

EnDotec. DO^{*}23

Gas Shielded Continuous Electrode For Semi-Automatic And Robotic Welding Applications

DESCRIPTION

Exclusive, gas shielded, metal cored alloy wire, ideal for maintenance and repair applications or batch manufacturing where highest integrity welding, efficiency and productivity are required. Specifically developed for low heat input semi-automatic joining, rebuilding and anti-wear protective coating of cast iron. It can also be used to join cast iron to steels. The innovative composition, with carbon and manganese added to a ferronickel base, gives a slag-free deposit with exceptionally good mechanical properties. Its nickel-rich matrix, with spheroidal graphite precipitates, offers exceptional crack resistance under high restraint. Thanks to its combination of strength and good elongation properties, cast iron can be joined without use of fixtures, rebuilt or coated. Low heat input for low dilution

- Maximized weld metal recovery
- Regular bead profile virtually spatter free
- Faster deposition rate for reduced labor costs
- Exceptional positional weldability
- Versatile usage over wide parameter range

APPLICATIONS

For joining and coating highly restrained spheroidal graphite cast iron, grey cast iron and malleable cast iron workpieces, as well as for joining cast iron to steels.

- Frames
- Casings for pumps and valves
- Crushers
- Machine tool beds
- Turbine scaling rings
- Textile industry machines
- Machining errors on castings

Complementary products: XHD 2230: manual electrode

PROCEDURE FOR USE

Welding Equipment: EnDotec continuous electrodes are compatible with most conventional, constant voltage power sources. Models with programmable, pulsed arc, metal transfer modes offer optimal performance.

Castolin Eutectic recommends using wire drive systems fitted with 4 knurled feed-rollers as well as polyamide liners.

Preparation: Remove old welding deposits and fatigued metal with ExoTrode. For joining and assembly, bevel edges to a V (45°) or X, especially for parts with a large cross-section. Areas to be coated and the groove faces of joints should be cleaned or ground to remove any contamination or oxidation (scale).

Preheating: This is not usually necessary. With difficult-to-weld base metals and with complex shaped workpieces, slight preheating to about 200°C will minimize any risk of cracking in the transition zone. The use of pulsed arc technology significantly improves semi-automatic welding productivity. A synergic program with continuously variable parameters is incorporated in certain Castolin Eutectic equipments which optimises welding performance over a wide range of deposition rates with minimum heat input and also facilitates positional work. To obtain additional information, contact your Castolin Eutectic application specialist.

Welding technique: For multipass flat/down hand joining, best penetration is obtained by pulling the torch at an angle of 80-70° to the axis of the joint. For fillet and or corner welding, the best bead pattern is obtained by pushing the torch at an angle of 70-60° to the axis of the joint.

Machining: Machine using normal cutting tools. Arc or plasma cutting equipment may also be used.

TECHNICAL DATA

Tensile strength: 475 N/mm² (68,000 psi)

Yield strength: 375 N/mm² (54,000 psi)

Typical hardness: 190 BN

Current polarity: DC (+)

Shielding gases: Recommended gas: 82% Ar, 18% CO₂ [ISO 14175-M21] Flow rate (l/min): 16

Electrode (mm)	Voltage (V)	Current (A)
1.2mm	19-24	110-280