

AI-1705Mn

Specifications

AS/NZS 2576 ER1215-B6

Description and Applications

AI-1705Mn is a gas shielded surfacing and joining wire used extensively as a buffer layer or build-up on 14% manganese (Hadfield) steel, carbon and other steels prior to hardfacing. It is also extensively used for joining manganese steel to itself or to dissimilar steels. By way of its high chromium content, **AI-1705Mn** is suitable for one-wire hardfacing where work hardening can be expected.

Applications include: Rebuilding of railway frogs and crossovers, railway lines, shovel track pads, and all types of crushers, hammers, manganese steel components, bucket repair and hardfacing, ball mill liners, many earthmoving, quarrying and mining areas.

Typical Weldmetal Analysis

C	Mn	Si	Cr	Fe
0.50	16.00	0.30	13.00	Bal

Mechanical Properties of Weldmetal

	As Welded
Tensile Strength	860MPa
Yield Strength (0.2%)	580MPa
Elongation	37%
Microstructure	Austenite
Hardness	210HRb (15HRc) 450HRb (48 HRc) (Work Hardened)
Shielding Gas	CO₂ or Argon + 25% CO₂

Welding Instructions

Preheat and interpass temperature 200°C. PWHT at 690°C for an hour.

Welding Parameters

Diameter (mm)	Polarity	Amsp
1.2	DC(+)	150-220
1.6	DC(+)	180-300
2.4	DC(+)	250-450

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

