

# TF-600

ESW (SESNET) Wire / Flux

## Characteristics and Applications:

It is designed for the electro slag welding (ESW) of mild steel and 490N/mm<sup>2</sup> class tensile strength steel using consumable nozzles made of steel pipe.

In the welding of steel-column diaphragms, a bare consumable nozzle prevents the slag bath from becoming excessively deep and thus ensures stable weld penetration.

Vertical position welding of mild steel and 490N/mm<sup>2</sup> class tensile strength steels for the construction of ships, buildings and other like structures.

## Notes on usage:

1. Do not rapidly change the depth and temperature of the slag bath.
2. In case of the interruption of welding, ensure that you have adequate amounts of material on hand before starting to work.
3. When assembling weldments, please proceed with spot welding at the outside of the hole on metal parts.
4. Please keep gap precision less than 0.5mm.
5. Please remove all contaminations in holes and keep dry before welding.
6. Stick out the wire from tube end around 30-40mm and control the thickness of slag around 15-20mm.

## Typical chemical composition of weld metal (wt%):

Wire	C	Mn	Si	P	S	Mo
TES-50G	0.07	1.54	0.55	0.016	0.006	0.12
TES-60G	0.09	1.60	0.64	0.020	0.004	0.20

## Typical mechanical properties of weld metal:

Wire	AWS A5.25	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -20°C(0°F)
TES-50G	FES 70-ES-G-EW	441(64)	580(84)	30	68(50)
TES-60G	FES 80-ES-G-EW	495(72)	650(94)	24	48(35)

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