

# Material: AFNOR NF TU Z 10 CDVNb 09 01

## Standard Specification for Seamless Steel Tubes for Pressure Purposes

**Group:** Ferrous Stainless Steel Alloys

**Sub Group:** AFNOR NF TU Z 10 CDVNb 09 01 Seamless Steel Tubes for Pressure Purposes

**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 + Tempering	
Silicon	Si %	0.200 - 0.500		
Manganese	Mn %	0.300 - 0.600		
Phosphorus	P %	0.020 max.		
Sulphur	S %	0.010 max.		
Chromium	Cr %	8.000 - 9.000		
Molybdenum	Mo %	0.850 - 1.050		
Nickel	Ni %	0.400 max.		
Vanadium	V %	0.180 - 0.250		
Aluminium	Fe %	0.030 max.		
Nitrogen	N %	0.030 - 0.070	Mechanical Properties	
Niobium	Nb %	0.060 - 0.100	Tensile Strength in Mpa	585 - 770
Copper	Cu %	0.250 max.	Yield Strength in Mpa	415 min.
Tin	Sn %	0.030 max.	Elongation in %	20 min.
Iron	Fe %	Balance	Reduction of Area in %	-
			Hardness in BHN	-
			Impact in Joule	40 J @ RT

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
1.4903	EN	European Union	Steel and Tube
1.4903	DIN	Germany	Steel
1.4903	DIN	Germany	Steel
J84090	UNS	USA	Casting
X10CrMoVNb9-1	DIN	Germany	Steel and Tube
91	BS	British	Steel and Tube
X10CrMoVNb9-1	ISO	International	Steel and Tube

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