



Product Data Sheet

OK 53.70

ESAB AB Sweden

| | | | | | |
|----------------------------|---|--------------------|------------------------|------------------------|---------------|
| Signed by P-O Oskarsson | Approved by Tony Dray/Christos Skodras | Reg no EN004686 | Cancelling EN003557 | Reg date 2008-12-31 | Page 1 (2) |
|----------------------------|---|--------------------|------------------------|------------------------|---------------|

REASON FOR ISSUE

Approvals up dated

GENERAL

A low hydrogen AC/DC electrode for one side welding of pipes and general structures. The root penetration is good, leaving a flat bead with easy removable slag. The stable arc and the well balanced slag system make the electrode easy to weld in all positions. Suitable for welding of transmission pipelines made from pipesteels up to API 5LX56.

It is also suitable for welding the root in higher strength pipes, API 5LX60, 5LX65, 5LX70.

Min AC OCV: 60

Polarity: AC, DC +(-)

Alloy Type: Carbon Manganese

Coating Type: Lime Basic

Diff Hydrogen: <5.0 ml/100g

WELDING POSITIONS



CLASSIFICATIONS Electrode

| | |
|---------------|---------------|
| SFA/AWS A5.1 | E7016-1 |
| EN ISO 2560-A | E42 5 B 12 H5 |
| GOST 9467-75 | E50A |

APPROVALS

| | |
|--------|------------|
| ABS | 3Y H5 |
| CE | EN 13479 |
| DNV | 3 YH5 |
| LR | 3, 3Y H15 |
| Seproz | UNA 485155 |
| VNIIST | |

CHEMICAL COMPOSITION

All Weld Metal (%)

| | Min | Max |
|----|------|-------|
| C | 0.04 | 0.08 |
| Si | 0.30 | 0.60 |
| Mn | 0.95 | 1.35 |
| P | | 0.015 |
| S | | 0.015 |



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MECHANICAL PROPERTIES OF WELD METAL

| Properties | All Weld Metal | | |
|-----------------------|---------------------------------|-----|-----|
| | Min | Max | Typ |
| | ISO | | |
| | As welded | | |
| ReL (MPa) | 420 | | 440 |
| Rm (MPa) | 520 | 560 | 530 |
| A4-A5 (%) | 26 | | 30 |
| Charpy V at -20°C (J) | 85 | | 150 |
| Charpy V at -40°C (J) | 47 | | 120 |
| Charpy V at -50°C (J) | 47 | | 100 |
| | Comments: | | |
| | Menage: KU at -60°C >120 Joule | | |
| | Elongation=A5 | | |
| | Menage: KU at -60 °C >120 Joule | | |

ECONOMICS & CURRENT DATA

| Dimension (mm) Ø x Length | Current (A) | | W | η | N | B | H | T | U |
|------------------------------|-------------|-----|-----|-----|------|------|------|----|----|
| | Min | Max | | | | | | | |
| 2.5 x 350 | 60 | 85 | 1.8 | 95 | 0.63 | 87.7 | 0.70 | 57 | 26 |
| 3.2 x 350 | 80 | 130 | 3.1 | 95 | 0.59 | 54.5 | 1.10 | 61 | 24 |
| 3.2 x 450 | 80 | 130 | 4 | 91 | 0.59 | 42 | 1.1 | 78 | 24 |
| 4.0 x 450 | 115 | 190 | 6.4 | 104 | 0.63 | 24.6 | 1.70 | 86 | 24 |
| 5.0 x 450 | 150 | 250 | | | | | | | |

- W** = Weight (kg / 100 electrodes)
- η** = Efficiency (g weld metal x 100 / g core wire)
- N** = Effective value (kg weld metal / kg electrodes)
- B** = Changes (number of electrodes / kg weld metal)
- H** = Deposit rate at 90% of max current (kg weld metal / hour arc time)
- T** = Fusion time at 90% of max current (s / electrode)
- U** = Arc voltage (V)