

Hy-Tuf / AMS 6425

Additional Information

Hy-Tuf has similarities to the following standard designations and specification

AMS 6425
 MIL-S-7108 (Air Melt)
 EMS 126 (Bendix)
 DMS 1841
 NAI 1275
 UNS Designation K32550
 AMS 6418

Chemical Properties

Element	Chemical Composition %
Carbon (C)	0.25
Manganese (Mn)	1.35
Silicon (Si)	1.50
Nickel (Ni)	1.80
Chromium (Cr)	0.30
Molybdenum (Mo)	0.40
Iron (Fe)	Balance

Heat Treatment

Normalise	927 °C, one hour, air cool
Austenitise	871 °C, one hour, oil quench
Temper	204 - 316 °C, four hours, air cool
Anneal	Heat to 743 °C and equalise, cool 27 °C per hour to 593 °C, air cool Reheat to 649 °C, hold for 15-20 hours, air cool.
	Typical resulting hardness is 230 HBW

Mechanical Properties

Property	Value
UTS min	1517 MPa
0.2% Yield Strength	1276 MPa
Elongation	5%
RA	30%
Fracture Toughness	110 MPa sqm

Physical Properties

Property	Value	
Density	7.77 g/cm ³	
Thermal Conductivity	37.49 W/m.K	
Coefficient of Thermal Expansion	Temp Range °C	mm/mm/°C (x 10 ⁻⁶)
	-18 - 93	11.3

Disclaimer

This data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product

and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

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