GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

Material - ASME SA-249 TPXM-19

Standard Specification for Welded Austenitic Steel Boiler, Superheater, Heat-Exchanger, and Condenser Tubes

Group - Ferrous Stainless Steel Alloys

Sub Group - ASME SA-249 TPXM-19 Welded Austenitic Steel Boiler, Superheater, Heat-Exchanger, and Condenser Tubes

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

Grade Belongs to the Industry - Tubing

Chemical Composition		
Carbon	C %	0.060 max.
Manganese	Mn %	4.000 - 6.000
Phosphorus	P %	0.045 max.
Sulphur	S %	0.030 max.
Silicon	Si %	1.000 max.
Chromium	Cr %	20.500 - 23.500
Nickel	Ni %	11.500 - 13.500
Molybdenum	Mo %	1.500 - 3.000
Nitrogen	N %	0.200 - 0.400
Niobium	Nb %	0.100 - 0.300
Vanadium	V %	0.100 - 0.300
Iron	Fe %	Balance
-	-	-
-	-	-
-	-	-

Heat Treatment
Solution Annealing

Mechanical Properties	
Tensile Strength in Mpa	690 min.
Yield Strength in Mpa	380 min.
Elongation in %	35 min.
Reduction of Area in %	-
Hardness in BHN	250 max.
Impact in Joule	-

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Cross Reference Table			
Material	**Standard**	**Country**	**Grade Belong to the Industry**
S20910	UNS	USA	Bars, Wire, Shapes and Forging
SA-312 Grade TP XM-19	ASME	USA	Steel and Pipe
A 580 Type XM-19	ASTM	USA	Steel and Wire
A 943 TPXM-19	ASTM	USA	Steel and Pipe
A 269 TPXM-19	ASTM	USA	Steel and Tubing
A 314 XM-19	ASTM	USA	Bars and Forging
A 358 XM-19	ASTM	USA	Steel and Pipe

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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