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1.4313-X3CrNiMo13-4 - QT780

DESCRIPTION

1.4313, also known as X3CrNiMo13-4 or ASTM A182 F6NM, is a corrosion resistant martensitic stainless steel used for various applications. 1.4313 is available in conditions QT650, QT780 and QT900 by altering the quenching & tempering cycle.

APPLICABLE STANDARDS

UNS S41500
EN-ISO X3CrNiMo13-4
AFNOR Z6CN13-04
BS 425C11
JIS SUSF6NM SCS5
Other standards available upon request

CHEMICAL COMPOSITION*

Element	C	Mn	P	S	Si	Ni	Cr	Mo	Fe
Min %	-	0.50	-	-	-	3.50	12.00	0.30	-
Max %	0.05	1.50	0.040	0.015	0.60	5.50	14.00	0.70	Balance

*Per DIN 1.4313 & ASTM A182 F6NM – Condition QT780.

MECHANICAL PROPERTIES*

Property	Minimum
UTS	790 Mpa
Rp0.2	620 Mpa
Elongation % in 4D	15%
Reduction of Area %	40%
Elastic Module	200 Gpa
Hardness	245HB
Charpy V-Notch Impact	50 J

*Per DIN 1.4313 & ASTM A182 F6NM – Condition QT780.

TYPICAL PRODUCTS & USAGE

Bar
Sheet
Flanges
Pumps
Compressors
Hydro-turbines
Valves & Valve Bodies
Reactor Technology

MATERIAL APPLICATION

1.4313 – X3CrNiMo13-4, also known as ASTM A-182 F6NM, is a corrosion resistant, martensitic chrome-nickel steel with added molybdenum. It has excellent strength and toughness properties and is commonly used in the petrochemical and oil- & gas industry due to its corrosion resistance for applications such as flanges, valves, valve bodies, pumps etc.

It has limited weldability due to its low carbon content. The QT650 grade has a lower yield-strength but is softer allowing for even better corrosion resistance, while the QT900 grade has a higher yield-strength but is also harder.

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