

Material: DIN 1.4903

Standard Specification for High-Temperature Resisting CrMo Steel

Group: Ferrous Mild Steel Alloys

Sub Group: DIN 1.4903 High-Temperature Resisting CrMo Steel

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

Grade Belongs to the Industry: Steel

Chemical Composition			Heat Treatment	
Carbon	C %	0.080 - 0.120	Normalizing or Annealing or Hardening + Tempering	
Silicon	Si %	0.200 - 0.500		
Manganese	Mn %	0.300 - 0.600		
Phosphorus	P %	0.020 max.		
Sulphur	S %	0.005 max.		
Chromium	Cr %	8.000 - 9.500		
Molybdenum	Mo %	0.850 - 1.050		
Nickel	Ni %	0.400 max.		
Vanadium	V %	0.180 - 0.250		
Aluminium	Al %	0.020 max.		
			Mechanical Properties	
Nitrogen	N %	0.030 - 0.070	Tensile Strength in Mpa	520 - 850
Niobium	Nb %	0.060 - 0.100	Yield Strength in Mpa	430 min.
Iron	Fe %	Balance	Elongation in %	18 min.
-	-	-	Reduction of Area in %	68 - 73
-	-	-	Hardness in BHN	-
-	-	-	Impact in Joule	27 J @ RT

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
J84090	UNS	USA	Steel
A234 Grade WP91	ASTM	USA	Pipe
A336 Grade F91	ASTM	USA	Forging
TU2 10 CDVNb 09-01	AFNOR NF	France	Tube
X 10 CrMoVNb 9-1	DIN	Germany	Steel
J80490	UNS	USA	Casting
A217 Grade C12A	ASTM	USA	Casting

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