



## Material - ASTM B 619 N12160

### Standard Specification for Nickel and Nickel-Cobalt Alloy Pipe

Group - Non-Ferrous Nickel Alloys

Sub Group - ASTM B 619 N12160 Nickel and Nickel-Cobalt Alloy Pipe

Application - Intended for Valve, Pump, General Engineering, Automotive and other Industries

Grade Belongs to the Industry - Pipe

Chemical Composition			Heat Treatment	
Carbon	C %	0.150 max.	As-Cast or Annealing or Age Hardning	
Silicon	Si %	2.400 - 3.000		
Manganese	Mn %	1.500 max.		
Chromium	Cr %	26.000 - 30.000		
Sulphur	S %	0.015 max.		
Molybdenum	Mo %	1.000 max.		
Phosphorus	P %	0.030 max.		
Titanium	Ti %	0.020 - 0.800		
Iron	Fe %	3.500 max.		
Tungsten	W %	1.000 max.		
Cobalt	Co %	27.000 - 33.000	Mechanical Properties	
Niobium	Nb %	1.000 max.	Tensile Strength in Mpa	620 min.
Nickel	Ni %	Balance	Yield Strength in Mpa	240 min.
-	-	-	Elongation in %	40 min.
-	-	-	Reduction of Area in %	-
-	-	-	Hardness in BHN	-
-	-	-	Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
B 564 N1216	ASTM	USA	Forging
B 622 N12160	ASTM	USA	Pipe and Tube
B 626 N12160	ASTM	USA	Tube
B 435 N12160	ASTM	USA	Plate, Sheet and Strip
B 472 N12160	ASTM	USA	Billet and Bar
B 572 N12160	ASTM	USA	Rod
SB-564 N12160	ASME	USA	Forging

**Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email [marketing@gravitycastindia.com](mailto:marketing@gravitycastindia.com)**

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