

Premium Metal Cored Gas Shielded Build-up Wire with Exceptional Resistance to Impact Accompanied by Mild Abrasion and Metal-to-Metal Wear

EnDotec® DO*05



WIRE

- For the re-building or cladding of most low-alloy and manganese steels
- Maximum weld metal recovery
- Exceptional all - position weldability
- High deposition rate for reduced labor costs



DESCRIPTION:

EnDOTec DO*05 is designed to combat wear from resulting from deformation impact, where impact is accompanied by minor abrasion, and metal-to-metal wear. It can be used as a “stand alone” rebuild wire or as a cushion layer for harder top coat alloys.

TECHNICAL DATA:

Typical Hardness as-deposited: HRC 20 - 22
Typical Yield Strength: 84,000 psi (580 MPa)
Typical Tensile Strength: 130,000 psi (900 MPa)
Typical Impact strength: 70 J @ 20°C 50 J @ -20°C
Power Source Type: Constant voltage & Integrated Wire Drive
Current & Polarity: DC (+) electrode positive
Shielding Gases:
1st.) Argon 98% + 2% Oxygen
2nd.) Argon 75% + 25% Carbon Dioxide

TYPICAL APPLICATIONS:

APPLICATIONS

- Drive Tumblers
- Frogs and Points
- Impeller Bars - Excavation Teeth
- Refuse Hammer
- Hammer Mills
- Gyratory Crushers

INDUSTRY

Dredging
Railway
Cement
Refuse
Paper,Cement
Ore Processing

TYPICAL WELDING PARAMETERS

DIAMETER	VOLTAGE	AMPERAGE	WIRE EXTENSION
.045" (1.2mm)	18-23 (Short Arc)	120-200 (Short Arc)	9/16" ± 1/8" (14mm ± 3mm) Use long nozzle
	24-28 (Spray Arc)	220-300 (Spray Arc)	5/8" ± 1/8" (16mm ± 3mm) Use short nozzle
1/16" (1.6mm)	21-26 (Short Arc)	90-170 (Short Arc)	9/16" ± 1/8" (14mm ± 3mm) Use long nozzle
	23-28 (Spray Arc)	160-230 (Spray Arc)	5/8" ± 1/8" (16mm ± 3mm) Use short nozzle

PROCEDURE FOR USE:

Caution: Although a 2-roll wire drive assembly will work the optimum for maintaining arc voltage stability and consistent and smooth wire feeding is a serrated 4-roll drive assembly. Smooth drive rolls are not recommended!

Step 1: Remove all “old” cracked or spalled weld metal down to a sound base.

Step 2: Preheat the part to be hardfaced depending on its air hardenability potential and/or carbon level. For most constructional steels a nominal preheat of 150°F is suggested and for medium alloy steels, ~250°F.

Note: Do not heat high manganese steels such as Hadfield Castings!

Step 3: After checking that the welding conditions are optimal by testing on scrap metal, position the gun head at a 70-80° angle and use a “push” technique for downhand welding. For fully automated welding such as hardfacing cylindrical parts, the wire should exit at about a 10° lagging angle from top dead center. Using this technique will assure a smooth and regular weld deposit profile with the optimum level of fusion.

Note: If welding is interrupted and the part being welded cools to room temperature, make sure to re-heat to the original preheat temperature. For hardenable steels slow cooling is advised using silicone blankets, vermiculite, or other environmentally suitable heat-retardant material.

YOUR RESOURCE FOR PROTECTION, REPAIR AND JOINING SOLUTIONS



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