



SPECIFICATIONS

European Standards:

- X1CrNiMoWN24-22-6

UNS : S31266

COMPOSITION

Carbon.....	<0.03
Chromium.....	24.00
Nickel.....	22.00
Molybdenum.....	5.50
Tungsten.....	2.00
Nitrogen.....	0.50

TYPICAL MECHANICAL PROPERTIES

- In the solution treated condition:
 - UTS: >800 N/mm²
 - 0.2 % Yield strength: >420 N/mm²
 - Elongation (5d): >50 %

APPLICATIONS

- Various mechanical and fabricated components operating in corrosive environments: sea water, chlorinated media, acid gases (H₂S).
- The grade is specifically used in:
 - offshore oil production industry (ASTM A182 Grade F58).
 - marine industry.
 - paper pulp industry.
 - chemical industry.

CHARACTERISTICS

- Super austenitic stainless steel with excellent corrosion resistance either general or localised (pitting, crevice) particularly in oxidant atmosphere with high chloride content:
Suitable for the test ASTM G48:
CPT > 95°C - CCT = 70°C
- Excellent crevice corrosion resistance in sea water atmosphere.
- Excellent stress corrosion resistance in H₂S environment.
- The crevice corrosion resistance of steel NYB66 is significantly better than that of Ni-base alloy 625 and conventional super austenitic steels.

HEAT TREATMENT

- Solution treatment:
 - Heat to 1140 / 1170°C.
 - Water quench.

PHYSICAL PROPERTIES

- Density:
 - at 20°C: 8.07
- Mean coefficient of expansion in $m/m.^{\circ}C$:
 - between 20°C and 100°C: 15.5×10^{-6}
 - between 20°C and 200°C: 15.5×10^{-6}
 - between 20°C and 300°C: 16.0×10^{-6}
 - between 20°C and 400°C: 16.3×10^{-6}
 - between 20°C and 500°C: 16.5×10^{-6}
- Modulus of elasticity in N/mm^2 :
 - at 20°C: 195×10^3
- Thermal conductivity in $W.m/m^2.^{\circ}C$:
 - at 20°C: 12
- Specific heat in $J/g.^{\circ}C$:
 - at 20°C: 0.45

Contact:

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The data provided in this document represent typical or average values rather than maximum or minimum guaranteed values. The applications indicated for the grades described are given as guidance only in order to help the reader in his personal assessment. Please note that these do not constitute a guarantee whether implicit or explicit as to whether the grade selected is suited to specific requirements. Aubert & Duval's liability shall not under any circumstances extend to product selection or to the consequences of that selection.