

Datasheet

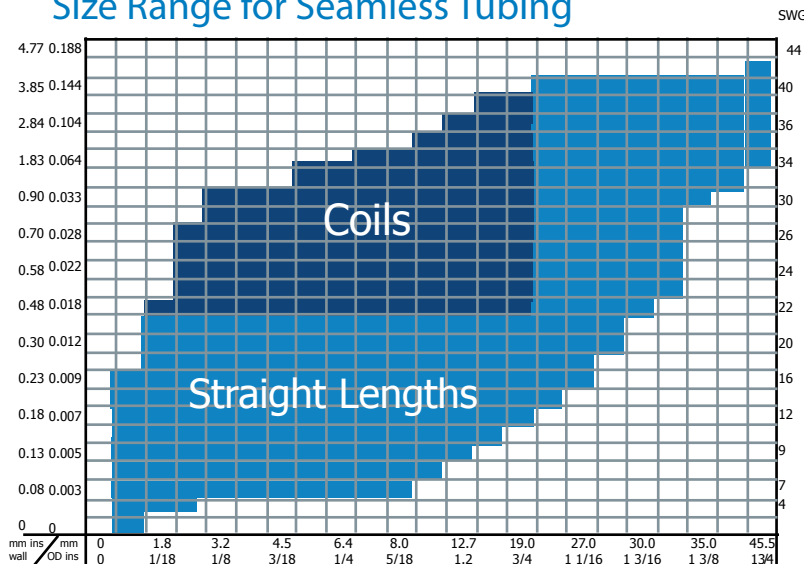
duplex stainless steel

Introduction

Fine Tubes UNS31803 is a duplex stainless steel. (austenitic— ferritic) characterised by:

- a high resistance to stress corrosion cracking in chloride-bearing environments.
- a high resistance stress corrosion cracking in environments containing hydrogen sulphide.
- a high resistance to general corrosion, pitting and crevice corrosion.
- high mechanical strength— roughly twice the yield strength of austenitic stainless steel
- high resistance to erosion corrosion and corrosion fatigue
- good thermal conductivity properties
- good weldability

Size Range for Seamless Tubing



Manufacturing Specifications

Seamless tube : NFA 49 217
 Seamless and Welded tube: ASTM A789
 Seamless and welded pipe : ASTM A790

Fine Tubes Production Specification :
 FT1077 & FT2349

Standards

UNS EN W.Nr
 S31803 1.4462 1.4462

DIN
 X2 CrNiMoN 22 5 3

AFNOR SS
 Z 2 CND 22-05-03 2377

Mechanical Properties - Solution Annealed

Tensile Strength (min)		0.2% Proof Stress (min)		1.0% Proof Stress (Min)		Elongation (A5% min)	Hardness Vickers (approx)
Mpa	Ksi	Mpa	Ksi	Mpa	Ksi		
680-880	98-127	450	65	500	73	25mm	260

Physical Properties At room temperature (20°):

Density	7.8 gm/cm ³
Specific Heat	480J/kg.K
Thermal Conductivity	14 W/m.K
Thermal Expansion	(10-6/K) 30-300°C - 14.0
Modulus of Elasticity	(103N/mm ²) - 200

Chemical Composition (% by weight)

C	Si	Mn	P	S	Cr	Ni	Mo	N
max	max	max	max	max				
0.03	1.0	2.0	0.03	0.02	2.2	5.5	3.0	0.14

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