

GRIDUCT 78C2L

IDENTIFICATION

Griduct 78C2L, E 7018C2L

CLASSIFICATION

AWS/ SFA : 5.5 E7018C2L,

DIN 8529 : ESY 46873NiB, BS 2493 : 3NiBH

DESCRIPTION

Medium heavy coated, basic type, hydrogen controlled electrode recommended for welding 3% nickel steel. The deposited weld metal has extra low carbon content and impurities such as sulphur, phosphorus are kept at very low level. The deposited weld metal is of radiographic quality.

WELD METAL ANALYSIS (RANGE) %

| C | Mn | Si | S | P | Ni |
|----------|-------------|-------------|-----------|-----------|------------|
| 0.05 max | 0.50 - 1.25 | 0.20 - 0.50 | 0.015 max | 0.015 max | 3.0 - 3.75 |

MECHANICAL PROPERTIES (RANGE)

| TS (N/mm ²) (MPa) | PS (N/mm ²) (MPa) | EL (%) (L=4D) | CVN Impact Value | |
|----------------------------------|----------------------------------|------------------|------------------|----------|
| | | | Temp | Joules |
| 520 - 620 | 400 - 540 | 24 - 32 | -80°C | 40 - 100 |
| | | | -101°C | 40 - 90 |

TYPICAL APPLICATIONS

- 3.5% Ni alloyed steels specifically for service at cryogenic temperatures down to -100°C.
- ASTM A 333 grade 3 pipe, BS: 1501-503 plate.
- Construction of cryogenic plant and associated pipe work e.g petrochemical industry, demanding resistance to weld brittle fracture when operating at temperatures down to minus 80 / minus 100°C.

MICROSTRUCTURE : Ferritic with a component of acicular ferrite.

ASME QUALIFICATION : F NO : QW - 432, A NO : QW : 442

REDRYING TEMPERATURE : 300°C / 2 hrs

WELDING POSITION :



PACKING PARAMETERS

GWELD

| Size (mm) | Length (mm) | Amps AC (70 OCV / DC +) | Packing / Box (kg) | Packing / Box (Pcs) |
|-------------|-------------|-------------------------------|-----------------------|------------------------|
| 2.5 | 350 | 60 - 90 | 5 x 4 = 20 | 160 x 4 = 640 |
| 3.15 / 3.20 | 450 | 80 - 110 | 5 x 4 = 20 | 110 x 4 = 440 |
| 4 | 450 | 120 - 160 | 5 x 4 = 20 | 70 x 4 = 280 |
| 5 | 450 | 150 - 200 | 5 x 4 = 20 | 45 x 4 = 180 |