

WELDTECH CAST IRON - WELCI

Specification

AWS Specification: AWS A5.15 ENiFe-CI

JIS Specification: DFC NiFe

Other Specification: DIN 8573: ENiFe-G2

Description

- Weldtech WELCI is an iron-nickel alloy welding electrode for high strength joints on cast iron.
- Suitable for fabrication and repair of a wide range of cast iron components and for the joining of cast iron to steel
- Used primarily for welding nodular graphite or spheroidal graphite (SG) cast irons.
- Weld deposit provides good levels of strength & is crack resistant, while remaining fully machinable
- Easy to control with soft smooth arc characteristics producing even weld beads of good contour.

Application

- For repair and fabrication of cast iron housings, blocks, machinery, parts, frames, casting defects, casting flaws, machine cuts, machining errors, repair of cracks, rebuilding worn or damaged areas and joining thick section castings and cast irons to steel.

Remarks

- Remove all traces of paint, grease, oil, rust, and oxides prior to welding.
- Pay particular attention to castings with sand inclusions.
- Use cutting electrodes for the removal of defects and preparation of cracks.
- Generally, small section castings can be welded without preheat. However, it is important that the base metal interpass temperature does not rise above the "hand-hot" level.
- Deposit in short intermittent beads about 25-50mm with frequent interruptions to allow cooling to take place.
- Fill crater at the end of each weld bead.
- Remove all traces of slag remnants before applying the next bead.
- Deposit without weaving and hammer each weld bead (while still hot) to reduce both local stresses and the risk of weld metal cracking.
- Large castings should be heated slowly and uniformly to a temperature in the range of 100 - 300°C. After welding, the workpiece should be cooled slowly at an even rate.

Technical Data

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL DEPOSITS (%):

C	Si	Mn	Ni	Fe
1.18	0.70	0.49	56.80	Bal.

TYPICAL MECHANICAL PROPERTIES OF ALL WELD METAL DEPOSITS:

Tensile Strength N/mm ² (KSI)	Elongation %	Hardness HV (HRB)
480 (70)	18	170 - 190 (85 - 90)

SIZE AND RECOMMENDED CURRENT RANGE: AC, DC (+)

ORDER CODE	WELCI-25	WELCI-32
DIAMETER x LENGTH (mm)	2.5 x 300	3.2 x 350
Current Amp	50 - 80	70 - 110

Welding Positions:

ALL POSITIONS EXCEPT VERTICAL
DOWN