



CROMOTEN 9M-15

LOW ALLOY STEEL (High Temperature)



Hydrogen controlled basic coated electrode for welding P91 type creep resistant steel.

CLASSIFICATION : EN ISO 3580-A

AWS A/SFA 5.5

E CrMo91 B 42 H5

E 9015-B91

KEY FEATURES :

- Basic coated low hydrogen electrode
- Nb and V modified 9Cr-1Mo weld deposit
- Good impact toughness at subzero temperatures
- Excellent strength and creep resistance at high temperature under prolong holding
- All positional capability
- Radiographic quality weld deposit

WELDING POSITION :



DCEP

TYPICAL APPLICATIONS :

- Suitable for welding similar composition creep resistant steels such as P91, T91 and F91
- Welding of material 1.4903 and similar steel Grades
- Application in Petrochemical plants, Power plants, Boilers, Oil refineries

REDRYING CONDITION : 250-300°C for minimum 1 hr. (Also available in vacuum packed condition)

CHEMICAL COMPOSITION OF UNDILUTED WELD METAL, Wt % :

| | C | Mn | Si | Cr | Mo | Ni |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Typical | 0.1 | 0.6 | 0.15 | 9.1 | 0.9 | 0.4 |
| Specification | 0.08-0.13 | 1.20 max | 0.3 max | 8.0-10.5 | 0.85-1.10 | 0.80 max |
| | V | Al | Nb | N | S | P |
| Typical | 0.2 | 0.01 | 0.07 | 0.04 | 0.005 | 0.005 |
| Specification | 0.20-0.30 | 0.04 max | 0.02-0.10 | 0.02-0.07 | 0.01 max | 0.01 max |

MECHANICAL PROPERTIES OF ALL WELD METAL :

| | Condition | UTS, MPa | YS at 0.2% offset, MPa | EL% | CVN Impact, J | |
|---------------|--------------------------|----------|------------------------|--------|---------------|--------|
| | | | | | 0°C | -18°C |
| Typical | PWHT: 760°C for 4 hrs | 670 | 580 | 22 | 58 | 44 |
| Specification | | 620 min | 530 min | 17 min | 45 min | 27 min |

Hardness, 3 Layer: 220 BHN max

Diffusible H2 Content: <5 ml/100 gm

PARAMETERS - PACKING DATA :

| Ø x L, mm | Amperage, A | Wt./Carton, Kg | Carton/Box | Net wt./Box, Kg |
|------------|-------------|----------------|------------|-----------------|
| 2.5 x 350 | 50-80 | 5 | 4 | 20 |
| 3.15 x 350 | 90-120 | 5 | 4 | 20 |
| 4.0 x 350 | 110-160 | 5 | 4 | 20 |
| 5.0 x 450 | 140-190 | 5 | 4 | 20 |

EQUIVALENT : GMAW wire: Automig 90S-B9

GTAW filler: Tigfil-90S-B9