Stainless Steel Electrodes

OK 61.50

A rutile based stainless steel electrode for SMAW of 18Cr-8Ni type steels

Classification AWS A5.4: E308-16

DESCRIPTION

OK 61.50 is an AC/DC rutile coated 20Cr-10Ni stainless steel electrode. The unique flux coating allows easy striking and restriking and is completely free from short-circuiting during welding.

APPROVALS: NPC, PDIL & TOYO

WELDING CURRENT: DC+, AC 70V

TYPICAL PROPERTIES

| С | Weld Metal Composition (Wt.%) | | All Weld Mechanical Properties | |
|---|----------------------------------|---------------------------------------|---|------------------|
| | C Si Mn Cr Ni | 0.05 0.80 0.75 20.50 9.10 | YS (N/mm²) UTS (N/mm²) Elongation (%) | 470 630 42 |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 60-100 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 80-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a box: 5 |

PACKING: Electrodes are packed in heat sealed plastic cartons and five of these cartons are shrink wrapped in a card board box. This electrode can also be made available in moisture resistant vacuum packed cartons, which can be used without redrying

OK 61.30

A rutile based extra low carbon stainless steel electrode for SMAW of 18Cr-8Ni type steels

Classification AWS A5.4: E308L-16

DESCRIPTION

OK 61.30 is a rutile based extra low carbon 20Cr-10-Ni type stainless steel electrode with a controlled ferrite that provides excellent resistance to corrosion, cracking and high temperature scaling resistance up to 800°C.

APPROVALS: PDIL & TOYO

WELDING CURRENT: DC+, AC 70V

TYPICAL PROPERTIES

| Weld Metal | | All Weld | |
|---------------------------|--|---|------------------|
| Composition (Wt.%) | | Mechanical Properties | |
| C Si Mn Cr Ni | 0.03 0.90 0.65 20.00 10.00 | YS (N/mm²) UTS (N/mm²) Elongation (%) | 540 620 42 |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 60-90 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 80-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a Box: 5 |



ESAB 304B

A basic coated extra low carbon stainless steel electrode for SMAW of 18Cr-8Ni type steels

Classification AWS A5.4: E308L-15

DESCRIPTION

ESAB 304B is an extra low carbon, basic coated 19Cr-10Ni stainless steel electrode with outstanding welding properties in the vertical and overhead position. The weld metal is highly resistant to cracking and porosity and has good impact toughness at very low temperatures.

APPROVAL: NPC

WELDING CURRENT: DC+

TYPICAL PROPERTIES

| | Metal tion (Wt.%) | All Weld Mechanical Prope | erties |
|---------------------------|--|--|------------------|
| C Si Mn Cr Ni | 0.03 0.40 1.50 19.00 10.50 | YS (N/mm²) UTS (N/mm²) Elongation (%) Impact (CVN) @ -196°C (Joules) | 450 570 40 |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 60-100 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 80-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 180-210 | No. of Cartons (Packets) in a Box: 5 |

PACKING: Electrodes are packed in heat sealed plastic cartons and five of these cartons are shrink wrapped in a card board box. This electrode can also be made available in moisture resistant vacuum packed cartons, which can be used without redrying.

OK 61.80

A Nb stabilised stainless steel electrode for SMAW of 18Cr-8Ni & stabilized stainless steels

Classification AWS A5.4: E347-16

DESCRIPTION

OK 61.80 is a rutile type low carbon 19Cr-10Ni stabilized stainless steel electrode. Niobium minimizes the chromium carbide precipitation and thereby improves the intergranular corrosion resistance.

APPROVALS: NPC & TOYO

WELDING CURRENT: DC+, AC 70V

TYPICAL PROPERTIES

| Weld Metal | | All Weld | |
|---------------------------------|---|---|------------------|
| Composition (Wt.%) | | Mechanical Properties | |
| C Si Mn Cr Ni Nb | 0.03 0.90 0.65 19.80 9.80 0.65 | YS (N/mm²) UTS (N/mm²) Elongation (%) | 550 630 35 |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 60-100 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 80-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a Box: 5 |



ESAB 316KCR

An extra low carbon stainless steel electrode depositing ferrite free weld metal

Classification AWS A 5.4: E316L-16 (Nearest)

DESCRIPTION

ESAB 316KCR is a specially designed extra low carbon stainless steel electrode to deposit a ferrite free, fully austenitic weld metal with better corrosion resistance to hydrochloric, nitric and sulphuric acids.

APPROVALS: PDIL, SNAMPROGETTI (CR.UR.510

rev 03) & TOYO

WELDING CURRENT: DC+, AC 70V

TYPICAL PROPERTIES

| | d Metal tion (Wt.%) | All Weld Mechanical Pro | |
|----------------|------------------------|---|------------------|
| C Si Mn | 0.04 0.40 1.20 | YS (N/mm²) UTS (N/mm²) Elongation (%) | 450 570 38 |
| Cr Ni Mo | 18.00 14.20 2.20 | J , , | |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 60-90 | Weight Per Box: 10 Kgs |
| 3.15 | 350 | 80-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a Box: 5 |

PACKING: Electrodes are packed in heat sealed plastic cartons and five of these cartons are shrink wrapped in a card board box. This electrode can also be made available in moisture resistant vacuum packed cartons, which can be used without redrying.

OK 67.67

A rutile based stainless steel electrode for SMAW of similar composition steels & dissimilar steels

Classification AWS A 5.4: E309-16

DESCRIPTION

OK 67.67 is a rutile based, all positional electrode depositing a weld metal of the type 23Cr-13Ni. The weld deposit provides excellent resistance to corrosion and oxidation at very high temperatures, up to 1100°C.

APPROVALS: NPC, PDIL & TOYO

WELDING CURRENT: DC+, AC 70V

TYPICAL PROPERTIES

| (| Weld Metal Composition (Wt.%) | | All Weld Mechanical Properties | |
|---|----------------------------------|--|---|------------------|
| | C Si Mn Cr Ni | 0.04 0.75 0.70 23.20 13.20 | YS (N/mm²) UTS (N/mm²) Elongation (%) | 480 590 36 |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 60-100 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 80-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a Box: 5 |



ESAB 309LC

A basic coated extra low carbon 23Cr-13Ni stainless steel electrode for SMAW

Classification AWS A 5.4: E309L-15

DESCRIPTION

ESAB 309LC is an extra low carbon all positional basic coated electrode giving austenitic weld deposit of 23Cr-13Ni type. It is suitable for welding heat resistant Cr-Ni alloyed steels and stainless steels to unalloyed or low alloyed steels, where better toughness is required.

WELDING CURRENT: DC+

TYPICAL PROPERTIES

| Weld Metal Composition (Wt.%) | | All Weld Mechanical Pro | |
|----------------------------------|--|---|------------------|
| C Si Mn Cr Ni | 0.03 0.75 1.00 23.50 13.70 | YS (N/mm²) UTS (N/mm²) Elongation (%) | 470 590 40 |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 60-100 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 80-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a Box: 5 |

PACKING: Electrodes are packed in heat sealed plastic cartons and five of these cartons are shrink wrapped in a card board box. This electrode can also be made available in moisture resistant vacuum packed cartons, which can be used without redrying.

OK 67.70

A rutile based 23Cr-13Ni-2.5Mo stainless steel electrode for SMAW

Classification AWS A 5.4: E309Mo-16

DESCRIPTION

OK 67.70 is a rutile based, over alloyed stainless steel electrode giving a weld deposit of 23Cr-13Ni-2.5Mo type, for welding stainless steels to other types of steels and for use as a buffer layer in welding acid resisting clad steels.

APPROVALS: NPC & PDIL

WELDING CURRENT: DC+, AC 70V

TYPICAL PROPERTIES

| Weld Metal Composition (Wt.%) | | All Weld Mechanical Properties | |
|----------------------------------|--|---|------------------|
| C Si Mn Cr Ni | 0.06 0.80 0.60 24.00 13.50 | YS (N/mm²) UTS (N/mm²) Elongation (%) | 530 630 32 |
| Мо | 2.60 | | |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 60-100 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 80-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a Box: 5 |



ESAB 309Cb

A Nb stabilised stainless steel electrode for SMAW of similar composition steels & dissimilar steels

Classification AWS A 5.4: E309Nb-15

DESCRIPTION

ESAB 309Cb is a basic coated stainless steel electrode giving austenitic weld deposit of 23Cr-13Ni type. Columbium provides immunity against weld decay. The C-Nb ratio is carefully controlled to provide stabilization against intergranular corrosion.

WELDING CURRENT: DC+

TYPICAL PROPERTIES

| Weld Metal Composition (Wt.%) | | All Weld Mechanical Properties | |
|----------------------------------|-------|-----------------------------------|-----|
| С | 0.04 | YS (N/mm²) | 510 |
| Si | 0.80 | UTS (N/mm ²) | 630 |
| Mn | 1.00 | Elongation (%) | 30 |
| Cr | 23.50 | | |
| Ni | 13.50 | | |
| Nb | 0.70 | | |
| | | | |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 60-100 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 80-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a Box: 5 |

PACKING: Electrodes are packed in heat sealed plastic cartons and five of these cartons are shrink wrapped in a card board box. This electrode can also be made available in moisture resistant vacuum packed cartons, which can be used without redrying.

OK 67.13

A stainless steel electrode depositing fully austenitic weld metal for SMAW of 25Cr-20Ni type steels

Classification AWS A 5.4: E310-16

DESCRIPTION

OK 67.13 is a semi basic type austenitic stainless steel electrode depositing a 25Cr-20Ni type weld deposit, which has excellent stability and oxidation resistance in continuous service up to 1100°C.

APPROVALS: NPC

WELDING CURRENT: DC+, AC 70V

TYPICAL PROPERTIES

| Weld Metal Composition (Wt.%) | | All Weld Mechanical Properties | | |
|----------------------------------|-------|-----------------------------------|-----|--|
| С | 0.10 | YS (N/mm²) | 430 | |
| Si | 0.60 | UTS (N/mm ²) | 600 | |
| Mn | 1.70 | Elongation (%) | 34 | |
| Cr | 26.50 | | | |
| Ni | 21.00 | | | |
| Мо | 0.10 | | | |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 60-100 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 80-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a Box: 5 |



OK 68.10

A basic coated stainless steel electrode depositing a ferritic 13Cr weld metal for SMAW

Classification AWS A5.4: E410-15

DESCRIPTION

OK 68.10 is a basic coated stainless steel electrode giving ferritic weld metal of 13Cr type for welding steels of similar composition.

WELDING CURRENT: DC+

TYPICAL PROPERTIES

| Weld Metal | | All Weld | | |
|---------------------------|---------------------------------------|-------------------------------|-----------|--|
| Composition (Wt.%) | | Mechanical Properties | | |
| C Si Mn Cr Ni | 0.03 0.40 0.70 12.00 0.40 | UTS (N/mm²) Elongation (%) | 520 25 | |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 70-100 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 90-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a Box: 5 |

PACKING: Electrodes are packed in cartons and four of these cartons are shrink wrapped in a cardboard box. This electrode can also be made available in moisture resistant vacuum packed cartons, which can be used without redrying.

OK 68.00

A rutile based stainless steel electrode for SMAW of 13Cr-4Ni-Mo type stainless steel castings

Classification AWS A 5.4: E410NiMo-16

DESCRIPTION

OK 68.00 is a specially designed rutile coated stainless steel electrode depositing 12Cr-4.5Ni-0.5 Mo weld metal. It has excellent welding characteristics in flat, H-V position and V-up positions.

WELDING CURRENT: DC+, AC 70V

TYPICAL PROPERTIES

| Metal tion (Wt.%) | All Weld Mechanical Properties | | |
|----------------------|---------------------------------------|---|--|
| 0.03 | UTS (N/mm²) | 800 | |
| 0.35 | Elongation (%) | 15 | |
| 0.90 | . , | | |
| 12.00 | | | |
| 4.70 | | | |
| 0.60 | | | |
| | 0.03 0.35 0.90 12.00 4.70 | 0.03 UTS (N/mm²) Elongation (%) 0.90 12.00 4.70 | |

CURRENT RANGE & PACKING DATA

| Size | Length | Current Range | Packing |
|------|--------|----------------------|--------------------------------------|
| (mm) | (mm) | (Amps) | |
| 2.50 | 350 | 70-100 | Weight Per Box: 10 Kg |
| 3.15 | 350 | 90-120 | Weight Per Carton |
| 4.00 | 350 | 120-170 | (Packet): 2 Kg |
| 5.00 | 350 | 160-210 | No. of Cartons (Packets) in a Box: 5 |