

## Classification

**EN ISO 3581-A**

E Z 17 Mo B 2 2

## Characteristics and typical fields of application

Basic electrode core wire alloyed low-hydrogen with good operating characteristics in all positions except vertical-down. Mainly used for surfacing on sealing faces of gas, water and steam valves to meet stainless and wear resistant overlays for instance. In the machined condition, at least a two layer build up should remain. Joint welding of similar, stainless and heat resistant chromium steels provides matching colour of weld metal with very good ability to polishing. Hydrogen content in weld deposit < 5 ml/100 g. Weld metal retention of hardness up to +500 °C. Scaling resistant up to 900 °C.

## Base materials

**Surfacings:** all weld able substrates, unalloyed and low-alloyed.

**Joint welds:** corrosion resistant Cr-steels as well as other similar-alloyed steels with C-contents up to 0.20 % (repair welding). Be careful with dilution and welding technology

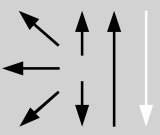
## Typical analysis of all-weld metal

|       | C    | Si   | Mn   | Cr    | Mo   |
|-------|------|------|------|-------|------|
| wt.-% | 0.22 | 0.30 | 0.40 | 17.00 | 1.30 |

## Mechanical properties of all-weld metal – typical values (min. values)

| Condition   | Brinell-hardness |
|---|------------------|
|   | HB               |
| u   | <b>400</b>       |
| a   | <b>250</b>       |
| u untreated, as welded   a annealed, 750 °C / 2 h / furnace |                  |

## Operating data

|  | <b>Polarity:</b><br>DC ( + ) | <b>Redrying if necessary:</b><br>120 – 200 °C,<br>min. 2 h | <b>Electrode identification:</b><br>FOX SKWAM<br>E Z 17 Mo B | <b>ø mm</b> | <b>L mm</b> | <b>Amps A</b> |
|---|------------------------------|--|--|-------------|-------------|---------------|
|   |                              |  |  | 2.5         | 300         | 60 – 80       |
|   |                              |  |  | 3.2         | 350         | 80 – 110      |
|   |                              |  |  | 4.0         | 350         | 110 – 140     |
|   |                              |  |  | 5.0         | 450         | 140 – 180     |

Preheating as required by the base metal, with temperatures between 100 and 200 °C being generally sufficient (for joint welding operations 250 – 400 °C). Annealing at 650 – 750 °C may be carried out to improve the toughness values in the weld metal and in the transition zone of the base metal.

The hardness of the deposit is greatly influenced by the degree of dilution with the base metal (depending on the relevant welding conditions) and by its chemical composition. As a general rule it can be observed that the higher the degree of dilution and the C-content of the base metal, the higher the deposit hardness.

## Approvals

KTA 1408.1 (8043.03), DB (30.014.12-20.014.08), CE