Hardfacing electrode

Classification

AWS A5.13-00 : ECoCr-E
DIN 8555-83 : E20-UM-45-CKRZ

General Description

Hardfacing electrode, cobalt base weld metal. Resists metal to metal wear, in a severe corrosion environment and/or high temperatures. Provides a deposits of essentially solid solution cobalt - chromium - molybdenum - nickel alloy. The hardness is a little lower as the Wearshield C6, which decreases the occurance of cracks and make the weld machinable.
Recommended when wear resistance is necessary and service temperature up to 800°C or short time 1100°C corrosion is severe

Application

Valve faces
Valve seats

Welding positions

ISO/ASME PA/1G

Current type

AC / DC electr. + / -

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

C	Cr	Ni	Mo	Co
0.22	26	3.0	5.0	bal.

Mechanical properties, all weld metal

	Typical hardness values
As deposited	25 HRc (255 HB)
Work hardened	45 HRc (425 HB)

Packaging, available sizes and identification

	Diameter (mm)	3.2
	Length (mm)	355
Unit: Box	Pieces/unit (nominal)	19
	Net weight/unit (kg)	1

Identification Imprint: Tip colour:

Welding instructions

Preheat 250°C or higher depending on material

Welding with low current to limit dilution

Avoid sharp angles

If necessary weld on a buffer layer of Cr-Ni steels for example RepTec 29 or Arosta 309Mo and at high temperature applications RepTec 7

Calculation data

Sizes Diam. x length	Current range	Current type	Arc time - per electrode at max. current -	Energy	Dep.rate	Weight/ 1000 pcs.	Electrodes/ kg weldmetal	kg Electrodes/ kg weldmetal
(mm)	(A)		(s)*	E(kJ)	H(kg/h)	(kg)	B	1/N
3.2 x 355	85-110	DC+						

*Stub end 35 mm

Remarks

Spatter is slightly less with DC+ polarity
A short arc length or dragging of the electrode lightly on the workpiece is usually most suitable