

## Material: AISI 1117

### Standard Specification For Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Steel and Bar

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** AISI 1117 Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Steel and Bar

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

**Grade Belongs to the Industry:** Steel and Bar

Chemical Composition			Heat Treatment	
Carbon	C %	0.140 - 0.200	As Raw or Annealing or Normalizing or Hardening and Tempering	
Manganese	Mn %	1.000 - 1.300		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.080 - 0.130		
Aluminium	Al %	0.020 max.		
Niobium	Nb %	0.025 max.		
Silicon	Si %	0.100 max.		
Vanadium	V %	0.050 max.		
Iron	Fe %	Balance		
-	-	-	Mechanical Properties	
-	-	-	Tensile Strength in Mpa	430 - 480
-	-	-	Yield Strength in Mpa	230 min.
-	-	-	Elongation in %	15 min.
-	-	-	Reduction of Area in %	40 - 47
-	-	-	Hardness in HB	121 - 248
-	-	-	Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
G11170	UNS	USA	Bars, Wire Rods, Plates, Strip, Sheets and Tubing
1117	SAE	USA	Steel, Bar, Forging and Tubing
SUM 31	JIS	Japan	Steel
A 576 1117	ASTM	USA	Steel and Bar
SA-311 1117 Class A	ASME	USA	Steel and Bar
A 576 11L17	ASTM	USA	Steel and Bar
A 29 1117	ASTM	USA	Steel and Bar

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