

# Material: ASME SA-217 Grade WC9

## Standard Specification for Martensitic Stainless Steel and Alloy Steel Castings for Pressure Containing Parts Suitable for High Temperature Service

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** SA-217 Grade WC9 Martensitic Stainless Steel and Alloy Steel Castings for Pressure Containing Parts Suitable for High Temperature Service

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

**Grade Belongs to the Industry:** Casting

Chemical Composition			Heat Treatment	
Carbon	C %	0.050 - 0.180	Normalizing or Annealing or Hardening + Tempering	
Silicon	Si %	0.600 max.		
Manganese	Mn %	0.400 - 0.700		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.045 max.		
Chromium	Cr %	2.000 - 2.750		
Nickel	Ni %	0.500 max.		
Molybdenum	Mo %	0.900 - 1.200		
Tungsten	W %	0.100 max.		
Copper	Cu %	0.500 max.		
Iron	Fe %	Balance	<b>Mechanical Properties</b> Tensile Strength in Mpa 485 - 655 Yield Strength in Mpa 275 min. Elongation in % 20 min. Reduction of Area in % 35 min. Hardness in BHN - Impact in Joule -	
-	-	-		
-	-	-		
-	-	-		
-	-	-		
-	-	-		
-	-	-		

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
J21890	UNS	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
622	BS	British	British
A217 Grade WC9	ASTM	USA	Casting

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