Hardfacing electrode

Classification

AWS A5.13	: E Fe6
DIN 8555	: E6-UM-60-GPS
EN 14700	: E Fe6

General description

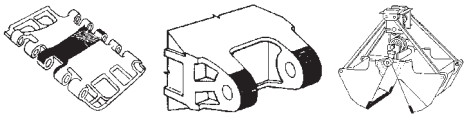
A basic coated electrode that produces a martensitic deposit with a considerable amount of retained austenite
Designed for operator appeal and weld quality
Excellent arc characteristics, good restriking and low spatter

Application

Wearshield MI produces a wear resistant martensite/austenite deposit with a hardness of 45-58 HRc. It can be used to surface a variety of carbon, carbon manganese and alloy steels. The martensite/austenite deposit makes Wearshield MI particularly suitable for APLs involving impact, metal to metal wear and mild abrasion such as by limestone. This deposit tends to cross check.

Typical applications include:

Dipper lips
Construction equipment
Earth moving equipment
Rock crushers
Hammer mills
Conveyor screws
Ditcher teeth
Agricultural equipment



Mechanical properties, all weld metal

	Typical hardness values
1 Layer	45-55 HRc
2 Layers	50-58 HRc

Welded on Mild Steel Plate

Packaging and available sizes

	Diameter (mm)	2.5	3.2	4.0	5.0
	Length (mm)	350	350	350	450
Unit: Box	Pieces / unit	117	69	38	25
	Net weight/unit (kg)	2.5	2.5	2.5	2.5

Identification Imprint: WEARSHIELD MI (E) Tip Color: violet

Wearshield® MI (e): rev. EN 22

Additional information

A preheat and interpass temperature of over 200°C is preferred to help reduce check cracking and avoid chipping and fragmentation.
The deposited weld metal is not machinable by conventional methods although the deposit can be shaped by grinding.
The Wearshield MI deposit tends to cross check and is therefore usually limited to 2 layers to avoid chipping and fragmentation.
Wearshield MI cannot be cut by the oxy-fuel processes. Plasma arc and air-carbon arc processes can be used to both cut and gouge the weld deposit.

Welding positions

ISO/ASME	PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G	PF/5Gup

Current type

AC / DC -

Chemical composition (w%), typical, all weld metal

C	Mn	Si	Cr
0.5	0.4	1.8	9

Structure

In the as welded condition the microstructure consists of a mixed structure of martensite and austenite.

Calculation data

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. current - (s)*	Energy - per electrode at max. current - E(kJ)	Dep.rate - per electrode at max. current - H(kg/h)
2.5 x 350	60 _ 70	AC/DC E-	-	-	7.6
3.2 x 350	70 _ 120	AC/DC E-	-	-	1.10
4.0 x 450	110 _ 150	AC/DC E-	-	-	1.45
5.0 x 450	150 - 200	AC/DC E-	-	-	2.00

Complementary products

Solid wire LNM 420 FM.