

# Material: AFNOR NF 10 CD 9.10

## Standard Specification for steel forgings for boilers and pressure vessels - grades and types

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** AFNOR NF 10 CD 9.10 steel forgings for boilers and pressure vessels - grades and types

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

**Grade Belongs to the Industry:** Forging

Chemical Composition		
Carbon	C %	0.150 max.
Silicon	Si %	0.350 max.
Manganese	Mn %	0.300 - 0.600
Phosphorus	P %	0.020 max.
Sulphur	S %	0.015 max.
Chromium	Cr %	2.000 - 2.500
Molybdenum	Mo %	0.900 - 1.100
Vanadium	V %	0.040 max.
Copper	Cu %	0.250 max.
Vanadium	V %	0.050 max.
Nickel	Ni %	0.400 max.
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-

Heat Treatment
Normalizing or Annealing or Hardening + Tempering

Mechanical Properties	
Tensile Strength in Mpa	520 - 670
Yield Strength in Mpa	310 min.
Elongation in %	18 min.
Reduction of Area in %	-
Hardness in BHN	-
Impact in Joule	28 J @ RT

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
J22090	UNS	USA	Casting
1.7379	DIN	Germany	Forging
1.7383	EN	European Union	Forging
622	BS	British	Bar
GS 18 CrMo 9 10	ONORM	Australia	Steel
8 CrMoNiNb 9-10	DIN	Germany	Steel
A757 D1N1 D1Q1	ASTM	USA	Casting

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