

Hardfacing cored wire

Classification

DIN 8555-83 : MF6-GF-45-KP

General description

**Lincore M is a selfshielded, open arc, flux cored tubular electrode
Deposition of austenitic manganese steel with 14% manganese**

Application

Lincore M is designed for rebuilding and hardfacing of manganese steel, carbon steel and low alloy steel parts
Typical applications include: Rail crossovers, frogs and switchpoints

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Rail crossovers, frogs and switchpoints
Dipper teeth and lips
Crusher hammers
Crushers screens and grizzlies
Chain hooks
Dredge parts, pump shells
Parts for safes and vaults

Manganese bucket fronts
Crusher rolls
Dragline pins and links
Rolling mill parts
Drive sprockets
Shovel tracks

Mechanical properties, all weld metal

	Typical hardness values
As deposited	18-28 Rc
Work Hardened	30-48 Rc

Packaging, available sizes and identification

Unit type	Net weight/unit (kg)	Diameter (mm) 2.0
Spool 22RR	10	X

Additional information

All work-hardened base material and previously deposited material should be removed prior to applying a new deposit, since such areas are prone to embrittlement and possible cracking.

No preheat is required on austenitic manganese steels although a preheat of between 150-200°C may be necessary on carbon and low steels to prevent heat affected zone cracking.

Narrow stringer beads are preferred to avoid excessive heat build up in the base material. High heat input welds and interpass temperatures above 260°C causes manganese carbide precipitation resulting in embrittlement.

There is no definite limitation to the number of passes that may be deposited, however, it is good practise to peen each pass immediately after welding to minimise internal stresses and possible distortion and cracking.

Lincore M deposits work harden rapidly making them difficult to machine. For best results carbide or ceramic cutting tools and rigid tooling should be used. Grinding can also be successfully employed.

First layers on mild and low alloy steel can be welded with RepTec 126, Lincore M can be used to complete the build up.

Welding positions



ISO/ASME PA/1G

Current type

DC +

Chemical composition (w%) typical, all weld metal

C	Mn	Si	Cr	Ni
0.6	13.0	0.4	4.9	0.5

Structure

Martensitic + ferretic

Calculation Data

Diameter (mm)	Wire Feed Speed (m/min)	Current (Amps)	Arc Voltage (volts)	Deposition Rate (kg/h)
2.0	3.2 to 6.4	240 - 360	24 - 29	2.9 - 6.2

Complementary products

Complementary products include Wearshield[®] Mangjet (e)