Latrobe LescalloyÂ® D6AC VAC-ARC High Strength Alloy Steel

Category : Metal , Ferrous Metal , Alloy Steel , Low Alloy Steel , Carbon Steel , Medium Carbon Steel

Material Notes:

LESCALLOY D6AC VAC-ARC steel is a medium carbon, low alloy, ultra high strength steel primarily designed for high strength structural applications requiring strength leaves up to 280,000 psi. This alloy provides a high yield strength to tensile strength ratio, combined with good ductility. A tough and fibrous fracture is exhibited to as low as -210Â°F in impact testing; also the notch toughness is excellent. It has been selected for fracture toughness critical applications at a variety of strength levels. The deep hardening characteristics of D6AC steel make it applicable for fairly large sections. Lescalloy D6AC VAC-ARC steel is produced by the consumable electrode vacuum arc remelting process to provide optimum cleanliness and preferred ingot structure, which in turn provide optimum transverse mechanical properties.Heat Treatment - Austenitized at 1650Â°F. Oil quenched and air cooled, or salt quenched at 400-425Â°F for 10 minutes and air cooledInformation 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-D6AC-VAC-ARC-High-Strength-Alloy-Steel.php

Physical Properties	Metric	English	Comments
Density	7.86 g/cc	0.284 lb/inÂ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	36	36	650Â°C Temper
	46	46	510Â°C Temper Temperature
	53	53	316Â°C Temper Temperature
Tensile Strength, Ultimate	1570 MPa	228000 psi	510Â°C Temper Temperature
	1930 MPa	280000 psi	316Â°C Temper Temperature
Tensile Strength, Yield	1345 MPa	195100 psi	510Â°C Temper Temperature
	1724 MPa	250000 psi	316Â°C Temper Temperature
Elongation at Break	7.0 %	7.0 %	316Â°C Temper Temperature
	7.0 %	7.0 %	510Â°C Temper Temperature
Reduction of Area	23 %	23 %	316Â°C Temper Temperature
	25 %	25 %	510Â°C Temper Temperature
Modulus of Elasticity	210 GPa	30500 ksi	
	76.5 GPa @Temperature 649 Â°C	11100 ksi @Temperature 1200 Â°F	

Mechanical Properties	Metric	English	Comments
	163 GPa @Temperature 427 Â°C	23700 ksi @Temperature 801 Â°F	
Machinability	50 - 55 %	50 - 55 %	AISI B1112 Screw Stock

Thermal Properties	Metric	English	Comments
CTE, linear	13.16 Âµm/m-Â°C @Temperature 38.0 - 93.0 Â°C	7.311 Âµin/in-Â°F @Temperature 100 - 199 Â°F	
	16.1 Âµm/m-Â°C @Temperature 316 - 704 Â°C	8.95 Âµin/in-Â°F @Temperature 601 - 1300 Â°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.46 %	0.46 %	
Chromium, Cr	1.1 %	1.1 %	
Iron, Fe	95.74 %	95.74 %	
Manganese, Mn	0.75 %	0.75 %	
Molybdenum, Mo	1.0 %	1.0 %	
Nickel, Ni	0.60 %	0.60 %	
Silicon, Si	0.25 %	0.25 %	
Vanadium, V	0.10 %	0.10 %	

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