

AI-1744

Description and Applications

AI-1744 is a newly developed gas shielded, alloy cored wire designed specifically to allow 100% joint efficiency in common grades of ductile iron, high strength cast irons and for joining these alloys to cast and mild steels.

AI-1744 uses a metallurgically unique, nickel-iron-manganese system that provides both outstanding strength and ductility. The addition of manganese allows the reduction of carbon while still providing low residual shrinkage stresses.

AI-1744 is an alloy-cored wire designed for automatic and semi-automatic welding of grey, ductile and malleable irons at high deposition rates. The wire may be used in spray transfer, short arc or pulsed MIG welding. DC Reverse Polarity is used with Argon + 2% Oxygen as the recommended shielding gas.

Applications: **AI-1744** is used for welding of cast irons to themselves and other materials, for repairing worn or broken parts and for salvaging defective castings where highest mechanical strength is required. **AI-1744** offers high quality weldments and can be used with all robotic, automatic and semi-automatic processes. **AI-1744** provides the wetting and crack-resistant weldability that allows steel forgings and castings to be redesigned in less expensive ductile iron and still be automatically welded. Typical production line applications include drive shafts, hydraulic and pneumatic cylinders, conveyor rolls, self-anchoring joints etc. Maintenance applications include roll rebuilding, pump casing repairs, crack repair, casting defect repair etc.

Typical Weldmetal Analysis

C	Mn	Ni	Fe
0.30	11.00	44.00	45.00

Mechanical Properties of Weldmetal

	As Welded
Tensile Strength	620 MPa (89,900psi)
Yield Strength (0.2%)	360 MPa (52,200psi)
Elongation	26%
Shielding Gas	Argon + 2% Oxygen

Welding Parameters

Diameter (mm)	Current type	Amps
1.2	DC(+)	150-220
1.6	DC(+)	180-300

Welding Positions

(1G, 1F) Downhand/flat position, (2F) Horizontal position, (2G) Horizontal vertical position.

Disclaimer

All figures in this datasheet should be considered indicative only. No guarantee is made as to their accuracy.

All figures subject to change without notice. Batch analysis is available for all products sold. Should you require any further information, please contact us at sales@alloysint.com.au



ALLOYS INTERNATIONAL PTY LTD

25 Raymond Road Laverton North Victoria 3026

Telephone: +61 3 8368 2222 | Facsimile: +61 3 8368 2200

ABN 53 112 712 286

sales@alloysint.com.au | www.alloysint.com.au