

CERTIFIED MATERIAL REPORT

CMR No. : 1712183700001

Date of Issue : 2017-12-18

| | | | |
|---------------|---|-----------------------|--------------|
| Customer | A-LEAF | | |
| Trade Name | Superflux 800T X M-12K | Size | 10 X 48 Mesh |
| Lot No. | 2021126 | Purchaser's Order No. | - |
| Specification | AWS A5.17 F7A8 X EM12K EN ISO 14174 S A FB 1 (Superflux 800T) * According to EN 10204-2004 : 3.1 | | |

| | | | | | | | | | |
|-----------------------|----|---------------|---------|-------|--------------------------------------|----|----|-----------|------|
| Welding Current | AC | Shielding Gas | - | | Post Weld Heat Treatment (× hr.) | | | AS WELDED | |
| Mechanical Properties | | Tensile Test | | | Impact Test (CVN - Joule) | | | | |
| | | YS(MPa) | TS(MPa) | EL(%) | Temp.() | X1 | X2 | X3 | Avg. |
| | | 515 | 584 | 29.4 | -60 | 48 | 56 | 60 | 55 |
| AWS Spec. | | 400 | 480 660 | 22 | 27 | | | | |

Chemical Composition (%)

| | | | | | | | | | | | |
|-----------|--------------|--------------|--------------|-------|-------|------|--|--|--|--|--|
| | C | Si | Mn | P | S | Cu | | | | | |
| (WIRE) | 0.07 | 0.30 | 1.05 | 0.019 | 0.009 | 0.09 | | | | | |
| AWS Spec. | 0.05 0.15 | 0.10 0.35 | 0.80 1.25 | 0.030 | 0.030 | 0.35 | | | | | |

Others

We hereby certify that the material covered by this report has been inspected in accordance with and been found to meet the applicable requirements of specification and customer's requirements.

Approved by

K.W. Park

QA Manager Park K. W.



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