

XM-19

## Additional Requirements

1. Material manufactured by forging or rolling process, a minimum section reduction of 3.75:1 is req
2. Bars identified individually by cast number using low stress stamps
3. Production length of bars shall be 3.0m - 6.0m unless stated otherwise
5. NDT operator certificates must accompany goods5. NDT operator certificates must accompany goods
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6. Material shall be certified to the following standards:  
 ASTM A276, A276, A479, A182, API6APSL3, ASME A479  
 UNS 20910, XM-19  
 NACE MR 0175/ISO 15156-3  
 NACE MR0103-2003  
 ISO9001:2008 ISO14001:2004

## Chemical Properties

Element	Chemical Composition %
Iron (Fe)	Balance
Carbon (C)	0.03 max
Chromium (Cr)	20.5 - 23.5
Nickel (Ni)	11.5 - 13.5
Silicon (Si)	0.2 - 0.6
Manganese (Mn)	4.0 - 6.0
Phosphorus (P)	0.04 max
Sulphur (S)	0.01 max
Nitrogen (N)	0.2 - 0.4
Molybdenum (Mb)	1.5 - 3.0
Niobium (+Tantalum) (Nb)	0.10 - 0.30
Vanadium (V)	0.10 - 0.30

## Corrosion Examination

ASTMA262 & Permeability test

## Mechanical Properties

Property	Value
Proof Strength	758 MPa
Tensile Strength	930 MPa
Elongation	20% min
Reduction in Area	50%
Hardness	25 - 35 HRC

## NDT Ultrasonic

ASTM A388/ EN10308CL2, API 6A PSL3

## Product Forms

Round Bar

## 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.

The information provided in this datasheet has been drawn from various recognised sources, including EN Standards, recognised industry references (printed & online) and manufacturers' data. No guarantee is given that the information is from the latest issue of those sources or about the accuracy of those sources.

Material supplied by the Company may vary significantly from this data, but will conform to all relevant and applicable standards.

As the products detailed may be used for a wide variety of purposes and as the Company has no control over their use; the Company specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or fitness for any particular purpose, whether expressed or implied.

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