

EnDotec. DO*390N

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

DESCRIPTION

Nanoalloy proprietary gas-shielded metal cored wire. It is ideal for both maintenance and repair and production applications where welds of utmost reliability, performance and productivity are required. The slag free deposit has a high concentration of complex borocarbides finely distributed in an iron alloy matrix. The exclusive nanoscale microstructure of this electrode guarantees exceptional performance against wear from severe abrasion and erosion. Bulk hardness properties are retained up to 750°C. The slightly magnetic and machinable weld deposits exhibit stress relieving microfissures and smooth surface contours free from ripples.

- Low friction coefficient without lubrication
- Low heat input for minimum dilution, which guarantees best properties of weld layers
- Maximum weld metal recovery coefficient
- Exceptional positional weldability
- Virtually spatter free, regular bead profiles
- Versatile applications over a wide parameter range
- Faster deposition rate for reduced labour costs
- Versatile applications over a wide parameter range
- Faster deposition rate for reduced labour costs

APPLICATIONS

Designed for extremely abrasion and erosion resistant protective coatings of carbon steel, alloy steels and stainless steels.

Typical application industries include: steelworks, cement plants, waste management plants, power plants, foundries, chemical processing plants, mining, petrochemical plants, etc.

Specific parts: Screw conveyors, furnace chutes, extractor fans, cyclones, conveyors, mixing blades, vanes, scrapers, press screws, sieves, etc.

PROCEDURE FOR USE

Welding Equipment: EnDotec continuous electrodes are compatible with most conventional constant voltage power sources. Models with programmable pulsed arc metal transfer functions offer optimum performance. E+C recommends the use of wire drive systems fitted with 4 knurled rollers as well as polyamide liners.

Preparation: Completely remove all previous weld deposits and worn metal with ExoTrod

Preheating: Preheating depends on the steel's Carbon Equivalent (CE), workpiece size, thickness and geometry. Castolin Eutectic recommends:

CE < 0.2: no preheating required

CE 0.2-0.4: preheating between 100-200°C

CE: 0.4-0.8: preheating between 200-350°C

300°C preheat promotes relatively crack-free welds.

Intermediate coat: Microfissures are minimized by depositing a base layer of EnDotec DO*02 for manganese austenitic steels and work hardening steels.

Welding technique : For single or multipass, down hand coating applications. Push the electrode at an angle of 70-80° to ensure optimal fusion. When required, additional passes should only be executed while the weld is still hot.

Machining

The deposit is machinable by grinding. Arc or plasma cutting equipment may also be used.

TECHNICAL DATA

Typical hardness

Hardness (1 layer): ...66-68 HRC

Hardness (2 layers): ...67-71 HRC

Current polarity: DC (+)

Shielding gases

Recommended gas: 97.5% Ar, 2.5% CO₂

[ISO 14175 M12]

Alternative gases: 82% Ar, 18% CO₂

[ISO 14175 M21]

Flow (l/min): 18

Electrode(mm)	Voltage (V)	Current (A)
1.6mm	20-34	150-350