

EnDotec. DO 48*

Gas Shielded Continuous Electrode For Anti-Wear Coatings

DESCRIPTION

Exclusive, Chrome & Nickel free gas shielded, metal cored alloy wire, ideal for maintenance and repair applications or batch manufacturing where highest integrity welding, efficiency and productivity are required.

The slag-free deposit features a high density of hard, cast tungsten carbide particles evenly distributed in a ferrous alloy matrix which is further reinforced with very fine precipitates formed by recrystallisation. This gives exceptional resistance to abrasive-erosive particles combined with moderate impact at ambient temperatures. Deposits may exhibit some stress relief cracks.

- Low heat input for low dilution.
- Maximised weld metal recovery.
- Exceptional positional weldability.
- Regular bead profile, virtually spatter free.
- Versatile usage over wide parameter range.
- Faster deposition rate for reduced labour costs

APPLICATIONS

Designed specifically for antiwear protective coatings on carbon steels and alloy steels. Typical industries include mining, quarries, drilling, tunneling, public works. Extrusion press parts, transport screws, mixer blades, paddles, conveyors, scraper blades, cylinder crushers, pump rotors and bodies, 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 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 worn metal completely with ExoTrod

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

CE < 0.2 : preheat not essential

CE 0.2-0.4 : preheat 100-200°C

CE 0.4-0.8 : preheat 200-350°C.

Note that 12-14% Mn steels should never be preheated and the workpiece temperature during welding should be kept below 250°C.

Buttering layer

Deposit a buttering layer of EnDotec DO*02 on austenitic manganese steels, and EnDotec DO*28S on hardening steels.

Welding technique

For single pass, downhand coating applications, pull the torch at an angle of 70-80° to ensure optimal fusion. If required, a maximum second pass 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: 57-60 HRC

Micro hardness of carbides (HV): 2300

Current polarity: DC (+)

Shielding gases

Electrode (mm)	Voltage (V)	Current (A)
1.6mm	17-22	70-180