GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA-213 Grade TP310HCbN

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

Group - Ferrous Stainless Steel Alloys

Sub Group - ASME SA-213 Grade TP310HCbN 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 - Tubing

Chemical Composition		
Carbon	C %	0.040 - 0.100
Manganese	Mn %	2.000 max.
Phosphorus	P %	0.045 max.
Sulphur	S %	0.030 max.
Silicon	Si %	1.000 max.
Chromium	Cr %	24.000 - 26.000
Nickel	Ni %	19.000 - 22.000
Nitrogen	N %	0.150 - 0.350
Niobium	Nb %	0.200 - 0.600
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

Heat Treatment
Solution Annealing

Mechanical Properties	
Tensile Strength in Mpa	655 min.
Yield Strength in Mpa	295 min.
Elongation in %	30 min.
Reduction of Area in %	-
Hardness in BHN	256 max.
Impact in Joule	-

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Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
S31042	UNS	USA	Steel
1501-3 310 S 16	B.S.	United Kingdom	Steel and Plate
SA-249 TP310HCb	ASME	USA	Steel and Tubing
SA-312 TP310Cb	ASME	USA	Steel and Pipe
A 959 Type 310HCbN	ASTM	USA	Steel
A 943 TP310S	ASTM	USA	Steel and Pipe
A 554 MT 310S	ASTM	USA	Steel and Tubing

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.