



## Material - ASME SB-163 N08120

### Standard Specification for Seamless Nickel and Nickel Alloy Condenser and Heat-Exchanger Tubes

Group - Non-Ferrous Nickel Alloys

Sub Group - ASME SB-163 N08120 Seamless Nickel and Nickel Alloy Condenser and Heat-Exchanger Tubes

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

Grade Belongs to the Industry - Tube

Chemical Composition			Chemical Composition		
Carbon	C %	0.020 - 0.100	Nickel	Ni %	35.000 - 39.000
Silicon	Si %	1.000 max.	Iron	Fe %	Balance
Manganese	Mn %	1.500 max.	-	-	-
Molybdenum	Mo %	2.500 max.	-	-	-
Sulphur	S %	0.030 max.	-	-	-
Chromium	Cr %	23.000 - 27.000	Heat Treatment		
Aluminium	Al %	0.400 max.	As-Cast or Annealing or Age Hardning		
Phosphorus	P %	0.040 max.	Mechanical Properties		
Titanium	Ti %	0.200 max.	Tensile Strength in Mpa	620 min.	
Copper	Cu %	0.500 max.	Yield Strength in Mpa	276 min.	
Boron	B %	0.010 max.	Elongation in %	30 min.	
Cobalt	Co %	3.000 max.	Reduction of Area in %	-	
Niobium	Nb %	0.400 - 0.900	Hardness in BHN	-	
Tungsten	W %	2.500 max.	Impact in Joule	-	
Nitrogen	N %	0.130 - 0.300			

Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
B 163 N08120	ASTM	USA	Tube
B 408 N08120	ASTM	USA	Rod and Bar
B 409 N08120	ASTM	USA	Plate, Sheet and Strip
B 564 N08120	ASTM	USA	Forging
B 407 N08120	ASTM	USA	Pipe and Tube
N08120	UNS	USA	Forging
-	-	-	-

**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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