GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA 213 Alloy 20

Standard Specification for Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater and Heat-Exchanger Tubes

Group - Non-Ferrous Nickel Alloys

Sub Group - ASME SA 213 Alloy 20 Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater and Heat-Exchanger Tubes

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

Grade Belongs to the Industry - Tube

Chemical Composition		
Carbon	C %	0.070 max.
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
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
As-Cast or Annealing or Age Hardning

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	217 max.
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 Alloy 20	ASTM	USA	Pipe
A 312 N08020	ASTM	USA	Pipe
A213 Alloy 20	ASTM	USA	Tube
AS-312 Alloy 20	ASME	USA	Pipe
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