



**Certificate of Conformance
to Requirements for Welding Electrode
EN 10204 3.1**

| | | |
|--------------------|-------------------------|-----------------------------|
| Customer : | | |
| Product : SWX 120 | Customer P.O.# : 119606 | Certificate No. : F091120-1 |
| Lot No. : 00901 | Mesh Size : | Date of Mfg. : 09/01/2020 |
| Specification : -- | Classification :- | Date of Issue : 09/11/2020 |

CHEMICAL ANALYSIS OF FLUX FOR SUBMERGED ARC WELDING

| | |
|---|-------|
| SiO ₂ | 10.0% |
| Al ₂ O ₃ + TiO ₂ | 23.2% |
| MnO + FeO | 6.35% |
| CaO + MgO + CaF ₂ | 58.9% |



J. M. Wang

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Manufacturing, Certification and Limited Warranty Agreement

Data for the above supplied product are those obtained when welded and tested accordance with the above specification. All tests for the above classification were satisfied. Other tests and procedures may produce different results. The above supplied product are manufactured by Tien Tai Electrode an ITW Co. located at: No.6 Kaifa 4th Rd., Rende Dist., Tainan City 717, Taiwan R.O.C. Hobart Brothers produces welding consumables under continuing quality assurance programs audited and approved by Lloyd's Register Quality Assurance Limited(LRQA)



**Certificate of Conformance
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Customer :

| | | |
|----------------------------------|----------------------------|----------------------|
| Product : SDX S2Si-EM12K/SWX 120 | Customer P.O.# : 119606 | Part Number : |
| Diameter : 4.0mm | Lot No. : 8297/2018;00901 | Lot Classification : |
| Classification : F7A6-EM12K | Date Tested : 09/08/2020 | Level of Testing : |
| Specification : AWS A5.17-'19 | Date of Issue : 09/11/2020 | |

Test Settings

| Amps DCEP | Volts | WFS | Shielding Gas | Electrode Stickout | Temperature | | Travel Speed |
|--------------|-------|--------|---------------|--------------------|--------------------|----------------------|--------------|
| | | | | | Preheat | Interpass | |
| 500 | 28 | 43 ipm | NONE | 35 mm | 85±25°F 30±15°C | 300±25°F 150±15°C | 16±1 ipm |

6 Layers, 2 passes on each layer 1 through 6; 7th Layer, 3 passes on cap layer; Direction reversed on each layer.

Mechanical Properties Lab Test # 2KJ08

| Shielding Gas | Testing Conditions | Ult. Tensile Strength | Yield Strength | Elong % in 2 " | Impact Test Temp. | Charpy V-Notch Values ft.lbf | | |
|---------------|--------------------|-----------------------|----------------------|----------------|-------------------|------------------------------|----|---------|
| NONE | AS WELDED | 81356 psi 561 MPa | 67559 psi 466 MPa | 32 | -60 °F -51 °C | 57 | 69 | 78 |
| | | | | | | Average | 68 | (92 J) |

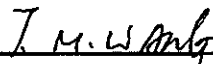
| Radiographic | | Fillet Weld Test | | | | | | Moisture % |
|--------------|----------|------------------|-----|-----------|-----|-----------|-----|------------|
| Inspection: | Conforms | Horizontal: | N/A | Vertical: | N/A | Overhead: | N/A | N/A |
| Bending Test | | | | | | | | |

Chemical Analysis Chem Pad #

| Elements | C | Mn | Si | S | P | Cu | | | | | | | | | |
|--------------|------|------|------|-------|-------|------|--|--|--|--|--|--|--|--|--|
| Filler Metal | 0.11 | 1.05 | 0.17 | 0.015 | 0.011 | 0.12 | | | | | | | | | |

Remarks

Production Date :09/01/2020


 Q.C Section:J.M. Wang

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