

# 检 测 报 告

## TEST REPORT

报告编号 (No.): UTS24120047R01R1 报告日期 (Report Date): 2025/01/02

委托单位/Client : 北京双龙盛电气制造有限公司  
Beijing Shuanglongsheng Electric Manufacturing Co., LTD  
地 址/Address : 北京市通州区台湖镇经略天则南区 2.19  
2.19, Tianze South District, Taihu Town, Tongzhou District, Beijing

以下样品信息由申请人提供及确认:  
The sample(s) information below is/are provided and confirmed by client:

样品名称/Sample Name : 热镀锌槽式电缆桥架/Hot-dip galvanized trough cable bridge  
型 号/Model : 50\*50  
100\*50  
150\*100  
200\*100  
300\*100  
300\*200  
400\*100  
400\*150  
400\*200  
600\*100  
600\*200  
800\*100  
1200\*100  
1200\*150  
1200\*200

生产单位地址 : 江苏省扬中市开发区园博大道北 100 米/100 meters north of Yuanboda Road, Yangzhong Development Zone, Jiangsu Province  
/Production unit address

测试标准/Test standard : JB/T 10216-2013 《电控配电用电线桥架》《企业技术要求》  
JB/T 10216-2013 "Electric Control distribution Cable Bridge"  
"Enterprise Technical Requirements"

联系人/Contact person : 陈龙/Chen Long

接样日期/Receiving Date : 2024/12/20

签 发  
Approved by



审 核  
Reviewed by

周伟

编 制  
Prepared by

王彭

授权签字人

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江苏省优联检测技术服务有限公司

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结果总结/Summary of Result(s):

| 样品名称<br>Sample Name                                        | 项目<br>Item(s) |                                                                   | 判定<br>Determine | 页码<br>Page Number |
|------------------------------------------------------------|---------------|-------------------------------------------------------------------|-----------------|-------------------|
| 热镀锌槽式电缆<br>桥架/Hot-dip<br>galvanized trough<br>cable bridge | 1             | 外观<br>Appearance                                                  | 符合/PASS         | 3                 |
|                                                            | 2             | 尺寸检查<br>Dimension check                                           | 符合/PASS         | 4                 |
|                                                            | 3             | 防护层厚度<br>Protective thickness                                     | 符合/PASS         | 5-6               |
|                                                            | 4             | 均匀性<br>Evenness                                                   | 符合/PASS         | 6-7               |
|                                                            | 5             | 盐雾测试 48h<br>Salt spray test 48h                                   | 符合/PASS         | 7-8               |
|                                                            | 6             | 交变湿热试验 24h<br>Alternating humid heat test for 24h                 | 符合/PASS         | 9-10              |
|                                                            | 7             | 附着力<br>Adhesive force                                             | 符合/PASS         | 11-12             |
|                                                            | 8             | 保护电路连续性 (接地)<br>Protection circuit continuity (ground<br>connect) | 符合/PASS         | 13                |
|                                                            | 11            | 机械负载试验<br>Mechanical load test                                    | 符合/PASS         | 14                |
|                                                            | 12            | 防护等级 IP30<br>Protection class IP30                                | 符合/PASS         | 15                |
|                                                            | 13            | 撞击试验<br>Bump test                                                 | 符合/PASS         | 16-17             |

.....接下页/ To be continued.....

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一、外观/Appearance

1、测试标准/Test standard

依客户要求要求进行试验，详见测试条件。/The test was/were carried out according to client's requirement, details was/are given in the test condition(s).

2、测试日期/Test Date

2024/12/23

3、测试条件/Test Condition

目视/Visual

4、测试结果/Test Result(s)

| 样品编号<br>Sample No. | 结果<br>Result                                                                                                                                            | 判定依据<br>Judgment basis                                                                                                                                                                                                                                                                                                                   | 判定<br>Determine |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1-1                | 镀层表面均匀，无毛刺、过烧、挂灰、伤痕等缺陷，无漏镀点。<br>/The coating surface is uniform, no burr, over burning, hanging ash, scars and other defects, no leakage plating point. | 镀层表面应均匀，无毛刺、过烧、挂灰、伤痕等缺陷，直径小于 2mm 的漏镀点不得超过 3 个，且在任一 100cm <sup>2</sup> 的面积内不得有 2 个漏镀点。/The coating surface should be uniform, without burrs, overburning, hanging ash, scars and other defects, the diameter of less than 2mm of the leakage point shall not exceed 3, and in any 100cm <sup>2</sup> area shall not have 2 leakage point. | 符合/PASS         |

备注/Remark: 判定限值依客户要求。/The prescribed limit(s) is/are according to client's requirement.

5、测试照片/Test Photo(s)



外观/Appearance

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二、尺寸检查/Dimension check

1、测试标准/Test standard

GB/T 1958-2017 《产品几何技术规范 (GPS) 几何公差 检测与验证》/Geometrical Product Specifications(GPS)—Geometrical tolerance—Verification

2、测试日期/Test Date

2024/12/23

3、测试结果/Test Result(s)

| 样品编号<br>Sample No. | 结果<br>Result                                 |
|--------------------|----------------------------------------------|
| 1-2                | 长/Length: 200cm 宽/Width: 20cm 高/Height: 10cm |

4、测试照片/Test Photo(s)



尺寸/Dimension

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## 三、防护层厚度/Protective thickness

## 1、测试标准/Test standard

依客户要求进行试验, 详见测试条件。/The test was/were carried out according to client's requirement, details was/are given in the test condition(s).

## 2、测试日期/Test Date

2024/12/27-2024/12/30

## 3、测试仪器/Test Equipment

| 设备名称<br>Test Equipment                      | 设备编号<br>Equipment Number | 校准有效期<br>Calibration Period of Validity |
|---------------------------------------------|--------------------------|-----------------------------------------|
| 正置金相显微镜<br>Upright Metallurgical Microscope | M-1-543                  | 2026/10/11                              |

## 4、测试条件/Test Condition

环境温度/Environment Temperature : (23±5)°C

环境湿度/Environment Humidity : (55±10)%RH

## 5、测试结果/Test Result(s)

单位/Unit: μm

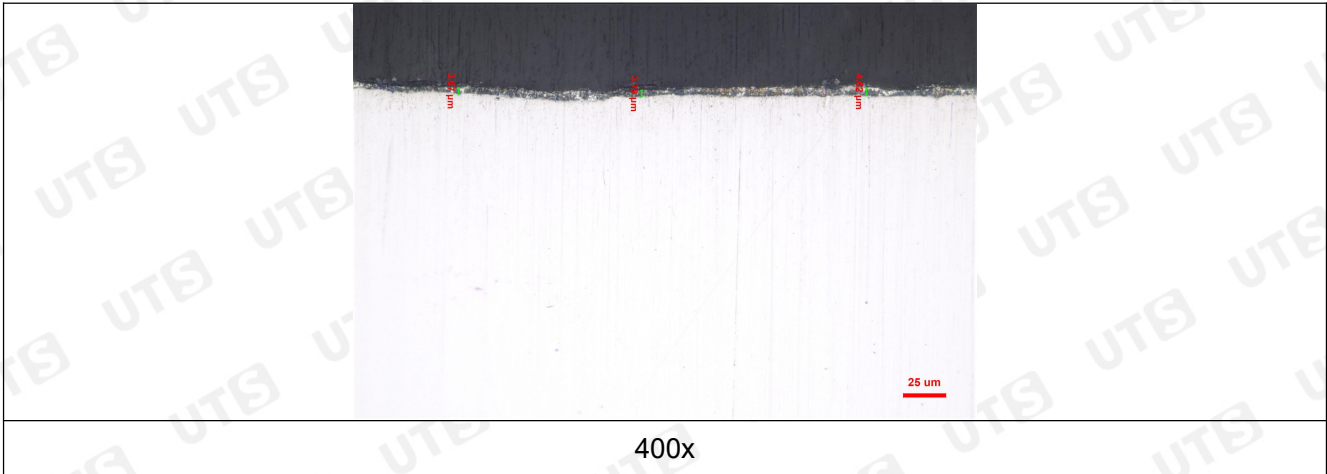
| 样品编号<br>Sample No. | 结果<br>Result |      |      | 平均值<br>AVH | 判定依据<br>Judgment Basis | 判定<br>Determine |
|--------------------|--------------|------|------|------------|------------------------|-----------------|
|                    | ①            | ②    | ③    |            |                        |                 |
| 1-3                | 3.67         | 3.79 | 4.62 | 4.03       | 3-15                   | 符合/PASS         |

备注/Remark: 判定限值依客户要求。/The prescribed limit(s) is/are according to client's requirement.

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6、测试照片/Test Photo(s)



四、均匀性/Evenness

1、测试标准/Test standard

依客户要求进行试验，详见测试条件。/The test was/were carried out according to client's requirement, details was/are given in the test condition(s).

2、测试日期/Test Date

2024/12/23

3、测试条件/Test Condition

目视/Visual

4、测试结果/Test Result(s)

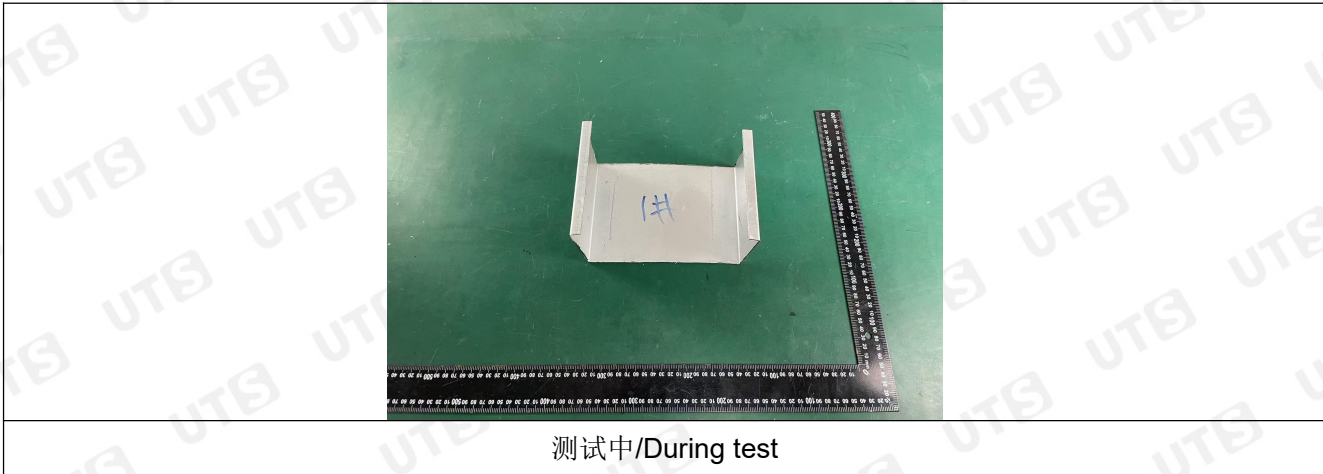
| 样品编号<br>Sample No. | 结果<br>Result                                                              | 判定依据<br>Judgment basis                                                    | 判定<br>Determine |
|--------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------|
| 1-4                | 目测突出表面没有明显层次感。/Visually, the protruding surface has no obvious gradation. | 目测突出表面没有明显层次感。/Visually, the protruding surface has no obvious gradation. | 符合/PASS         |

备注/Remark: 判定限值依客户要求。/The prescribed limit(s) is/are according to client's requirement.

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## 5、测试照片/Test Photo(s)



测试中/During test

## 五、盐雾测试 48h/Salt spray test 48h

## 1、测试标准/Test standard

GB/T 2423.17-2008 《电工电子产品环境试验 第2部分: 试验方法 试验 Ka: 盐雾》/Environmental testing for electric and electronic products - Part 2: Test method - Test Ka: Salt mist

## 2、测试日期/Test Date

2024/12/23-2024/12/25

## 3、测试仪器/Test Equipment

| 设备名称<br>Test Equipment                       | 设备编号<br>Equipment Number | 校准有效期<br>Calibration Period of Validity |
|----------------------------------------------|--------------------------|-----------------------------------------|
| 盐雾腐蚀试验箱<br>Salt spray corrosion test chamber | R-1-079                  | 2025/11/25                              |

## 4、测试条件/Test Condition

环境温度/Environment Temperature : (23±2)°C  
环境湿度/Environment Humidity : (50±5) %RH  
试验温度/Test Temperature : (35±2) °C  
盐水浓度/Medium : (5±1) % NaCl  
pH 值/pH Value : 6.5~7.2  
盐雾沉降率/Quantity of Fog : 1.0~2.0 mL/80cm<sup>2</sup>·h  
持续时间/Duration : 48 h

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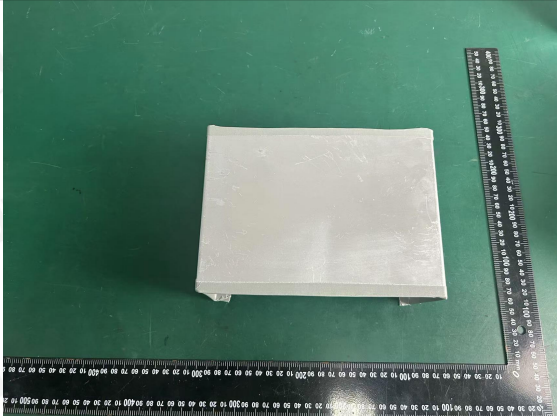
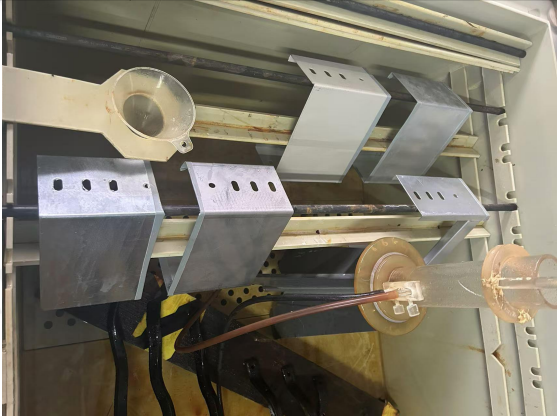
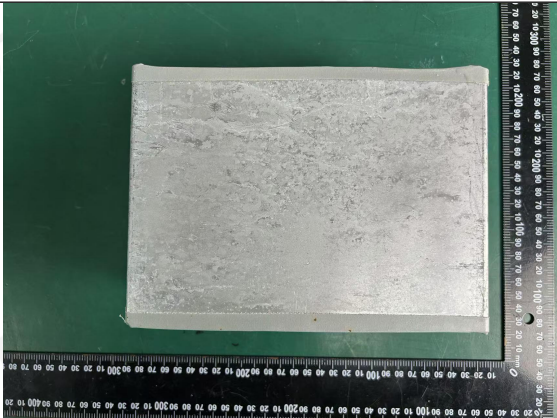
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5、测试结果/Test Result(s)

| 样品编号<br>Sample No. | 结果<br>Result | 判定依据<br>Judgment basis                                                     | 判定<br>Determine |
|--------------------|--------------|----------------------------------------------------------------------------|-----------------|
| 1-5                | 3 级/Level 3  | 不低于 JB/T 6743-1993 标准 3 级。/Not lower than JB/T 6743-1993 standard level 3. | 符合/PASS         |

备注/Remark: 判定限值依客户要求。/The prescribed limit(s) is/are according to client's requirement.

6、测试照片/Test Photo(s)

|                                                                                     |                                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|   |  |
| 测试前/Before test                                                                     | 测试中/During test                                                                     |
|  | /                                                                                   |
| 测试后/After test                                                                      | /                                                                                   |

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### 六、交变湿热试验 24h/Alternating humid heat test for 24h

#### 1、测试标准/Test standard

GB/T 2423.4-2008 《电工电子产品环境试验 第 2 部分：试验方法 试验 Db 交变湿热（12h+12h 循环）》  
/Environmental testing for electric and electronic products - Part 2: Test method - Test Db: Damp heat, cyclic ( 12h+12h cycle)

#### 2、测试日期/Test Date

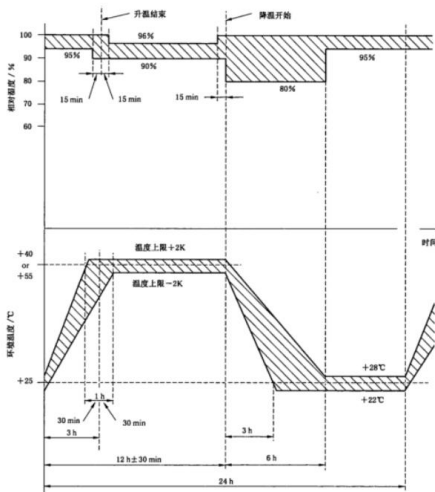
2024/12/24-2024/12/26

#### 3、测试仪器/Test Equipment

| 设备名称<br>Test Equipment                                                      | 设备编号<br>Equipment Number | 校准有效期<br>Calibration Period of Validity |
|-----------------------------------------------------------------------------|--------------------------|-----------------------------------------|
| 高低温交变湿热试验箱<br>High and low temperature alternating wet<br>heat test chamber | R-1-089                  | 2025/11/21                              |

#### 4、测试条件/Test Condition

相对湿度 95%，温度范围：25℃~44℃，1 个循环 24h。/Relative humidity 95%, temperature range: 25℃~44℃, 1 cycle 24h.



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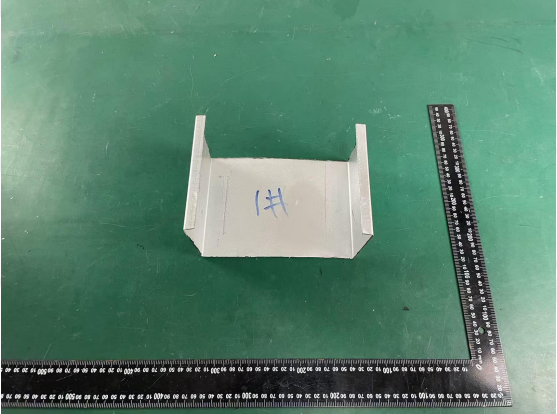
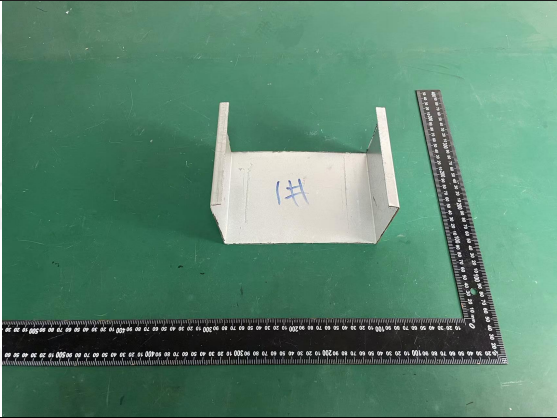
报告编号 (No.):UTS24120047R01R1    报告日期 (Report Date) : 2025/01/02

5、测试结果/Test Result(s)

| 样品编号<br>Sample No. | 结果<br>Result                                                                                                                                                                     | 判定依据<br>Judgment basis                                                                                                                                                                                                                    | 判定<br>Determine |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1-6                | 试验后，桥架表面防护层光泽未变暗，颜色未变化，无腐蚀点。/After the test, the gloss of the protective layer on the bridge surface did not darken, the color did not change, and there was no corrosion point. | 24h 交变湿热试验后，允许桥架表面防护层光泽稍变暗，颜色稍退但无腐蚀点。/After 24h alternating wet heat test, the gloss of the protective layer on the surface of the bridge is allowed to darken slightly, and the color is slightly faded but there is no corrosion point. | 符合/PASS         |

备注/Remark: 判定限值依客户要求。/The prescribed limit(s) is/are according to client's requirement.

6、测试照片/Test Photo(s)

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|   |   |
| 测试前/Before test                                                                     | 测试中/During test                                                                      |
|  |  |
| 测试设备/Test equipment                                                                 | 测试后/After test                                                                       |

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## 七、附着力/Adhesive force

## 1、测试标准/Test standard

GB/T 5270-2024 《金属基体上的金属覆盖层 电沉积和化学沉积层 附着强度试验方法评述》/Metallic coatings on metallic substrates-Electrodeposited and chemically deposited coatings-Review of methods available for testing adhesion

## 2、测试日期/Test Date

2024/12/23

## 3、测试仪器/Test Equipment

| 设备名称<br>Test Equipment     | 设备编号<br>Equipment Number | 校准有效期<br>Calibration Period of Validity |
|----------------------------|--------------------------|-----------------------------------------|
| 漆膜划格器<br>Paint film marker | M-1-021                  | 2025/07/04                              |

## 4、测试条件/Test Condition

状态调节/State adjustment : (23±2) °C, (50±5) %RH, 24 h

间距/Spacing : 1 mm

切割刀数/Number of cutting knife : 6\*6

## 5、测试结果/Test Result(s)

| 样品编号<br>Sample No. | 结果<br>Result                                                                         | 判定依据<br>Judgment basis                                                                         | 判定<br>Determine |
|--------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------|
| 1-7-A              | 锌层无剥离、起皮、凸起等现象。/Zinc layer has no peeling, peel off, protrusion and other phenomena. | 锌层不应有剥离, 起皮, 凸起等现象。/Zinc layer should not have peel, peel off, protrusion and other phenomena. | 符合/PASS         |
| 1-7-B              | 锌层无剥离、起皮、凸起等现象。/Zinc layer has no peeling, peel off, protrusion and other phenomena. |                                                                                                | 符合/PASS         |
| 1-7-C              | 锌层无剥离、起皮、凸起等现象。/Zinc layer has no peeling, peel off, protrusion and other phenomena. |                                                                                                | 符合/PASS         |

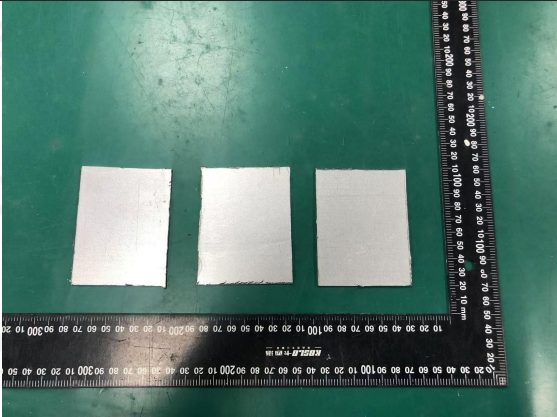
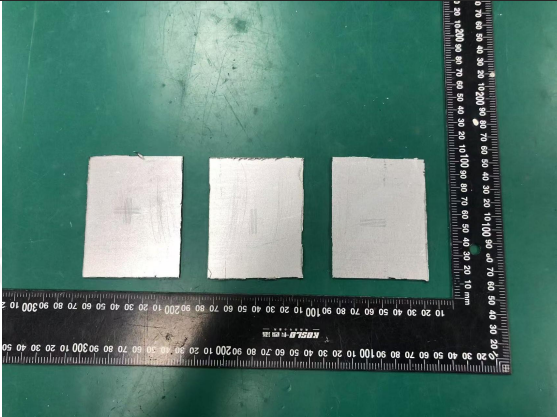
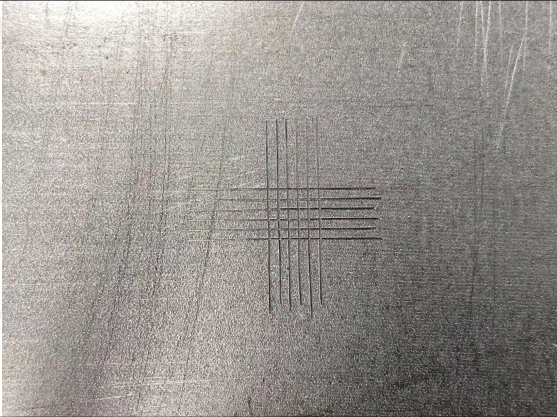
备注/Remark: 判定限值依客户要求。/The prescribed limit(s) is/are according to client's requirement.

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6、测试照片/Test Photo(s)

|                                                                                    |                                                                                    |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|   |  |
| 测试前/Before test                                                                    | 测试后/After test                                                                     |
|  | /                                                                                  |
| 特写/Close-up                                                                        | /                                                                                  |

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八、保护电路连续性（接地）/Protection circuit continuity (ground connect)

1、测试标准/Test standard

依客户要求要求进行试验，详见测试条件。/The test was/were carried out according to client's requirement, details was/are given in the test condition(s).

2、测试日期/Test Date

2024/12/30

3、测试结果/Test Result(s)

| 样品编号<br>Sample No. | 结果<br>Result                                                       | 判定依据<br>Judgment basis                                                   | 判定<br>Determine |
|--------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------|
| 1-8                | 有可靠的电气连接并接地。/There is a reliable electrical connection and ground. | 应有可靠的电气连接并接地/There should be a reliable electrical connection and ground | 符合/PASS         |

备注/Remark: 判定限值依客户要求。/The prescribed limit(s) is/are according to client's requirement.

4、测试照片/Test Photo(s)



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十一、机械负载试验/Mechanical load test

1、测试标准/Test standard

依客户要求进行了试验，详见测试条件。/The test was/were carried out according to client's requirement, details was/are given in the test condition(s).

2、测试日期/Test Date

2024/12/24

3、测试条件/Test Condition

跨距/Span: 1m

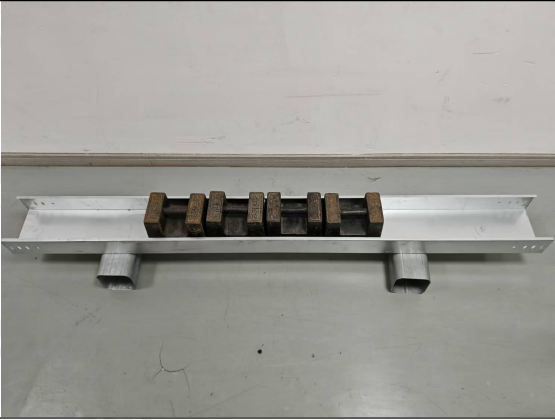
承载力/Bearing capacity: 1000N/m

4、测试结果/Test Result(s)

| 样品编号<br>Sample No. | 结果<br>Result         | 判定依据<br>Judgment basis | 判定<br>Determine |
|--------------------|----------------------|------------------------|-----------------|
| 1-11               | 绕度值/Winding value: 0 | 绕度值/Winding values≤10  | 符合/PASS         |

备注/Remark: 判定限值依客户要求。/The prescribed limit(s) is/are according to client's requirement.

5、测试照片/Test Photo(s)



测试中/During test

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十二、防护等级 IP30/Protection class IP30

1、测试标准/Test standard

GB/T 4208-2017 《外壳防护等级 (IP 代码)》/Degrees of protection provided by enclosure(IP code)

2、测试日期/Test Date

2024/12/26

3、测试仪器/Test Equipment

| 设备名称<br>Test Equipment       | 设备编号<br>Equipment Number | 校准有效期<br>Calibration Period of Validity |
|------------------------------|--------------------------|-----------------------------------------|
| IP3X 试验探棒<br>IP3X test probe | R-1-591                  | 2025/04/22                              |

4、测试条件/Test Condition

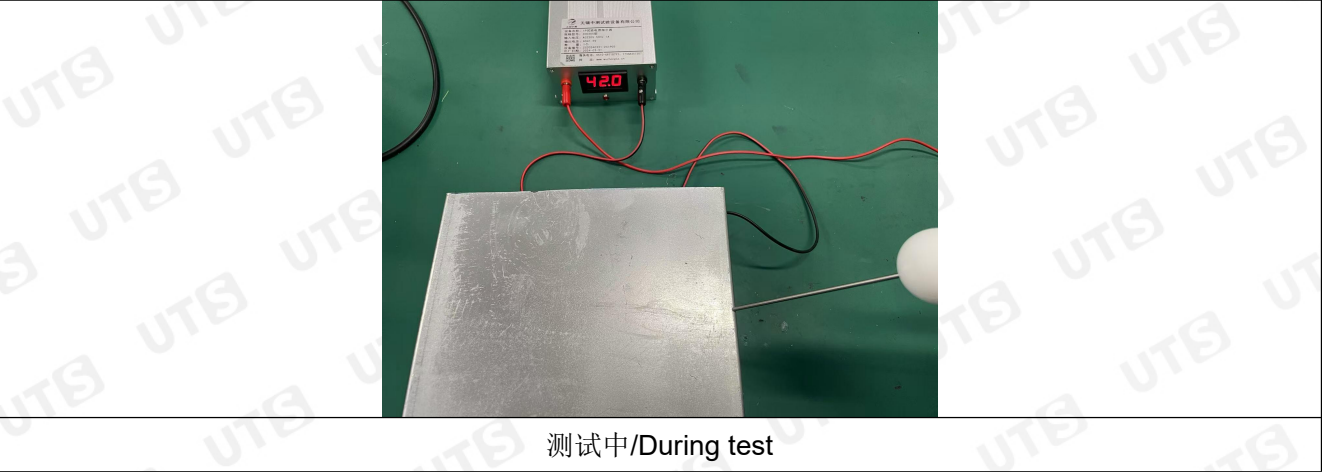
用直径为 2.5mm 的试验棒，对试品外壳施加 3±0.3N 的力。/Using a test rod with a diameter of 2.5mm, a force of 3±0.3N is applied to the test casing.

5、测试结果/Test Result(s)

| 样品编号<br>Sample No. | 结果<br>Result                                                        | 判定依据<br>Judgment basis                                                 | 判定<br>Determine |
|--------------------|---------------------------------------------------------------------|------------------------------------------------------------------------|-----------------|
| 1-12               | 试验过程试验棒未进入壳内。/The test rod did not enter the shell during the test. | 试验过程试验棒不得进入壳内。/The test rod shall not enter the shell during the test. | 符合/PASS         |

备注/Remark: 判定限值依客户要求。/The prescribed limit(s) is/are according to client's requirement.

6、测试照片/Test Photo(s)



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十三、撞击试验/Bump test

1、测试标准/Test standard

GB/T 2423.55-2006 《电工电子产品环境试验 第 2 部分：试验方法 试验 Eh：锤击试验》/Environmental testing for electric and electronic products--Part 2 : Test methods--Test Eh: hammer tests

2、测试日期/Test Date

2024/12/26

3、测试条件/Test Condition

在长度为 250mm±5mm 的三个试品分别做底部和两个侧边的撞击试验，撞击位置为中部，撞击能量为 10J，次数为各一次。/Bump tests were conducted on the bottom and two sides of the three samples with a length of 250mm±5mm, respectively. The bump position was the middle, the bump energy was 10J, and the number of times was once.

4、测试结果/Test Result(s)

| 样品编号<br>Sample No. | 结果<br>Result                      | 判定依据<br>Judgment basis                                                                       | 判定<br>Determine |
|--------------------|-----------------------------------|----------------------------------------------------------------------------------------------|-----------------|
| 1-13               | 无变形和裂纹。/No deformation and crack. | 不应出现影响安全使用的变形和裂纹。<br>/There should be no deformations and cracks that would affect safe use. | 符合/PASS         |

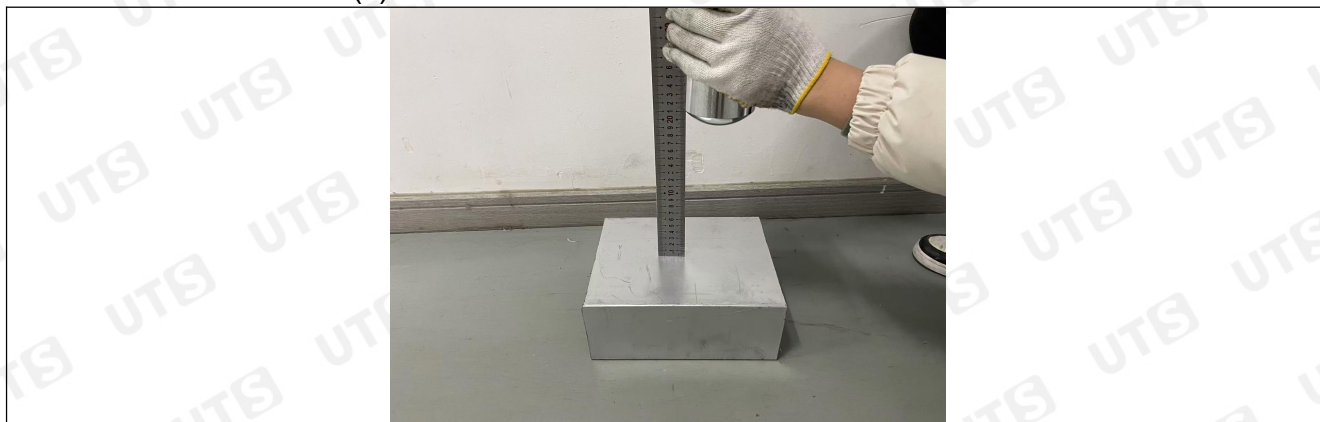
备注/Remark: 判定限值依客户要求。/The prescribed limit(s) is/are according to client's requirement.

# 检 测 报 告

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### 5、测试照片/Test Photo(s)



测试中/During test

此报告代替之前 2024/12/30 发出的报告 UTS24120047R01，特此声明报告 UTS24120047R01 作废。

This report replaces the report UTS24120047R01 that was issued on 2024/12/30, we hereby declare that the report UTS24120047R01 is invalid.

.....报告结束/End of Report.....

本报告中结果仅作为科研、教学或内部质量控制之用。

Test results in this report are only used for scientific research, teaching and internal quality control.