

Material: UNS S 42100

Standard Specification for Martensitic Chromium Stainless Steel

Group: Ferrous Stainless Steel Alloys

Sub Group: UNS S 42100 Martensitic Chromium Stainless Steel

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

Grade Belongs to the Industry: Casting

Chemical Composition			Heat Treatment	
Carbon	C %	0.170 - 0.230	Annealing or Hardening + Tempering	
Silicon	Si %	0.200 - 0.300		
Manganese	Mn %	0.400 - 0.700		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.010 max.		
Chromium	Cr %	11.000 - 12.500		
Nickel	Ni %	0.300 - 0.800		
Molybdenum	Mo %	0.800 - 1.200		
Vanadium	V %	0.250 - 0.350		
Tungsten	W %	0.400 - 0.600		
			Mechanical Properties	
Niobium	Nb %	0.050 max.	Tensile Strength in Mpa	965 min.
Aluminium	Al %	0.050 max.	Yield Strength in Mpa	760 min.
Iron	Fe %	Balance	Elongation in %	10 min.
-	-	-	Reduction of Area in %	24 min.
-	-	-	Hardness in HB	269 max.
-	-	-	Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
1.4935	DIN	Germany	Casting
SUH 616	JIS	Japan	Bar and Wire
20 VNiMoCr 120	STAS	Romania	Casting
422	AISI	USA	Bar, Wire, Shapes and Forging
X 20 CrMoWV 12-1	DIN	Germany	Casting
A176 Type 422	ASTM	USA	Plate, Sheet and Strip
A743 CA28MWV	ASTM	USA	Casting

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