

# TWH-31-S

## /TF-81

### Characteristics and Applications:

TWH-31-S is a flux-cored wire used for submerged arc welding, it produces a low carbon, low alloy pearlitic structure in the deposited metal. After welding, the deposit can easily be machined because hardness is about HRC 31. It is primarily used for build-up on carbon and low alloy steel components.

It is suitable for built-up continuous casting rolls, steel mill rolls, shafts, idlers, journals or workpieces that machinability is required.

### Notes on usage:

1. The DC(+) polarity is recommended.
2. To prevent weld crack, the pre-heat and inter-pass temperatures should be between 204-316°C for massive workpieces, heavy cylinders and highly stressed workpieces.

### Typical chemical composition (wt%):

	C	Mn	Si	Mo
Typical value	0.14	2.7	0.5	0.6

### Range of weld metal hardness (on mild steel):

Layer	1st layer	2nd layer	3rd layer
Hardness (HRC)	18-24	24-27	28-32

### Suggested welding parameter (DC<+>):

Parameters	Diameter (mm)	3.2
Volt		25-32
Amps		300-450
Stick out(mm)		30-40

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