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TECHNICAL DATA SHEET No. 17

Product:	Grade A43-O Hardfacing Wire
Description:	A Complex Chromium Carbide alloy tubular flux cored wire.
Nominal Composition:	C 5.6%, Cr. 20.8%, Nb. 6.7%, Balance Fe. + alloying elements.
Hardness:	82 HRA average.
Availability:	2.4mm dia. & 2.8mm dia. on 15 kg spools or 25 kg reels.
Typical Applications:	Medium to high abrasion, medium impact applications, at temperatures up to 450° C, general purpose wear plates, screens, fan impellor wear plates etc.
Application Instructions:	
A) Work Preparation:	It is essential that all surfaces to be welded are clean and free from rust, scale etc. This may be achieved by wire brushing, or in the case of heavy rust or scale, by grinding or shotblasting.
B) Pre-Heating:	The workpiece should be pre-heated to 100° C to reduce cracking of the deposit.
C) Deposition:	Wherever possible the wire should be deposited in the down hand position, i.e. with the workpiece horizontal. The wire should be deposited with minimum amps consistent with good weld flow and a steady arc - as a guide this should be in the range 270-320 amps, 26-30V, with 25-40mm stick-out for the 2.4mm dia. wire, & 300-380 amps, 26-30V, with 25-40mm stick-out for the 2.8mm dia. wire. Where possible the required thickness of deposit should be achieved in one pass, up to a thickness of 5mm, to reduce cracking. Each pass should be deposited with a weave to produce a bead 12-15mm wide and should overlap the previous bead by 5-6mm. to produce a smooth even surface finish. Shielding gas is not required with this wire.
D) Deposit Thickness:	Maximum 10-12mm in 2 to 3 layers.
E) Cooling:	Slow cool large workpieces in still air or cover with thermal blankets, smaller workpieces should be immersed in suitable insulating material until cold.