

TYPE	STANDARD	GRADE	thickness : t mm.	CHEMICAL COMPOSITION (max)						Tension Test						Bend Test		Impact Test				
				C	Si	Mn	P	S	OTHER ELEMENTS		Yield Point min		Tensile Strength		Elongation min		Angle of bending (Degree)	Inside radius	Temp (°C)	Absorbion energy min (Joule)		
									thick : t mm.	Kgf / mm ² [MPa, N / mm ²]	thick : t mm.	Kgf / mm ² [MPa, N / mm ²]	thick : t mm.	Transverse	Test piece	%						
Welded Structure ²⁾	TIS 1499 (2541) & JIS G 3106 (2004)	SM400A	t ≤ 50	0.23	-	2.50 x C (min)	0.035	0.035	Ceq	Cs	t ≤ 16	25 [245]	t ≤ 100	41 - 52 [400-510]	t ≤ 5	5	23	* For impact test : the steel products over 12 mm. in thickness shall be tested Charpy Impact and test piece in rolling direction.	-	-		
			50 < t ≤ 200	0.25							16 < t ≤ 40	24 [235]			5 < t ≤ 16	1A	18		0	27 *		
		SM400B	t ≤ 50	0.20	0.35	0.60-1.40			40 < t ≤ 100	22 [215]	16 < t ≤ 40	24 [235]			16 < t ≤ 40	1A	22		0	27 *		
			50 < t ≤ 200	0.22								40 < t ≤ 100			22 [215]	t > 40	4		24	47 *		
		SM400C	t ≤ 100	0.18	1.40	t ≤ 16			33 [325]	t ≤ 16	33 [325]	t ≤ 5			5	22	-		-			
			50 < t ≤ 200	0.20						16 < t ≤ 40	32 [315]	5 < t ≤ 16			1A	17	0		27 *			
		SM490A ³⁾	t ≤ 50	0.20					40 < t ≤ 100	30 [295]	16 < t ≤ 40	32 [315]			16 < t ≤ 40	1A	21		0	27 *		
		SM490B ³⁾	t ≤ 50	0.18					50 < t ≤ 100 mm.	37 [365]	40 < t ≤ 100	30 [295]			t > 40	4	23		47 *			
		SM490C ³⁾	t ≤ 100	0.18					t ≤ 16	37 [365]	16 < t ≤ 40	36 [355]			t ≤ 5	5	19		-	-		
		SM490YA ³⁾	t ≤ 100	0.20	0.55	1.60			16 < t ≤ 40	36 [355]	40 < t ≤ 75	34 [335]			16 < t ≤ 40	36 [355]	5 < t ≤ 16		1A	15	0	27 *
		SM490YB ³⁾							40 < t ≤ 75	34 [335]	16 < t ≤ 40	36 [355]			16 < t ≤ 40	1A	19		0	27 *		
		SM520B ³⁾							75 < t ≤ 100	33 [325]	40 < t ≤ 75	34 [335]			16 < t ≤ 40	1A	19		47 *			
		SM520C ³⁾							50 < t ≤ 100 mm.	33 [325]	75 < t ≤ 100	33 [325]			t ≤ 5	5	19		0	27 *		
		SM570	t ≤ 50	0.18					t ≤ 16	47 [460]	16 < t ≤ 40	46 [450]			53 - 65 [520-640]	t ≤ 5	5		19	-	-	
50 < t ≤ 100	16 < t ≤ 40		46 [450]		5 < t ≤ 16	1A	15	0	27 *													
	40 < t ≤ 75		44 [430]		16 < t ≤ 40	46 [450]	t > 16	1A	26	-5	47 *											
					40 < t ≤ 75	44 [430]	40 < t ≤ 75	44 [430]	t > 20	4	20											