

ESSEN[®] Mn14

AC/ DC +

AWS A5.13 - 80 EFe Mn-A; ASME
SFA 5.4 A96 EFeMn - A.

Manganese Steel Electrode for Impact Resistance.



PROPERTIES

ESSEN MN 14 is a 14% manganese electrode designed to deposit Austenitic manganese deposits for services involving severe impact. The deposits are extremely tough and work hardens under Impact.

MECHANICAL PROPERTIES

HOT HARDNESS

Reheating above 500 to 600 F (250 C to 315 C) may cause serious embrittlement. Thus, hot hardness is not a property that can be exploited.

IMPACT

The EFeMn electrodes, as-deposited, are usually considered the outstanding engineering materials for heavy impact service.

APPLICATIONS

The applications where surfacing with EFeMn electrodes are most appropriate are those dealing with metal - to - metal wear and impact, where the work - hardening quality of the deposit becomes a major asset. Soft rock crushing operations, involving limestone or dolomite, for eg, can also benefit from such protection. Abrasion by work - hardening manganese steel, severe service with quartz abrasion is best dealt with by using manganese steel as a tough base metal and surfacing with a martensitic iron. Under very high-stress conditions, such as those in a jaw crusher, experience may demonstrate that all wear resistant metals except manganese steel are too brittle. Surface protection then becomes a matter of replacing worn metal with more EFeMn filler metal, which is common. Railways frogs and crossings are also reclaimed in this way. Extensive areas, as in crushers and power shovel parts, are usually protected with a combination of weld deposits and filler bars, which are flats and rounds of manganese steel, welded in places. Such protection may be applied up to 3 in (76 mm) thick, which is near the upper thickness limit of common surface protection methods.

WELDING PROCEDURE

Clean weld area. Base metal is not to be preheated or post-heated. The temperature of the base material should be maintained as low as possible throughout the welding. Multilayers possible

RECOMMENDED AMPERAGE	
Size	Current
3.15 mm x 350 mm	120 - 160 Amps
4.00 mm x 350 mm	130 - 180 Amps

PACKING	
3.15 mm x 350 mm 5kg	21 pcs/kg (Approx.)
4.00 mm x 350 mm 5kg	15 pcs/kg (Approx.)



ESSEN
WELDING ALLOYS PVT. LTD.



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PREMIUM WELDING ALLOYS

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