

EnDotec DO^{*}622 S

Gas Shielded Continuous Electrode For Semi -Automatic And Robotic Welding

DESCRIPTION

Exclusive, gas shielded flux cored nickel base wire, ideal for maintenance and repair applications or batch manufacturing where highest integrity welding, efficiency and productivity are required. Specifically developed for joining large pieces, subjected to high stresses and made of low alloy steels, high alloy steels, dissimilar steels, non-identified steels and nickel alloys.

Also suitable for protective coatings, offering excellent resistance to attack by most kinds of acids and alkalis, even in strong concentrations. Conceived to avoid brittle phases in the dilution zone, even when the base metal is an alloy steel, stainless steel, nickel or copper-based alloy.

- Exceptional resistance to cracking because deposit has a coefficient of thermal expansion very similar to steel.
- No risk of sigma phase formation or embrittlement.
- Deposit is unaffected by heat thermal cycles and stresses induced by high temperatures over long periods of time.
- Basic slag deposit, very easy removal.
- Good resistance to corrosion, oxidation.
- Excellent resistance to thermal shocks.
- Very high impact strength.
- Low heat input for low dilution.
- Maximized weld metal recovery
- Regular bead profile, virtually spatter free.
- Faster deposition rate for reduced labour costs.

APPLICATIONS

Cement: Kiln bearing rings. Ball mill couplings and clips. Railways: Rail brakes. Civil engineering: Mechanical arms - Chassis - Ripper teeth - Bucket arms

PROCEDURE FOR US

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 with ExoTrod.

For joining and assembly, bevel edges to a V (45°) or X, especially for parts with a large cross-section.

Preheating This is not usually necessary. For high tensile carbon steels preheating to 200-100°C can be employed.

Welding parameters Welding current: = (+)

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

Once the workpieces are securely clamped, apply a buttering layer on the two groove faces to limit dilution with the base metal. Where there is a severe risk of hardening the base metal, make the first pass at a low amperage, pushing the torch without weaving. Ensure that there are no cracks by carrying out a dye-penetrant test. Finish filling the groove.

Machining

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

TECHNICAL DATA

Tensile strength: 610 N/mm² (88,000 psi)

Yield strength: 380 N/mm² (55,000 psi)

Elongation: 40%

Impact strength AV(I/-196°C): 90

Current polarity: DC (+)

Shielding gases

Recommended gas : Ar%15-25%CO₂ [ISO 14175 -M21] Flow rate (l/min): 14-18

Electrode(mm)	Voltage (V)	Current (A)
1.2mm	21-31	130-250
1.6mm	22-32	150-300