

# SPECIALTY METALS

## SpecMet CSF 81TM

For 550N/mm<sup>2</sup> class high tensile strength steel

For 80%Ar+20%CO<sub>2</sub> Gas

AWS	A5.29	E81T1-Ni1M
KS	D 7104	YFW-A602R
JIS	Z3313	T553T1-1MA-N2-H5

## Applications

Butt, fillet welding of 550N/mm<sup>2</sup> high tensile strength steels of structure such as ships, bridges, buildings and storage tanks etc.

## Characteristics

1. CSF-81TM is a titania type flux cored wire and designed for all-position welding by single pass & multi pass with Ar+20%CO<sub>2</sub> gas shielding.
2. It provides the excellent usability with stable arc, less spattering, good bead appearance, better slag removal, and less quantity of welding fume comparable to solid wire.
3. It provides a good welding efficiency thank to high deposition rate particularly.
4. It provides excellent impact value at low temperatures in the as-welded and PWHT conditions.

## Notes on Usage

1. The optimum flow of Ar+20%CO<sub>2</sub> for shielding is 20~25ℓ/min.
2. The distance between tip & base metal is to be 20~25mm.
3. Protect the weld with a screen to prevent blowholes caused by wind where the wind velocity is 2m/sec and more.
4. Thick heavy plate should be welded under proper preheating & interpass temperature.

### Typical chemical composition of weld metal (%) (shielding gas: 80%Ar+20%CO<sub>2</sub>)

C	Mn	Si	P	S	Ni
0.04	1.30	0.28	0.013	0.010	0.98

### Typical mechanical properties of weld metal (%) (shielding gas: 80%Ar+20%CO<sub>2</sub>)

YP N/mm <sup>2</sup> (MPa)	TS N/mm <sup>2</sup> (MPa)	EL (%)	IV (J)		PWHT
			-20°C	-40°C	
536	610	28.2	137	98	As welded
512	605	29.0	105	65	620 x 1hr S.R

### Size and recommended current range (DC+)

Dia. Mm(in)	1.2 (0.045)			1.4 (0.052)		1.6 (0.062)	
	Flat H-Fillet	180~300	200~320	200~340	140~250	140~250	140~250
Amp.	V-Up	120~220	140~240	140~240	140~250	140~250	140~250
	V-Down	120~240	140~240	140~240	140~250	140~250	140~250
	O.H	120~220	140~240	140~240	140~250	140~250	140~250

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