Industeel URANUSÂ® 52N+ 25 Cr Super Duplex Stainless Steel with PREN = 40

Category : Metal , Ferrous Metal , Duplex , Stainless Steel , T S30000 Series Stainless Steel

Material Notes:

Description: URANUSÂ® 52N+ (UR 52N+) is a super duplex stainless steel with 25% Cr and a PREN value higher than 40. The minimum guaranteed yield strength is 550 MPa which allows the designer to reduce weight. The molybdenum and nitrogen additions have been optimized in order to obtain the best corrosion resistance properties even for heavy plates. High nitrogen content improves the structure stability particularly in HAZ. Its corrosion resistance is much better than UR B6/N08904 and roughly equivalent to 6 Mo super austenitic alloys. Copper additions increase the corrosion resistance properties, particularly in sulfuric acid media. URANUSÂ® 52N+ is a cost efficient grade designed for offshore, marine, phosphoric acid, sulfuric acid applications... as well as pollution control equipments.Information provided by manufacturer.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Industeel-URANUS-52N-25-Cr-Super-Duplex-Stainless-Steel-with-PREN-40.php

Physical Properties	Metric	English	Comments
Density	7.82 g/cc	0.283 lb/inÂ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	<= 28	<= 28	Typical
Hardness, Vickers	250 - 280	250 - 280	Typical, V₅
Tensile Strength, Ultimate	>= 770 MPa	>= 112000 psi	
Tensile Strength, Yield	>= 550 MPa @Strain 0.200 %	>= 79800 psi @Strain 0.200 %	
	>= 570 MPa @Strain 1.00 %	>= 82700 psi @Strain 1.00 %	
Elongation at Break	>= 25 %	>= 25 %	
Modulus of Elasticity	200 GPa	29000 ksi	
Poissons Ratio	0.333	0.333	Calculated
Shear Modulus	75.0 GPa @Temperature 20.0 Â°C	10900 ksi @Temperature 68.0 Â°F	
Charpy Impact	>= 95.0 J	>= 70.1 ft-lb	
	>= 70.0 J @Temperature -50.0 Â°C	>= 51.6 ft-lb @Temperature -58.0 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear	13.5 Âµm/m-Â°C @Temperature 20.0 - 100 Â°C	7.50 Âµin/in-Â°F @Temperature 68.0 - 212 Â°F	
	14.0 Âµm/m-Â°C @Temperature 20.0 - 200 Â°C	7.78 Âµin/in-Â°F @Temperature 68.0 - 392 Â°F	
	14.5 Âµm/m-Â°C @Temperature 20.0 - 300 Â°C	8.06 Âµin/in-Â°F @Temperature 68.0 - 572 Â°F	
Specific Heat Capacity	0.450 J/g-Â°C @Temperature 20.0 Â°C	0.108 BTU/lb-Â°F @Temperature 68.0 Â°F	
Thermal Conductivity	17.0 W/m-K @Temperature 20.0 Â°C	118 BTU-in/hr-ftÂ²-Â°F @Temperature 68.0 Â°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.030 %	<= 0.030 %	
Chromium, Cr	25 %	25 %	
Copper, Cu	>= 1.5 %	>= 1.5 %	
Iron, Fe	<= 63.22 %	<= 63.22 %	As remainder
Molybdenum, Mo	3.5 %	3.5 %	
Nickel, Ni	6.5 %	6.5 %	
Nitrogen, N	0.25 %	0.25 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000850 ohm-cm @Temperature 20.0 Â°C	0.0000850 ohm-cm @Temperature 68.0 Â°F	

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