

ST-410

2020.09



❖ Specification

AWS A5.9	ER410
JIS	Z3321 YS410
EN	ISO 14343-A W 13

❖ Applications

TIG Welding of 13%Cr stainless steel (STS 403, STS 410)

❖ Characteristics on Usage

Structure of all-weld metal is martensite having magnetic properties thus providing high hardness, good anti-abrasive property. Bead appearance and weldability are good. Due to high hardness of all-weld metal and excellent resistance to corrosion and abrasion, it can be used to hardfacing of carbon steels and 13%Cr stainless steels application.

❖ Note on Usage

Use 100% Ar

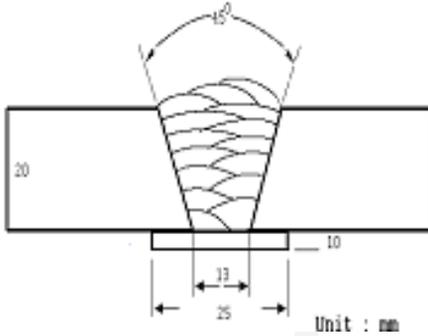
❖ Packing

Dia.	1.6mm (1/16in)	2.0mm (5/64in)	2.4mm (3/32in)	2.6mm (0.10in)	3.2mm (1/8in)
TIG	5kg (11lbs)				



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions



[Joint Preparation & Layer Details]

Diameter(mm)	: 2.4mm
Shielding Gas	: 100%Ar
Flow Rate(ℓ /min.)	: 20~25
Amp./ Volt.	: 160~240 /
Pre-Heat(℃)	: R.T.
Interpass Temp.(℃)	: 150 ± 15
Polarity	: DC(-)
PWHT(℃)	: 745 ± 15 1hr, Furnace cooling(315), Air cooling(RT)

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact test Joule (ft·lbs)	
	T.S. MPa (ksi)	EL. (%)	+20℃ (68°F)	0℃ (32°F)
ST-410	775 (113)	19	134 (99)	58 (43)

❖ Chemical Analysis of the wire(wt%)

Consumable	Chemical Composition (wt%)				
	C	Si	Mn	Ni	Cr
ST-410	0.10	0.38	0.34	0.17	12.0
AWS A5.9 ER410	≤0.12	≤0.5	≤0.6	≤0.6	11.5 ~13.5

❖ Chemical Analysis of All weld metal(wt%)

Consumable	Chemical Composition (wt%)				
	C	Si	Mn	Ni	Cr
ST-410	0.10	0.39	0.46	0.65	9.68

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