



EnDOtec® DO*02

Gas shielded metal cored alloy wire

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.

It is ideal for joining dissimilar martensitic or austenitic stainless steels. It can be applied either as a buttering layer or as a coating for protection against impact and high pressure.

EnDOtec DO*02 Features:

- Excellent crack resistance
- High resistance to metal/metal friction
- Good resistance to thermal cycling and oxidation, at working temperatures up to 600°C
- Rapid work-hardening
- High ductility and elongation reducing local stresses
- Stainless and slightly magnetic
- Slag free deposit machinable deposit
- Low heat input for low dilution
- Maximum weld metal recovery
- Excellent bead appearance, no spatter, high arc stability
- Exceptional all-positional weldability
- High deposition rate for reduced labour costs
- Great flexibility in operation: 100-400 A

Technical Data:

Mechanical properties:

Tensile strength Rm: 650 MPa
 Yield strength: Rp0.2 350 MPa
 Elongation A5: 30-40%
 Impact strength: 70J 20°C
 55J -20°C
 45J -60°C

Hardness after welding: 10Rc
 Hardness after work hardening: 35Rc

Shielding gases:

97.5% Ar, 2.5% CO₂

Other possible gases :

99% Ar, 1%O₂

100% Ar

82% Ar, 18% CO₂

Flow rate: 12-16 l/min

Applications:

Designed for joining large sections of dissimilar composition, Armour plate, Manganese steels, and furnace components. Super heated steam outlets, rails and frog points. For buttering layers, multi pass protective coatings. Rail truck wheels, cylindrical crusher hooks. Gyrotory crusher cones. Rolling mill inlet guides. Drive sprockets.

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. E+C recommends using wire drive systems fitted with 4 feed-rollers - smooth rollers for Ø 1.2 mm and knurled rollers for Ø 1.6 mm - as well as polyamide liners.

Preparation:

Remove old welding deposits and worn metal completely with ChamferTrode 03/04.

Preheating:

Preheating depends on the steel's Carbon Equivalent, and the work piece size, thickness and geometry. E+C 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 work-piece temperature during welding should be kept below 250°C.

Welding parameters:

Welding current: = (+)

Diameters	1.2 mm		1.6 mm	
Transfer mode	Short arc	Spray arc	Short arc	Spray arc
Arc voltage (V)	17-22	29-31	16-20	27-31
Amperage (A)	90-230	230-280	110-300	270-325

Welding technique:

For multi-pass, down-hand joining, optimum penetration is obtained by pulling the torch along the joint at an angle of 70/80°.

For fillet welding, the best bead appearance is obtained by pushing the electrode with a torch feed angle of 60-70°.

Machining:

Machine using carbide-tipped cutting tools Arc or plasma cutting equipment may also be used.

Packaging:

EnDOtec continuous electrodes are precision wound on recyclable, wire spools (DIN 8559, K300) to a standard weight of 15 kg and specially packed for optimum, storage protection.

DIGITALWELD

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