HINDUSTAN INOX LTD

Technical Information

Stainless Steel Bare Wire

Alloy:HIL312
Class : ER312

Conforms to Certification : AWS A5.9
ASME SFA A5.9

Alloy ER312 Welding data

Weld Process : Used for Mig, Tig & Submerged arc

AWS Chemical Composition Requirements

C=0.15 max	P=0.030max
Si=0.30-0.65	S-0.030max
Mn=1.0-2.50	Mo=0.75max
Cr=28.0-32.0	Cu=0.75max
Ni=8.0-10.50	

Type of Filler wire

GMAW " Mig Filler wire"
Diameter Range
0.80-1.6mm
0.030"-1/16"

GTAW " Tig Process "
Diameter Range
1.60-4.00mm
1/16"-5/32"

Submerged Arc Welding
Diameter Range
1.60-4.00mm
1/16"-5/32"

Deposited Chemical Composition % (Typical)

C = 0.12	Si = 0.48	Mn = 1.65
P = 0.013	S = 0.012	Cr = 28.80
Ni =9.20		

Deposited All Weld Metal Properties

Data is typical for ER312 weld metal deposited by mig using Argon+2% oxygen and Tig using 100% Argon as the shielding gas. Data on Sub-arc is not presented, as sub-arc is dependent on the type of flux used.

Mechnical Properties (R.T.)

Yield strength	502 MPa
Tensile strength	715MPa
Elongation	26%
Reduction of area	31%

Application

ER-312 is used to weld cast alloys of similar composition and is used to weld dissimilar metals and weld overlays. This alloy has very high ferrite . When welding similar cast alloys , limit welding to two or three layers only.

If additional information is needed contact Hindustan Inox Ltd . +912243401414, sales@hindustaninox.com