



## Material - ASME SB-163 N08811

Standard Specification for Seamless Nickel and Nickel Alloy Condenser and Heat-Exchanger Tube

**Group - Non-Ferrous Nickel Alloys** 

Sub Group - ASME SB-163 N08811 Seamless Nickel and Nickel Alloy Condenser and Heat-Exchanger Tube Application - Intended for Valve, Pump, General Engineering, Automotive and other Industries Grade Belongs to the Industry - Tube

Chemical Composition			Heat Treatment	
Carbon	C %	0.060 - 0.100		
Silicon	Si %	1.000 max.		
Manganese	Mn %	1.500 max.		
Chromium	Cr %	19.000 - 23.000	As-Cast or Annealing or Age Hardning	or Age Hardning
Sulphur	S %	0.015 max.		
Copper	Cu %	0.750 max.		
Aluminium	Al %	0.150 - 0.600		
Titanium	Ti %	0.150 - 0.600		
Al + Ti	Al % + Ti %	0.850 - 1.200	Mechanical Properties	
Iron	Fe %	39.500 max.	Tensile Strength in Mpa	448 min.
Nickel	Ni %	30.000 - 35.000	Yield Strength in Mpa	172 min.
-	-	-	Elongation in %	30 min.
-	-	-	Reduction of Area in %	-
-	-	-	Hardness in BHN	-
-	-	-	Impact in Joule	-

Cross Reference Table				
Material	Standard	Country	Grade Belong to the Industry	
B 163 N08811	ASTM	USA	Tube	
B 407 N08811	ASTM	USA	Pipe and Tube	
B 408 N08811	ASTM	USA	Rod and Bar	
B 409 N08811	ASTM	USA	Plate, Sheet and Strip	
B 564 N08811	ASTM	USA	Forging	
N08811	UNS	USA	Tube	
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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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