

EnDotec. DO^{*}11

Gas Shielded Continuous Electrode For Semi -Automatic And Robotic Welding

DESCRIPTION

Exclusive, Chrome-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, "as cast" Tungsten Carbide particles evenly distributed in a nickel alloy matrix which is further reinforced with very fine precipitates formed by recrystallisation. This gives exceptional resistance to abrasive-erosive particles with moderate impact and is specifically for service in hot or corrosive environments.

Deposits are crack resistant which prevents ingress and contamination by organic matter or bacterial growth.

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

APPLICATIONS

Designed for antiwear protective coatings on carbon steels, alloy steels, stainless steels and nickel alloys. Typical industries include agricultural, food, beverage, organic oils, pulp and paper, chemical processing. Oil pressing parts, transport screws, cellulose mixing blade spaddles, conveyors, bone mill hammers 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 ExoTrode

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^{*}500S on hardening steels.

Welding technique

For single pass, downhand coating applications. Push or pull the electrode at an angle of 70-80° to ensure optimal fusion. If required, a 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: 55 HRC

Micro hardness of carbides (HV) : 2400

Current polarity: DC (+)

Shielding gases

Recommended gas: 97,5% Ar, 2,5% CO₂ [ISO 14175 - M12]

Flow rate (l/min): 16

Electrode (mm)	Voltage (V)	Current (A)
1.6mm	18-22	120-140