



## Material - ASTM A 249 S31277

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

**Group - Non-Ferrous Nickel Alloys**

**Sub Group - ASTM A 249 S31277 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 - Tube**

Chemical Composition			Heat Treatment	
Carbon	C %	0.020 max.	As-Cast or Annealing or Age Hardning	
Silicon	Si %	0.500 max.		
Manganese	Mn %	3.000 max.		
Chromium	Cr %	20.500 - 23.000		
Molybdenum	Mo %	6.500 - 8.000		
Copper	Cu %	0.500 - 1.500		
Nitrogen	N %	0.300 - 0.400		
Phosphorus	P %	0.030 max.		
Sulphur	S %	0.010 max.		
Nickel	Ni %	26.000 - 28.000	Mechanical Properties	
-	-	-	Tensile Strength in Mpa	770 min.
-	-	-	Yield Strength in Mpa	360 min.
-	-	-	Elongation in %	40 min.
-	-	-	Reduction of Area in %	-
-	-	-	Hardness in HRC	100 max.
-	-	-	Impact in Joule	-

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
Incoloy 27-7MO	Gravity	India	Sheet, Plate, Bar and Wire
A 213 S31277	ASTM	USA	Tube
A 240 S31277	ASTM	USA	Plate, Sheet and Strip
A 312 S31277	ASTM	USA	Pipe
A 580 S31277	ASTM	USA	Wire
A 959 S31277	ASTM	USA	Pipe
SA-213 S31277	ASME	USA	Tube

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

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