

Premium Metal Cored, Gas Shielded, Build-up Wire with
Exceptional Resistance to Corrosion

EnDotec® DO*29S



WIRE

- Low heat input for low dilution
- Maximum weld metal recovery
- Corrosion resistant at high temperatures
- Exceptional all - position weldability
- High deposition rate for reduced labor costs
- Machinable



DESCRIPTION:

EnDOTec DO*29S is designed for joining and build-up of plain carbon steel, construction grade and low alloy steels. It is multi-component iron-base alloy containing Ni, Mo, and Cr to prevent corrosion.

Low carbon to minimize intergranular carbide precipitation, which can cause intergranular corrosion. Good resistance to oxidation scaling and heat checking.

TYPICAL APPLICATIONS:

APPLICATION

Pump Castings
Chemical Vats - Pulp Digesters
Boiler Pumps
Valve Castings - Chemical Hoppers
Filters - Pasteurizers
Plating Baskets

INDUSTRY

Pulp & Paper
Pulp & Paper
Heating
Chemical
Agriculture
Steel

TECHNICAL DATA:

Typical Hardness as-deposited: HRB 90-100
Typical Tensile Strength: 80,000 psi
Power Source Type: Constant voltage & Integrated Wire Drive
Current & Polarity: DC (+) electrode positive
Shielding Gases: Recommended Gas: 100% CO₂
Alternative Gas: 98% Ar, 2% CO₂

PROCEDURE FOR USE:

Caution: Although a 2-roll wire drive assembly will work the optimum for maintaining arc voltage stability and consistent and smooth wire feeding is a serrated 4-roll drive assembly. **Smooth drive rolls are not recommended!**

Step 1: Remove all "old" cracked or spalled weld metal down to a sound base.

Step 2: When re-building, a cushion layer is advised. For 12-14% Mn steels, use EnDOTec DO*05.

Step 3: Preheat the part to be hardfaced depending on its air hardenability potential and/or carbon level. For most constructional steels a nominal preheat of 150°F (65°C) is suggested and for medium alloy steels, ~250°F (~121°C).

Note: Do not heat high manganese steels such as Hadfield Castings!

Step 4: After checking that the welding conditions are optimal by testing on scrap metal, position the gun head at a 70-80° angle and use a "push" technique for downhand welding. For fully automated welding such as hardfacing cylindrical parts, the wire should exit at about a 10° lagging angle from top dead center. Using this technique will assure a smooth and regular weld deposit profile with the optimum level of fusion.

Note: If welding is interrupted and the part being welded cools to room temperature, make sure to reheat to the original preheat temperature. For hardenable steels slow cooling is advised using silicone blankets, vermiculite, or other environmentally suitable heat-retardant material.

Step 5: For most applications, other than a superficial grind, finishing is not required. If some level of profiling is needed use either grinding or single-point machine finishing.

NOTE: For more details regarding machining deposits of DO*29S consult with Technical Services.

TYPICAL WELDING PARAMETERS

DIAMETER	VOLTAGE	AMPERAGE	CONTACT TIP	WIRE SPEED
.45" (1.2mm)	23-27 (Short Arc)	135-190 (Short Arc)	1/2" ± 1/8" short nozzle (Short Arc)	230-360 ipm Short Arc
	25-30 (Spray Arc)	150-230 (Spray Arc)	9/16" ± 1/8" long nozzle (Spray Arc)	275-525 ipm Spray Arc

YOUR RESOURCE FOR PROTECTION, REPAIR AND JOINING SOLUTIONS



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