

## Material: BS 622

### Standard Specification for Alloy Steel; Steels for Fired and Unfired Pressure Vessels: Sections and Bars

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** BS 622 Cr-Mo Alloy Steel; Steels for Fired and Unfired Pressure Vessels: Sections and Bars

**Application:** Intended for Valve, Pump, General Engineering, Automotive and Other Industries

**Grade Belongs to the Industry:** Bar

Chemical Composition			Heat Treatment	
Carbon	C %	0.090 - 0.150	Normalizing or Annealing or Hardening + Tempering	
Silicon	Si %	0.500 max.		
Manganese	Mn %	0.300 - 0.600		
Phosphorus	P %	0.025 max.		
Sulphur	S %	0.015 max.		
Chromium	Cr %	2.000 - 2.500		
Molybdenum	Mo %	0.900 - 1.100		
Nickel	Ni %	0.300 max.		
Iron	Fe %	Balance	Mechanical Properties	
-	-	-	Tensile Strength in Mpa	490 - 690
-	-	-	Yield Strength in Mpa	275 min.
-	-	-	Elongation in %	16 min.
-	-	-	Reduction of Area in %	-
-	-	-	Hardness in HB	156 - 235
-	-	-	Impact in Joule	25 J @ RT

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
SA-217 WC9	ASME	USA	Casting
10 CrMo 9-10	AFNOR NF	France	Steel
10 CrMo 9-10	DIN	Germany	Forging
10 CrMo 9-10	EN	European Union	Casting
10 CrMo 9-10	UNI	Italy	Casting
J21890	UNS	USA	Casting
A217 Grade WC9	ASTM	USA	Casting

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