	67	126	196	282	367	449
Steel class 10.9	$N_{Rk,s}$	[kN]	37	58	84	157	245	353	459	561
Stainless steel A2, A4, HCR class 50	$N_{Rk,s}$	[kN]	18	29	42	78	122	176	229	280
Stainless steel A2, A4, HCR class 70	$N_{Rk,s}$	[kN]	26	41	59	110	171	247	321	392
Stainless steel A4, HCR class 80	$N_{Rk,s}$	[kN]	29	46	67	126	196	282	367	449
Steel failure – characteristic tension resistance – partial factor										
Steel class 4.8	$\gamma_{Ms,N}^{1)}$	[-]	1,50							
Steel class 5.8	$\gamma_{Ms,N}^{1)}$	[-]	1,50							
Steel class 8.8	$\gamma_{Ms,N}^{1)}$	[-]	1,50							
Steel class 10.9	$\gamma_{Ms,N}^{1)}$	[-]	1,40							
Stainless steel A2, A4, HCR class 50	$\gamma_{Ms,N}^{1)}$	[-]	2,86							
Stainless steel A2, A4, HCR class 70	$\gamma_{Ms,N}^{1)}$	[-]	1,87							
Stainless steel A4, HCR class 80	$\gamma_{Ms,N}^{1)}$	[-]	1,60							
Steel failure – characteristic shear resistance without lever arm										
Steel class 4.8	$V^0_{Rk,s}$	[kN]	7	12	17	31	49	71	92	112
Steel class 5.8	$V^0_{Rk,s}$	[kN]	9	14	21	39	61	88	115	140
Steel class 8.8	$V^0_{Rk,s}$	[kN]	15	23	34	63	98	141	184	224
Steel class 10.9	$V^0_{Rk,s}$	[kN]	18	29	42	78	122	176	230	280
Stainless steel A2, A4, HCR class 50	$V^0_{Rk,s}$	[kN]	9	14	21	39	61	88	115	140
Stainless steel A2, A4, HCR class 70	$V^0_{Rk,s}$	[kN]	13	20	29	55	86	124	160	196
Stainless steel A4, HCR class 80	$V^0_{Rk,s}$	[kN]	15	23	34	63	98	141	184	224
Steel failure – characteristic shear resistance with lever arm										
Steel class 4.8	$M^0_{Rk,s}$	[Nm]	15	30	52	133	260	449	666	900
Steel class 5.8	$M^0_{Rk,s}$	[Nm]	19	37	65	166	324	561	832	1125
Steel class 8.8	$M^0_{Rk,s}$	[Nm]	30	60	105	266	519	898	1331	1799
Steel class 10.9	$M^0_{Rk,s}$	[Nm]	37	75	131	333	649	1123	1664	2249
Stainless steel A2, A4, HCR class 50	$M^0_{Rk,s}$	[Nm]	19	37	66	166	324	561	832	1124
Stainless steel A2, A4, HCR class 70	$M^0_{Rk,s}$	[Nm]	26	52	92	233	454	786	1165	1574
Stainless steel A4, HCR class 80	$M^0_{Rk,s}$	[Nm]	30	60	105	266	519	898	1331	1799
Steel failure – characteristic shear resistance – partial factor										
Steel class 4.8	$\gamma_{Ms,V}^{1)}$	[-]	1,25							
Steel class 5.8	$\gamma_{Ms,V}^{1)}$	[-]	1,25							
Steel class 8.8	$\gamma_{Ms,V}^{1)}$	[-]	1,25							
Steel class 10.9	$\gamma_{Ms,V}^{1)}$	[-]	1,50							
Stainless steel A2, A4, HCR class 50	$\gamma_{Ms,V}^{1)}$	[-]	2,38							
Stainless steel A2, A4, HCR class 70	$\gamma_{Ms,V}^{1)}$	[-]	1,56							
Stainless steel A4, HCR class 80	$\gamma_{Ms,V}^{1)}$	[-]	1,33							

¹⁾ In the absence of other national regulation

Fracture elongation threaded rod for seismic category C1 and C2 must be $A_s \geq 19\%$.
Steel classes 10.9 are not covered for seismic application.

DGE 02 Sinto-ST-VE
DGE 12 Sinto-ST-VEW
DGE 22 Sinto-ST-VES

Performances

Characteristic values for steel: tension and shear resistance – threaded rods

Annex C1
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