GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA-213 Grade TP310MoCbN

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 TP310MoCbN 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 %	0.100 max.
Manganese	Mn %	1.500 max.
Phosphorus	P %	0.030 Max.
Sulphur	S %	0.030 max.
Silicon	Si %	1.000 max.
Chromium	Cr %	19.500 - 23.000
Nickel	Ni %	23.000 - 26.000
Molybdenum	Mo %	1.000 - 2.000
Nitrogen	N %	0.100 - 0.250
Niobium	Nb %	0.100 - 0.400
Titanium	Ti %	0.200 max.
Boron	B %	0.002 - 0.010
Iron	Fe %	Balance
-	-	-
-	-	-

Heat Treatment
Solution Annealing

Mechanical Properties	
Tensile Strength in Mpa	640 min.
Yield Strength in Mpa	270 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**
S31025	UNS	USA	Steel
J94213	UNS	USA	Steel and Casting
J94214	UNS	USA	Steel and Casting
A 297 Grade HN	ASTM	USA	Steel and Casting
A 608 Grade HN 40	ASTM	USA	Steel and Tubing
A 312 S31002	ASTM	USA	Steel and Pipe
G 5122 SCH 19	JIS	Japan	Steel and Casting

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

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