

# ES HF Mn-A

Type Zirconium-basic

SMAW

EFeMn-A

**ESWECO**  
*The Art of Welding*

## Description

ES HF Mn-A is a high-recovery, austenitic-manganese steel electrode containing nickel. It produces a crack-resistant weld metal, which work-hardens under compressive stresses.

It is intended for surfacing and building up Mn-steel components exposed to severe impact and moderate abrasion.

Typical applications include crusher plates and rolls, bulldozer teeth, cones and mantels of rotary crushers, dredger buckets, rail crossings and so on.

The interpass temperature should be kept as low as possible.

## Current

DC+, AC OCV 65 V



## Classifications

SFA/AWS A5.13 EFeMn-A

## Typical all weld metal composition, %

C	Si	Mn	Ni
0.8	<0.3	14.0	3.5

## Typical mech. Properties all weld metal

Weld metal hardness, a w (no preheat, interpass temperature 100- 150°C)	160-180 HB
Weld metal hardness, w h (approx. 25% reduction)	42-46 HRC
Machinability (overheating must be avoided)	Grinding
Impact resistance	Excellent

## Welding parameters

Diameter,mm	Length,mm	Welding current, A	Arc voltage,V
3.2	300	100-160	30
4.0	350	130-210	30
5.0	350	170-300	31