



## Material - ASTM A 312 Alloy 20

### Standard Specification for Seamless and Heavily Cold Worked Austenitic Stainless Steel Pipes

Group - Non-Ferrous Nickel Alloys

Sub Group - ASTM A 312 Alloy 20 Seamless and Heavily Cold Worked Austenitic Stainless Steel Pipes

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

Grade Belongs to the Industry - Pipe

Chemical Composition			Heat Treatment	
Carbon	C %	0.070 max.	As-Cast or Annealing or Age Hardning	
Silicon	Si %	1.000 max.		
Manganese	Mn %	2.000 max.		
Chromium	Cr %	19.000 - 21.000		
Sulphur	S %	0.035 max.		
Molybdenum	Mo %	2.000 - 3.000		
Copper	Cu %	3.000 - 4.000		
Nb + Ta	Nb% + Ta%	1.000 max.		
Phosphorus	P %	0.045 max.		
Nickel	Ni %	32.000 - 38.000		
Iron	Fe %	Balance		
-	-	-		
-	-	-		
-	-	-		
-	-	-		
			Mechanical Properties	
			Tensile Strength in Mpa	550 min.
			Yield Strength in Mpa	240 min.
			Elongation in %	30 min.
			Reduction of Area in %	-
			Hardness in BHN	-
			Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
Incoloy Alloy 020	Gravity	India	Pipe, Tube, Sheet, Strip, Plate, Hexagon and Wire
A 312 N08020	ASTM	USA	Pipe
A213 Alloy 20	ASTM	USA	Tube
AS-312 Alloy 20	ASME	USA	Pipe
SA 213 Alloy 20	ASME	USA	Tube
SA-312 Alloy 20	ASME	USA	Pipe
NCF020	JIS	Japan	Plate, Sheet and Strip

**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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