

Report Number R494257
Report Date 26-Jan-2009
Page 1 of 2
Client Order 42622

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RECEIVED 1 Section Bar Stock approx. 0.990"dia. x 8.100"lg.
MATERIAL Ti-6Al-4V
TEST TO SPECIFICATION AMS 4928R

PROPERTIES AS SUPPLIED

Quantitative Analysis by XRF

Al	6.03 %	5.50 - 6.75
Fe	0.06 %	0.30 max.
Ti	Rem. %	Rem.
V	4.22 %	3.50 - 4.50
Y	<0.0003 %	0.005 max.

Quantitative Analysis by Combustion

C	0.017 %	0.08 max.
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Quantitative Analysis by IGF

H	0.0032 %	0.0125 max.
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Quantitative Analysis by IGF

O	0.152 %	0.20 max.
N	0.019 %	0.05 max.

Disposition of Chemical Analysis

Within Specification Limits

The < Symbol signifies not detected at the detectability limit indicated.

No other Elements detected by XRF in excess of 0.10% individually or 0.40% in the aggregate.

Tension Test at Room Temperature

Tensile Strength	140 ksi	135 min.
Yield Strength at 0.2% Offset	126 ksi	125 min.
Elongation in 4D	16 %	10 min.
Reduction of Area	49 %	25 min.
Disposition	Within Specification Limits	

Metallographic Examination of Surface for Alpha Case

Alpha Case None Evident
Disposition Within Specification Limits

Required: The product shall be free of any oxygen-rich layer such as alpha case or other surface contamination, determined by microscopic examination at not lower than 100x.

Metallographic Examination for Structure

Structure Equiaxed alpha and elongated alpha in a transformed beta matrix with no continuous network of alpha in prior beta grain boundaries.

Disposition Within Specification Limits

Required: Microstructure shall be that structure resulting from alpha-beta processing and shall conform to one of the following:
1. Equiaxed and/or elongated alpha in a transformed beta matrix with no continuous network of alpha at prior beta grain boundaries.
2. Essentially complete field of equiaxed alpha and/or elongated alpha with no continuous network of alpha at prior beta grain boundaries.
3. Partially broken and distorted grain boundary alpha with plate-like alpha.
A microstructure showing a continuous network of alpha in prior beta grain boundaries is not acceptable.



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