

Crack free welding of thin walled cast iron**GENERAL DESCRIPTION**

Nickel cored electrode for the repair of thin, delicate and complicated castings.

Very smooth deposits, which are fully machinable.

Suitable for vertical down and overhead welding.

Porosity free deposit.

Modi Lastek 42E is welded with a weaving motion in the direction of travel. During the forward motion it burns out oil and grease, and during the backward motion a droplet is deposited on the previous deposit.

APPLICATIONS

All thin walled cast iron pieces.

Cracked pump-housing, water-cooling apparatus, pulleys, cast iron flanges and covers, impellers.

Surfacing of valves and valve seats.

Hardness: 130 - 170 HB

CHEMICAL COMPOSITION (%) (Typical values, all weld metal)

| | | | | |
|----------|-----------|-----------|-----------|--------------|
| C : 0.75 | Mn : 0.50 | Si : 0.75 | Fe : 2.00 | Ni : > 95.00 |
| S : 0.02 | Cu : 1.00 | | | |

MECHANICAL PROPERTIES (Typical values, all weld metal)

| Yield Strength N/mm ² | Tensile Strength N/mm ² | Elongation 5d (%) | Impact Strength Charpy V notch (ISO-V) |
|-------------------------------------|---------------------------------------|----------------------|-------------------------------------------|
| | ≥ 370 MPa | ≥ 18 % | |

GENERAL INFORMATION

| | | | |
|----------------------------|--------------------------------------------------|----------|----------|
| Welding positions | All | | |
| Shielding gas | NA | | |
| Packing | 5 Kg in a plastic box | | |
| Polarity | AC or DC, straight polarity (electrode negative) | | |
| Diameter (mm) | 2.5 | 3.2 | 4.0 |
| Length (mm) | 300 | 300 | 350 |
| Approx. current (A) | 40 – 75 | 70 – 100 | 80 – 120 |

Tips & Tricks

For welding thin cast iron (e.g. 5 mm thick):

Drill a hole at the end of the crack. Prepare a groove with a grinding disk. Provide for good support at the back of the cast iron in order to avoid vibrations while peening.

Weld approx. 8 mm wide with Modi Lastek 42E by weaving in the direction of travel (electrode 2.5 mm) at 40-45 Amp. Peen immediately. Continue welding using the "backstep" technique. Never apply a sealing run at the back of the work piece.

Cool down as slowly as possible.