

AFROX THERMET 25.35.NB

Afrox 25.35.Nb is a MMA electrode with a basic flux coating on nearly matching core wire (0.1%C-25%Cr-35%Ni-0.6%Nb). The electrode is specifically designed to deposit weld metal, which matches the composition of similar castings. This alloy was developed from 800 type alloys with increased chromium and nickel contents and exhibits improved carburisation and

oxidation resistance. It is used at temperatures up to 1100°C and is resistant to thermal shock and fatigue. The electrode is optimized for DC+ welding in all positions including fixed pipework in the ASME 5G/6G positions. Moisture resistant coating giving sound porosity-free deposits.

APPLICATIONS

Applications include the welding of centrifugally cast **pyrolysis coils, reformer tubes, return bends, and tees** for the **petrochemical industry**.

MATERIALS TO BE WELDED

Similar Cast Alloys:
Alloy HP10Cb (ACI-ASTM terminology)
Paralloy CR39W (Doncasters Paralloy)

Lloyds T57 (LBA)
Centralloy H101 (Centracero)

CLASSIFICATIONS

None

**TYPICAL CHEMICAL ANALYSIS
(ALL WELD METAL)**

% Carbon	0.14 max	% Molybdenum	0.5 max
% Manganese	2.5-4.0	% Niobium	0.5-0.8
% Silicon	0.2-1.0	% Copper	0.15 max
% Sulphur	0.02 max	% Lead	0.01 max
% Phosphorus	0.03 max	% Tin	0.01 max
% Chrome	24.0-28.0	% Iron	Balance
% Nickel	34.0-39.0		

TYPICAL MECHANICAL PROPERTIES (ALL WELD METAL IN THE AS WELDED CONDITION)

0.2% Proof Stress	460 MPa	% Elongation on 5d	32
Tensile Strength	660 MPa	% Reduction Area	42
% Elongation on 4d	34		

PACKING DATA

(DC+)

Diameter mm	Electrode Length mm	Current Amps	Item Number	Pack Mass Kg
3,2	320	75-120	077/620	4,0

STORAGE AND RE-BAKING

Hermetically sealed ring-pull metal tin with unlimited shelf life. Direct use from tin is satisfactory for longer than a working shift of 8h. Excessive exposure of electrodes to humid conditions will cause some moisture pick-up and increase the risk of porosity.

For electrodes that have been exposed:

Redry 150 – 250°C/1-2h to restore to as-packed condition. Maximum 350°C, 3 cycles, 10h total.

Storage of redried electrodes at 50 – 200°C in holding oven or heated quiver: no limit, but maximum 6 weeks recommended.

Recommended ambient storage conditions for opened tins (using plastic lid): < 60% RH, > 18°C.

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