SA-204 Steel Plates

Overview SA 204 Gr A, SA 204 Gr B & SA 204 Gr C

This carbon / molybdenum grade is used almost exclusively in Refinery / Petrochemical applications. The lean alloy characteristics of this grade lends itself to use in pressure vessels, fittings, and custom fabricated pipe and other environments within moderate temperature ranges.

Chemical Requirements

*Elements represented in percentage

Elements Composition %	SA 204 Grade A	SA 204 Grade B	SA 204 Grade C
Carbon, max:			
up to 1 in. [25 mm] incl. in thickness	0.18	0.20	0.23
Over 1 in. to 2 in [50 mm] incl. in thickness	0.21	0.23	0.26
Over 2 in. to 4 in. [100 mm] incl. in thickness	0.23	0.25	0.28
Over 4 in. [100 mm] incl. in thickness	0.25	0.27	0.28
Manganese, max:			
Heat analysis:	0.90	0.90	0.90
Product analysis:	0.98	0.98	0.98
Phosphorus, max	0.025	0.025	0.025
Sulfur, max	0.025	0.025	0.025
Silicon:			
Heat analysis	0.15-0.40	0.15-0.40	0.15-0.40
Product analysis	0.13-0.45	0.13-0.45	0.13-0.45
Molybdenum:			
Heat analysis	0.45-0.60	0.45-0.60	0.45-0.60
Product analysis	0.41-0.64	0.41-0.64	0.41-0.64

Tensile Requirements

	SA 204 Grade A		SA 204 Grade B		SA 204 Grade C	
	ksi	[MPa]	ksi	[MPa]	ksi	[MPa]
Tensile strength	65-85	[450-585]	70-90	[485-620]	75-95	[515-655]
Yield strength, min.	37	[255]	40	[275]	43	[295]
Elongation in 8 in. [200 mm], min, %	19		17		16	
Elongation in 2 in. [50 mm], min, %	23		21		20	