

MIG Welding

Description

MIG welding is an arc welding process that uses a continuous wire as filler material and an inert gas (generally argon or Ar/CO₂ mixtures) to protect the molten pool from oxidation.

It is a reliable and versatile technique widely used for **geometry restoration, repair of worn components, and controlled material build-up.**



Process

By means of an anthropomorphic robot, an electric arc is generated between the welding wire and the workpiece, melting both and creating a weld bead metallurgically bonded to the substrate. The wire is fed continuously, and the gas shielding ensures a clean and contamination-free fusion.

Welding parameters (current, wire feed speed, gas) are adjusted according to the type of material and the thickness to be rebuilt.

Highlights

- High versatility and wide range of filler materials
- Excellent weld bead control and good metallurgical quality
- Ideal for reconstruction and repair of industrial components
- Suitable also for medium-to-large surfaces
- Economically advantageous process and rapidly executable

Applications

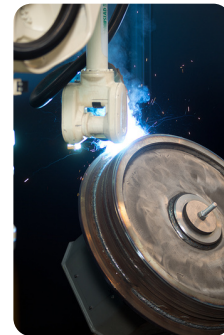
- Dimensional restoration of shafts, housings, and damaged surfaces
- Regeneration of components subject to wear or impact
- Repair of cracks and microcracks
- Industrial applications on medium-to-large components

Applied Materials

- Carbon steel wires
- Stainless steel wires
- Cast iron wires (with nickel or special alloys)
- Ni- and Co-based alloys for wear-resistant applications
- Specific materials for structural build-up and overlays

Coating Thickness

- Up to 10 mm



Technical Data

- Maximum outer diameter: 1000 mm
- Maximum length: 1,500 mm
- Maximum weight: 300 kg

| Product | Material | Colour | Hardness | Thickness | Max working temperature | Roughness | Substrate |
|----------------------|------------------|--------|-----------|-----------|-------------------------|------------|-----------|
| EU_WELD_LASTIFIL 600 | Lastifil 600 | Grey | 58-62 Hrc | 5-10 mm | 500°C | 0,4-0,8 Ra | Steel |
| EU_WELD_STELLITE | Stellite grade 6 | Grey | 38-42 Hrc | 5-10 mm | 900°C | 0,4-0,8 Ra | Steel |

Treatable Materials

- Carbon steels
- Alloy steels
- Stainless steels (with dedicated wire)
- Cast irons (with specific techniques and fillers)
- Selected superalloys (parameterized)



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