

Latrobe Lescalloy® AF 1410 VIM-VAR ; 17 in High Strength Alloy Steel

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

Material Notes:

LESCALLOY AF1410 VIM-VAR steel exhibits both high strength and very high fracture toughness. It is typically used in the 235/260 ksi (1620/1793 MPa) tensile strength range for a variety of critical, fracture-sensitive aerospace structural applications. It is double vacuum melted (VIM-VAR® vacuum induction melted followed by vacuum arc remelting) to provide superior cleanliness, ingot homogeneity, and to enhance mechanical properties. Heat Treatment - 857°C - 1 hour oil quench; -73°C - 1 hr air warm; 510°C - 5 hrs air cool. 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-Lescalloy-AF-1410-VIM-VAR-17-in-High-Strength-Alloy-Steel.php

Physical Properties	Metric	English	Comments
Density	7.83 g/cc	0.283 lb/in ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	1680 MPa	243000 psi	Transverse
	1680 MPa	244000 psi	Longitudinal
Tensile Strength, Yield	1524 MPa	221000 psi	Transverse
	1544 MPa	223900 psi	Longitudinal
Elongation at Break	16 %	16 %	Transverse
	17 %	17 %	Longitudinal
Reduction of Area	66 %	66 %	Transverse
	73 %	73 %	Longitudinal
Modulus of Elasticity	203 GPa	29400 ksi	
Charpy Impact	71.0 J	52.4 ft-lb	V-Notch, Transverse
	81.0 J	59.7 ft-lb	V-Notch, Longitudinal

Component Elements Properties	Metric	English	Comments
Carbon, C	0.15 %	0.15 %	
Chromium, Cr	2.0 %	2.0 %	
Cobalt, Co	14 %	14 %	
Iron, Fe	72.65 %	72.65 %	

Component Elements Properties	Metric	English	Comments
Molybdenum, Mo	1.0 %	1.0 %	
Nickel, Ni	10 %	10 %	
Silicon, Si	0.10 %	0.10 %	

Chemical Properties	Metric	English	Comments
Critical Temperature	168 Â°C	334 Â°F	Martensitic Finish
	336 Â°C	637 Â°F	Martensitic Start

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