## Latrobe Nitralloy® Nâ, ¢ VAC-ARC Premium Nitriding Steel

Category : Metal , Ferrous Metal , Alloy Steel , Carbon Steel , High Carbon Steel

## Material Notes:

NITRALLOY N is an age hardenable nitriding steel. The age hardening capability of the alloy permits the core strength to be developed while the surface is being nitrided. VAC-ARC remelting is employed to provide preferred ingot solidification and superior microcleanliness. Tensile properties are that of the core. Information Provided by Timken Latrobe Steel. Timken sold Latrobe in December 2006. They are now Latrobe Specialty Steels Co.

## Order this product through the following link:

http://www.lookpolymers.com/polymer\_Latrobe-Nitralloy-N-VAC-ARC-Premium-Nitriding-Steel.php

Mechanical Properties	Metric	English	Comments	
Hardness, Rockwell C	29	29	Core, At 1650°F, oil quench, tempered at 1200°F	
	41	41	Core, A+ age at 975°C for 20 hours	
Tensile Strength, Ultimate	910 MPa	132000 psi	At 1650°F, oil quench, tempered at 1200°F	
	1240 MPa	180000 psi	A+ age at 975°C for 20 hours	
Tensile Strength, Yield	1172 MPa	170000 psi	A+ age at 975°C for 20 hours	
	793 MPa	115000 psi	oil quench, tempered at 1200°F	
	@Temperature 899 °C	@Temperature 1650 °F		
Elongation at Break	16 %	16 %	A+ age at 975°C for 20 hours	
	22 %	22 %	sample was oil quenched and	
	@Temperature 899 °C	@Temperature 1650 °F	tempered at 1200°F	
Reduction of Area	50 %	50 %	A+ age at 975°C for 20 hours	
	59 %	59 %		
	@Temperature 899 °C	@Temperature 1650 °F	after oil quench, tempered at 1200°F	
Charpy Impact	16.3 J	12.0 ft-lb 48 Aging at 504°C		

Component Elements Properties	Metric	English	Comments
Aluminum, Al	1.25 %	1.25 %	
Carbon, C	0.24 %	0.24 %	
Chromium, Cr	1.15 %	1.15 %	



Component Elements Properties	Metric <sup>%</sup>	English	Comments	
Manganese, Mn	0.60 %	0.60 %		
Molybdenum, Mo	0.25 %	0.25 %		
Nickel, Ni	3.5 %	3.5 %		
Silicon, Si	0.30 %	0.30 %		

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