


SMAW

For Hard Surfacing

HARDFACING TC

CLASSIFICATION : JIS Z3251 DF5A-700B

WELDING POSITIONS : 

- Hard, Shock Resistant Cr-Mo Deposit
- Ideal for Surfacing and Repairing High Speed Tool Steels

DESCRIPTION AND APPLICATIONS

HARDFACING TC is an exceptionally smooth running, AC/DC electrode depositing air hardening, high speed tool steel metal. The C-Cr-Mo deposit combines toughness and wear resistance with full hardness being retained at temperatures between 500°C and 600°C .

HARDFACING TC is used on a wide range of applications involving the repair and manufacture of punches, dies, shear blades, lathe tools, forming rolls and cutting edges etc. When welding on hardened tool steel preheat and stringer beads are recommended.

DEPOSIT PROPERTIES

The hard tough HARDFACING TC welding deposit may be annealed by soaking at 800°C and then furnace cooled. To re-harden the deposit, heat slowly to 850°C and then quickly to 1250°C, soak for 15 minutes and quench in oil or an air blast if component is small. To develop full hardness, temper at 520°C for a one hour period.

TYPICAL ALL WELD METAL COMPOSITION (Wt%)

C	Mn	Cr	Mo	Fe
0.5	0.6	5.0	5.0	Bal

DEPOSIT HARDNESS

SINGLE-LAYER ON MILD STEEL*	54 - 58 HRC
MULTI-LAYER, AS WELDED	56 - 60 HRC
MULTI-LAYER, HEAT TREATED	60 - 65 HRC

- Single layer deposit hardness may vary depending on base metal type and degree of dilution.

OPERATIONAL AND PACKAGING DATA

ELECTRODE SIZE (mm)	ELECTRODE LENGTH (mm)	WELDING CURRENT RANGE • (amps)	PACKAGING (kg)	
			PKT	CTN
2.5	300	60 - 85	5	20
3.2	350	100 - 125	5	20

- Recommended for DC + or AC (minimum 45 OCV) operation

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