Manganese 25

PRODUCT DESCRIPTION:

Manganese 25 is a self-shielded, flux-cored wire that deposits a low chromium austenitic manganese alloy. As a result of the higher Manganese content in the weld metal, **Manganese 25** is more versatile than standard austenitic manganese filler metals. It can be used for build-up and overlay of austenitic manganese (Hadfield) as well as carbon and low alloy steels. The deposit offers the ultimate in impact resistance and upon work-hardening, has moderate abrasion resistance. **Manganese 25** is not limited to a maximum number of layers of build-up.

OPERATIONAL CHARACTERISTICS:

Manganese 25 has steady arc. Spatter and noise levels are minimal, with a complete, easily removed slag cover. Welding position is limited to a flat-horizontal. The weld deposit should be crack free provided the cooling rate is properly controlled. Conforms to EN 14700 T Fe9.

TYPICAL CHEMICAL COMPOSITION AND HARDNESS*:

C	Mn	Si	Cr	Ni	Fe	Hardness (As welded)	Hardness (Work Hardened)
0.9	20.0	0.5	2.5	0.9	Balance	25 HRC	53 HRC

*All weld metal (5 layer) – Weight percentage (w%)

RECOMMENDED OPERATING PARAMETERS:

Diameter (mm)	Current	Stick-Out (mm)	Optimum Amps	Volts	Deposition Rate Amps	kg/hr
1.6	DCEP	25 - 38	225 - 275	23 - 25	200	3
			275 - 350	**24 - 27**	250	5
			350 - 400	26 - 29	300	7

Start with **middle ranges** and adjust accordingly. Higher amperages will increase deposition rate, dilution, and heat input to base metal, increasing voltage will widen and flatten bead profile, but excessive voltage will result in porosity.
Too much electrical stick-out may result in increased spatter, too little may result in internal porosity.

AVAILABLE DIAMETERS AND PACKAGES:

Diameter (mm)	15kg Spool
1.6	BS300 Wire Basket

APPLICATIONS:

- Build-up of Hadfield Manganese components
- High impact wear protection of Carbon and low-alloy steel components