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Nazwa gatunku: 1.0577/18G2AA/S355J2

Nazwa: NON-ALLOY LOW CARBON STEEL

NORM: PN-EN 10025

APPLICATION

Steel susceptible to construction steel structures, welding, riveting and bolted structures working at the ambient temperature.

TECHNOLOGICAL INFORMATION

Fully killed steel; weldable steel

CHEMICAL COMPOSITION:

C	Mn	Si	P	S	Cr	Ni	Mo	V	Nb	Ti	Al	Cu
Max 0,20	Max 1,60	Max 0,55	Max 0,025	Max 0,025	-	-	-	-	-	-	-	Max 0,55

MECHANICAL PROPERTIES:

Effect of the cross-section on mechanical properties								
Ultimate tensile strength								
Thickness, mm	< 3	> 3-100			> 100-150		> 150-250	
R _m , MPa	510-680	470-630			450-600		450-600	
Yield stress								
Thickness, mm	≤ 16	> 16-40	> 40-63	> 63-80	> 80-100	> 100-150	> 150-200	> 200-250
R _e , MPa	≥ 355	≥ 345	≥ 335	≥ 325	≥ 315	≥ 295	≥ 285	≥ 275
Elongation								
Thickness, mm	≤ 1		> 1-1.5	> 1.5-2	> 2-2.5	> 2.5-3		
A _{80mm} , %, longitudinal samples	≥ 14		≥ 15	≥ 16	≥ 17	≥ 18		
A _{80mm} , %, transverse samples	≥ 12		≥ 13	≥ 14	≥ 15	≥ 16		

Thickness, mm	3-40	> 40-63	> 63-100	> 100-150	> 150-250
A, %, longitudinal samples	≥ 22	≥ 21	≥ 20	≥ 18	≥ 17
A, %, transverse samples	≥ 20	≥ 19	≥ 18	≥ 18	≥ 17
Impact test at -20°C					
Thickness, mm	> 10-400 27				
KV, J					

Technological treatment processes:

Technological treatment processes		Possible application	Temperature, °C	
Hot forming	Forging	+	(1150 - 800)	
	Rolling	+	(1150 - 800)	
Treatment	Heat treatment	Quenching	-	
		Tempering	-	
	Precipitation strengthening	Supersaturation	-	
		Ageing	-	
	Annealing	Normalising	+	(890 - 920)
		Soft annealing	+	< 580
Thermochemical treatment	Carburising	-	-	
	Other	-	-	

INTERNATIONAL STEEL GRADES:

ISO		CEN		Russia	
~E355-D	ISO 630:1995	S355J2G3	EN 10025:1993	~17GIS	GOST 19281 - 89
US		Japan		China	
~A 706	ASTM A 706 - 00	~SM 490 A	JIS G 3106 1995	~16Mn	GB T 8164 - 93