

# 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/CO<sub>2</sub> 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

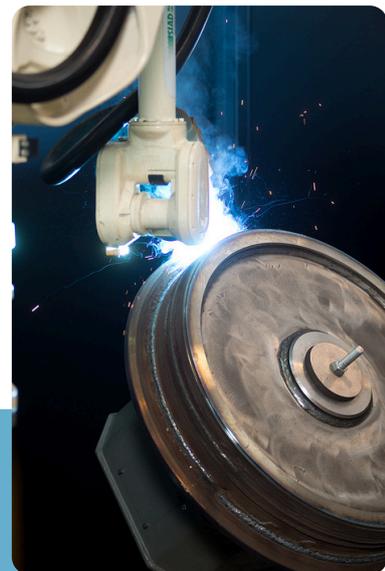
- Carbon steel wires
- Stainless steel wires
- Cast iron wires (with nickel or special alloys)
- Ni- and Co-based alloys for wear-resistant applications
- Specific materials for structural build-up and overlays

## Coating Thickness

- Up to 10 mm

## Technical Data

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



## 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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