

## MANUFACTURER TEST CERTIFICATE

EN10204 3.1

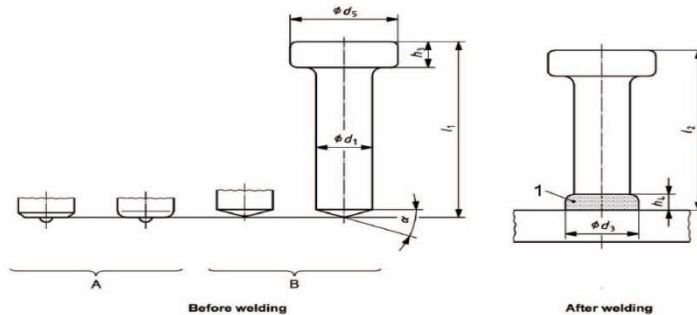
|           |             |              |                      |
|-----------|-------------|--------------|----------------------|
| Customer: | TN BUILDING | Report No.:  | WD-MC12525TC         |
| PO No.:   | /           | Test Date:   | 2025-5-13            |
| Lot No.:  | 352504505   | Part No.:    | 230125               |
| Inv. No.: | WD-MC12525  | Size:        | 3/4 X 4 - 3/16       |
| Quantity: | 20          | Description: | Shear Connector (SD) |

|                             |  |  |  |  |  |  |  |  |  |  |  |                    |  |
|-----------------------------|--|--|--|--|--|--|--|--|--|--|--|--------------------|--|
| 1. Chemical Composition (%) |  |  |  |  |  |  |  |  |  |  |  | Material: SWRCH18A |  |
|-----------------------------|--|--|--|--|--|--|--|--|--|--|--|--------------------|--|

| Heat No.  | Dia | C    | Si   | Mn   | P     | S     | Cr   | Al   | Ni   | Cu   | CEV    |
|-----------|-----|------|------|------|-------|-------|------|------|------|------|--------|
| 222503182 | 20  | 0.16 | 0.04 | 0.73 | 0.017 | 0.013 | 0.03 | 0.04 | 0.01 | 0.02 | 0.306% |

|                |  |  |  |
|----------------|--|--|--|
| 2. Dimensional |  |  |  |
|----------------|--|--|--|

| Inspection Item            | Standards (mm)                   | Measure Value(mm) | Result |
|----------------------------|----------------------------------|-------------------|--------|
| Body Diameter( $d_1$ )     | 19-0.4                           | 18.82~18.93       | OK     |
| Forehead Diameter( $d_5$ ) | 32±0.3                           | 31.76~32.06       | OK     |
| Head Thickness( $h_3$ )    | 10 <sup>+1</sup> <sub>-0.5</sub> | 9.68~10.26        | OK     |
| Total Length( $l_1$ )      | 106±1.5                          | 105~105.5         | OK     |
| Appearance                 | Good                             | Good              | OK     |
| Head Mark                  | TN                               | TN                | OK     |



|   |  |  |  |
|---|--|--|--|
| 3. Mechanical Properties (ISO13918:2008/AWS D1.1) |  |  |  |
|---|--|--|--|

| Test Item             | Standard               | Measure Value | Result |
|-----------------------|------------------------|---------------|--------|
| Tensile Strength(MPa) | ≥450                   | 458~509       | OK     |
| Yield Strength(MPa)   | ≥350                   | 359~420       | OK     |
| Elongation (%)        | ≥15                    | 16~25         | OK     |
| Bending Test          | No Crack on Weld Joint | OK            | OK     |

We hereby certify that the material/dimensional described herein has been manufactured and tested with satisfactory results in accordance with the requirement if the above material/dimensional specifications.





**邢台钢铁有限责任公司**  
**XINGTAI IRON AND STEEL CORP., LTD.**  
**产品质量证明书**  
**INSPECTION CERTIFICATE**



扫码辨别真伪



邢钢质字 (J) —070

|                       |                     |                        |            |                             |           |
|-----------------------|---------------------|------------------------|------------|-----------------------------|-----------|
| 订货单位<br>Customer      | 河北华通金属材料有限公司        | 证书号<br>Certificate No. | 2504260235 | 车号<br>Train No.             | 冀E0455Z-4 |
| 收货单位<br>Purchaser     | 河北华通金属材料有限公司        | 牌号<br>Steel Grade      | SWRCH18A   | 盘数合计<br>Total Qty           | 13        |
| 产品名称<br>Product       | 高速线材                | 批号<br>Lot No.          | 352504505  | 重量合计(t)<br>Total Weight     | 27.6440   |
| 交货标准<br>Specification | Q/XG114.1-2019      | 炉号<br>Heat No.         | 222503182  | 等级<br>Grade                 | A         |
| 开证日期<br>Date Of Issue | 2025-04-26 17:41:47 | 规格(mm)<br>Diameter     | φ20        | 交货状态<br>Delivery Conditions | 热轧        |

一、化学成分 Chemical Composition (%)

| C    | Si   | Mn   | P     | S     | Alt  | Cr   | Cu   | Ni   |
|------|------|------|-------|-------|------|------|------|------|
| 0.16 | 0.04 | 0.73 | 0.017 | 0.013 | 0.04 | 0.03 | 0.02 | 0.01 |

二、尺寸、外形、表面质量 Dimensions Contour and Surface Quality 合格

三、物理性能 Physical Properties

冷顶锻

1/2合格