SA-515 Steel Plates

Overview SA 515 Gr 60, SA 515 Gr 65 & SA 515 Gr 70

Course grain steel intended for intermediate / high temperature service in boilers and other PVQ applications. This grade is produced in both the As Rolled and Normalized condition.

Chemical Requirements

*Elements represented in percentage

Elements Composition %	SA 515 Gr 60 (Grade 415)	SA 515 Gr 65 (Grade 450)	SA 515 Gr 70 (Grade 485)
Carbon, max			
1 in. (25 mm) and under	0.24	0.28	0.31
Over 1 to 2 in. (25 to 50 mm), incl	0.27	0.31	0.33
Over 2 to 4 in. (50 to 100 mm), incl	0.29	0.33	0.35
Over 4 to 8 in. (100 to 200 mm), incl	0.31	0.33	0.35
Over 8 in. (200 mm)	0.31	0.33	0.35
Manganese, max			
Heat analysis	0.90	0.90	1.20
Product analysis	0.98	0.98	1.30
Phosphorus, max	0.035	0.035	0.035
Sulfur, max	0.04	0.04	0.04
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

Tensile Requirements

	SA 515 Gr 60 (Grade 415)	SA 515 GrÂ 65 (Grade 450)	SA 515 Gr 70 (Grade 485)
Tensile strength, ksi (MP)	60-80(415-550)	65-85(450-585)	70-90(485-620)

AMERICAN ALLOY STEEL

	SA 515 Gr 60 (Grade 415)	SA 515 GrÂ 65 (Grade 450)	SA 515 Gr 70 (Grade 485)
Yield strength, min. ksi (MP)	32(220)	35(240)	38(260)
Elongation in 8 in. (200 mm), min, %	21	19	17
Elongation in 2 in. (50 mm), min, %	25	23	21