

TGA-52

AWS A5.18 ER70S-2
EN ISO 636-B W 49A 3 2Ti
JIS Z3316 W 49 AP 3U 2

Characteristics and Applications :

TGA-52 is a multiple deoxidized mild steel welding wire for GTAW welding applications. In addition to manganese and silicon, it picks aluminum, titanium and zirconium as deoxidizers which provide sound welds in semi-killed and rimmed steels and is suitable for welding steels that have a rusty or dirty surface.

Notes on usage :

1. 100% Argon shielding gas with 99.997% high purity is recommended and the flow rate must be properly controlled. The flow rate is recommended 7-12l/min when arc current is 100-200Amp and it goes up to 12-15l/min when arc current rises to 200-300Amp.
2. Trailer Shield is required to ensure the weld pool completely shielded by inert gas until solidification is complete and no porosity problem.
3. Select right gas cup size and employ proper stick out of tungsten electrode.
4. In order to have a very clean weld pool, keep the weld plate free from dirt, rust, paint and any other atmospheric contamination.

Typical chemical composition of wire (wt%):

	C	Mn	Si	P	S	Ni	Cr	Mo	V	Al	Ti	Zr	Cu
AWS	≤0.07	0.90-1.40	0.40-0.70	≤0.025	≤0.035	≤0.15	≤0.15	≤0.15	≤0.03	0.05-0.15	0.05-0.15	0.02-0.12	≤0.50
EN ISO	0.04-0.14	0.90-1.40	0.40-0.80	≤0.025	≤0.035	≤0.15	≤0.15	≤0.15	≤0.03	0.05-0.20	Ti+Zr 0.05-0.25		≤0.35
Typical value	0.06	1.25	0.5	0.01	0.008	0.03	0.05	0.07	0.02	0.14	0.15	0.08	0.048

Typical mechanical properties of all weld metal:

	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -30°C (-20°F)
AWS	≥400(58)	≥490(70)	≥22	≥27(20)
EN ISO	≥390(57)	490-670(71-97)	≥18	≥47(35)
Typical value	490(71)	578(84)	32	300(221)

Sizes available:

Diameter (mm)	1.6	2.0	2.4	3.2
Length (mm)	915			

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