GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASTM A312 S33228

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

Group - Ferrous Stainless Steel Alloys

Sub Group - ASTM A312 S33228 Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes

Application - Intended for Valve, Pump, General Engineering, Automotive and Other Industries
Grade Belongs to the Industry - Steel and Pipe

Chemical Composition		
Carbon	C %	0.040 - 0.080
Manganese	Mn %	1.000 max.
Phosphorus	P %	0.020 max.
Sulphur	S %	0.015 max.
Silicon	Si %	0.300 max.
Chromium	Cr %	26.000 - 28.000
Nickel	Ni %	31.000 - 33.000
Cerium	Ce %	0.050 - 0.100
Niobium	Nb %	0.600 - 1.000
Aluminium	Al %	0.025 max.
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
Solution Annealing

Mechanical Properties	
Tensile Strength in Mpa	500 min.
Yield Strength in Mpa	185 min.
Elongation in %	-
Reduction of Area in %	-
Hardness in HB	-
Impact in Joule	-

Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
SA-312 UNS S33228	ASME	USA	Steel and Pipe
A 213 S33228	ASTM	USA	Steel and Tubing
A 182 F 56	ASTM	USA	Steel and Pipe
A 240 S33228	ASTM	USA	Plate, Sheet and Strip
A 249 S33228	ASTM	USA	Steel and Tubing
A 403 WP S33228	ASTM	USA	Steel and Pipe
A 959 S33228	ASTM	USA	Steel

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

All information in our data sheets and website is indicative only and is not intended to be a substitute for the full specification from which it is extracted. It is intended to provide typical values to allow comparison between metal alloy option rather than a definitive statement of mechanical performance or suitability for a particular application as these will vary with temperature, product type and product application. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of business.