





中国认可 国际互认 检测 TESTING CNAS L5138

Rep.No.:TSZ22030333-P08-R01

Page 1 / 16 Pages

检测报告 UN38.3

| ame of sample: | Solid-State Lithium-ion Battery Pack |
|-----------------|---|
| 产品名称: | 西态锂离子电池组 7mm 5mm |
| Model/型号规格: | PL9887187-22.2V-27Ah |
| Client: | Beijing WeLion New Energy Technology Co.,Ltd. |
| 委托单位: | 北京卫蓝新能源科技有限公司 |
| Classification: | Commission Test |
| 检测类别: | と Min |
| | |

Shenzhen Tiansu Calibration and Testing Co.,Ltd

深圳天溯计量检测股份有限公司

Shenzhen Tiansu Calibration and Testing Co.,Ltd 深圳天溯计量检测股份有限公司

B/1,4, NO.2 Jinlong Road, Longgang District, Shenzhen, China 深圳市龙岗区宝龙街道锦龙大道 2 号 1 栋、4 栋

Web: www.tiansu.org E-mail: tsjc@tiansu.org Tel: 0755-89457984



UN38.3



Page 2 / 16 Pages

| Name of samples: Solid-State Lithium-ion Battery Pack 样品名称: 固态锂离子电池组 | Trade mark: - |
|--|---|
| Commissioned by: Beijing WeLion New Energy Technology Co.,Ltd. 委托单位: 北京卫蓝新能源科技有限公司 | Commissioner address: No. 1, West Qihang Street, Doudian Town, Fangshan District,Beijing 委托单位地址: 北京市房山区窦店镇启航西街1号 |
| Manufacturer by: Jiangsu WeLion New Energy Battery Co.,Ltd. 制造单位: 江苏卫蓝新能源电池有限公司 | Manufacturer address: NO.30 Hongchang Road, Zhongguancun Industrial Park,Liyang,Jiangsu Province, China. 制造单位地址: 江苏省溧阳市中关村产业园宏昌路 30 号 |
| Manufacturer's Contact Information 制造商联系信息: Phone: 13951854956 Email: Imiao@solidstalelion.com | Manufacturer's Web Site 制造商网址: |
| Type/Model | Shape: Prismatic |
| 型号规格: PL9887187-22.2V-27Ah | 样品形状: 棱柱形 |
| Appearance color: Black | Sample size |
| 样品颜色: 黑色 | 样品尺寸: L(213.0mm)*W(91.00mm)*H(65.00mm) |
| Rated info. 额定信息: 22.2V/27Ah/599Wh | Cell quantity 组成电芯数量: 6PCS |
| Quantity of sample: 30cells+16batteries | Cell model |
| 样品数量: 30 个电芯+16 个电池 | 电芯型号: PL9887187-27Ah |
| Limited charge voltage | Cut-off voltage |
| 充电限制电压: 25.2V | 放电截止电压: 16.8V |
| Standard charge current | Max continuous charge current |
| 标准充电电流: 13.5A | 最大持续充电电流: 54A |
| Standard discharge current | Max continuous discharge current |
| 标准放电电流: 13.5A | 最大持续放电电流: 81A |
| Receiving date | Sample identification |
| 接样日期: 2022/04/07 | 样品标识序号: C01#~C30#, B01#~B16# |
| Completing date | Test item: 8 items |
| 完成日期: 2022/04/18 | 测试项目: 8 项 |
| Test conclusion: | MA TEMP |

Test conclusion:

检测结论:

The Solid-State Lithium-ion Battery Pack submitted by Beijing WeLion New Energy Technology Co. Ltd are tested according to Section 38.3 of The Seventh Revised Edition of the United Nations Recommendations for the Transport of Dangerous Goods, Manual of Test and Criteria (ST/SG/AC.10/11/Rev.7/Section 38.3). The test results comply with the relevant requirements of the standard.

> Date of issue:Apr.202222 签发日期:2022.04.20

批准 Approved by 段江涛

审核 Reviewed by 邓兴勇

主检 Tested by

徐志龙

Page 3 / 16 Pages

Description and illustration of the sample:

样品说明及描述:

| Test item 测试项目 | Sample No. 样品编号 | 大洲 State 状态 大洲 | Remark 备注 |
|-------------------|--------------------|--|--------------|
| · · | B01#~B04# | at first cycle in fully charged states; 在第一个循环完全充电; | Battery |
| T.1~T.5 | B05#~B08# | after 25 cycles ending in fully charged states; 在第二十五个循环完全充电; | 电池 |
| 天湖 7iau Su | C01#~C05# | at first cycle at 50% of the design rated capacity; 在第一个循环充电 50%的额定容量; | Cell |
| T.6 | C06#~C10# | after 25 cycles ending in fully charged at 50% of the design rated capacity; 在第二十五个循环充电 50%的额定容量; | 电芯 |
| T.7 | B09#~B12# | at first cycle in fully charged states; 在第一个循环完全充电; | Battery |
| 1.7 7i 河 5 · · | B13#~B16# | after 25 cycles ending in fully charged states; 在第二十五个循环完全充电; | 电池 |
| T.8 | C11#~C20# | at first cycle in fully discharged states; 在第一个循环完全放电; | Cell |
| 1.0 | C21#~C30# | after 25 cycles ending in fully discharged states; 在第二十五个循环完全放电; | 电芯 |

| Description o | f the sam | pling procedure | 9: |
|---------------|-----------|-----------------|----|
|---------------|-----------|-----------------|----|

| 取 | 样 | 程 | 序 | 的 | 说 | 眀 | |
|---|---|---|---|---|---|---|--|
| | | | | | | | |

Description of report revision:

报告修订的说明:

Remarks:

备注:

The Solid-State Lithium-ion Battery Pack submitted by Beijing WeLion New Energy Technology Co.,Ltd are small batteries.

由北京卫蓝新能源科技有限公司所送的固态锂离子电池组是小电池。

Page 4 / 16 Pages

Photos of Battery\电池图片









Page 6 / 16 Pages

Photos of Cell\电芯图片





Page 7 / 16 Pages

| 38.3.4 | Procedure/测记 | 试步骤 | | | | | Lan Su— | | |
|----------------|---|--|-------------------|--------------------|---|--------------------|----------------|--|--|
| ,u >40 | Test 1: Altitud | de simulation/ | 测试 1: 高度模 | 拟 | z iM.° | R VIII 7 ian Su | ¥, | | |
| | at ambient ten | Test cells and batteries shall be stored at a pressure of 11.6kPa or less for at least six hour at ambient temperature (20±5℃). 将电芯和电池在温度为 20±5℃,大气压力为不大于 11.6kpa 的环境中贮存不少于 6 个小时。 | | | | | | | |
| | Requirement/ | 标准要求: | from the | o Tian | 54 | 美潮 | 1000 | | |
| | 1.Cells and ba | atteries Mass Ic | oss limit: ≤0.1% | u | | | Р | | |
| 38.3.4.1 | 样品质量损 | 失≤0.1%。 | | | | | ian Su P | | |
| 天 瀬 Tian Su | applicable to 样品试验后 | o test cells and | batteries at full | discharged sta | relating to voltag ates. 要求不适用于完全 | · Tian - Ti | · 考 | | |
| | 和电芯。 | | 4. 渊 | 7 ian Su | 1. Team | | £ WA | | |
| | 3.No leakage, no venting, no disassembly, no rupture and no fire. 样品(电池)应无漏液、无排气、无解体、无破裂以及无着火现象的发生。 | | | | | | | | |
| | Result 测试结果 | * Y | A Tian | 5° | 天 潮 7ian Su | 0.000 | 天湖 Tian Su | | |
| Sample No. | | Before Test 测试前 | | After Test 测试后 | | Residual OCV | Test result | | |
| 样品编号 | Mass 样品质量 (kg) | Voltage 开路电压(V) | Mass 样品质量(kg) | Voltage 开路电压(V) | 质量损失(%) | 剩余电压(%) | 测试结果 | | |
| B01# | 2.352 | 25.124 | 2.351 | 25.094 | 0.04 | 99.88 | Pas | | |
| B02# | 2.346 | 25.098 | 2.345 | 25.073 | 0.04 | 99.90 | Р | | |
| B03# | 2.351 | 25.130 | 2.351 | 25.117 | 0.00 | 99.95 | P | | |
| B04# | 2.346 | 25.090 | 2.345 | 25.072 | 0.04 | 99.93 | Р | | |
| | | 25.107 | 2.352 | 25.099 | 0.00 | 99.97 | Р | | |
| B05# | 2.352 | 23.107 | | | | | | | |
| B05# B06# | 2.352 | 25.102 | 2.352 | 25.079 | 0.00 | 99.91 | Р | | |
| 100 | Jan C | 7:04.3" | 2.352 | 25.079 25.105 | 0.00 | 99.91 99.98 | P P | | |

Other supplements: Test result "P" decides that the test item passes.

Page 8 / 16 Pages

| 38.3.4 | Procedure/测 | 试步骤 | | | | | ian Su— |
|---------------|--|---|---|--|---|----------------|-------------------------------|
| ,u .u.o | Test 2: Thern | nal test/测试 2 | : 温度测试 | Tian 5" | | 7ian Su | 系 |
| | 72±2℃, follow The maximum procedure is t batteries are t 将电芯和电池 贮存不少于 6 | ved by storage n time interval b o be repeated o be stored for 在温度为 72±2 个小时,两个流 | for at least six between test te until 10 total cy 24 hours at an ℃的条件下贮存 | hours at a test mperature extro cles are complo hbient tempera 不少于 6 个小 长为 30min,重约 | temperature equemes in 30 minu ete, after which a ture (20±5℃). 时,然后,在温力 | tes, This | 天湖 Tian Si M Ian Si |
| 38.3.4.2 MA | 样品质量损 2.Open circuit applicable t 样品试验后 和电芯。 3.No leakage, | atteries Mass lo 失≤0.1%. voltage not le o test cells and 开路电压应不位 no venting, no | d batteries at ful 氐于试验前开路 o disassembly, i | he requirement Il discharged st 电压的 90%,此 no rupture and | 要求不适用于完 no fire. | 全放完电的电池 | 平 東湖 Tian Su Tian Su |
| | Result 测试结果 | ア | 【排气、尤胖体 | 、 九 | 着火现象的发生 | · Figure | R Su |
| Sample No. | Before 测词 | | Mark D | · Test 式后 | Mass loss | Residual OCV | Test result |
| 样品编号 | Mass 样品质量 (kg) | Voltage 开路电压(V) | Mass 样品质量(kg) | y Voltage 开路电压(V) | 质量损失(%) | 剩余电压(%) | 测试结果 |
| B01# | 2.351 | 25.094 | 2.349 | 24.971 | 0.09 | 99.51 | Р |
| B02# | 2.345 | 25.073 | 2.343 | 24.940 | 0.09 | 99.47 | Р |
| B03# | 2.351 | 25.117 | 2.349 | 25.004 | 0.09 | 99.55 | Р |
| B04# | 2.345 | 25.072 | 2.343 | 24.952 | 0.09 | 99.52 | Р |
| 7100 30 | 2.352 | 25.099 | 2.351 | 24.971 | 0.04 | 99.49 | Р |
| B05# | 17.13 | | | | | | |
| B05# | 2.352 | 25.079 | 2.350 | 24.954 | 0.09 | 99.50 | 7 in P |
| 8 | 71011 5" | 25.079 | 2.350 2.343 | 24.954 24.974 | 0.09 | 99.50 99.48 | P P |

Other supplements: Test result "P" decides that the test item passes.

Page 9 / 16 Pages

| 38.3.4 | Procedure/测 | 试步骤 | | | | | ian Su— | |
|---------------|--|---|--|--------------------|---------------------------------------|--|----------------|--|
| 300 | Test 3: Vibra | tion/测试 3: 拼 | 克动 文 洲 | 7 ich 2" | **A | Tian Su | | |
| | distorting the be a sinusoid Hz traversed | cells in such a al wave form w in 15 minutes, | manner as to fa ith a logarithmic This cycle shall | aithfully transmi | en 7 Hz and 200 2 times for a tota | he vibration shall Hz and back to 7 | 天 湖 Tian S | |
| | 加至 200Hz, | 然后再减少回: | | 环,一个循环抖 | 。振动以正弦波 寺续 15 分钟的对 | | M Su | |
| 38.3.4.3 | Requirement | /标准要求: | Mian Su | 0 | A VIII Tim 5" | 天逝 | Р | |
| 19-99 | 1.Cells and batteries Mass loss limit: ≤0.1%. 样品质量损失≤0.1%. | | | | | | | |
| | | 2 1/113 | | he requirement | relating to voltagates. | ge is not | 7 in S | |
| | 样品试验后 和电芯。 | 开路电压应不1 | 低于试验前开路 | 电压的 90%,此 | 要求不适用于完全 | 全放完电的电池 | 天湖 Tian Su | |
| | 1000 | • | | no rupture and i | | | | |
| | 样品(电池 |) 应无漏液、ラ | 无排气、无解体 | 、无破裂以及无 | 着火现象的发生 | 0 | | |
| | Result 测试结果 | | | | | | | |
| Sample No. | | re Test 试前 | After Test 测试后 | | Mass loss | Residual OCV | Test result | |
| 样品编号 | Mass 样品质量 (kg) | Voltage 开路电压(V) | Mass 样品质量(kg) | Voltage 开路电压(V) | 质量损失(%) | 剩余电压(%) | 测试结 | |
| B01# | 2.349 | 24.971 | 2.348 | 24.959 | 0.04 | 99.95 | Р | |
| B02# | 2.343 | 24.940 | 2.343 | 24.918 | 0.00 | 99.91 | Р | |
| B03# | 2.349 | 25.004 | 2.349 | 24.976 | 0.00 | 99.89 | Р | |
| B04# | 2.343 | 24.952 | 2.343 | 24.935 | 0.00 | 99.93 | Р | |

Other supplements: Test result "P" decides that the test item passes.

24.971

24.954

24.974

24.984

2.351

2.349

2.343

2.343

24.949

24.934

24.947

24.957

0.00

0.04

0.00

0.00

99.91

99.92

99.89

99.89

P

Ρ

Ρ

Ρ

其他补充:测试结果"P"代表判定该测试项目通过。

2.351

2.350

2.343

2.343

B05#

B06#

B07#

B08#

Page 10 / 16 Pages

| 38.3.4 | Procedure/测 | 试步骤 | | 夫鄉 | 5/200- | - W49 | ian Su — |
|---|---|--------------------|------------------|---------------------|-----------|--------------|----------------|
| N/a D | Test 4: Shoc | k/测试 4: 冲击 | 天湖 | 7im 5" | - ×44 | 7 can Su | 3 |
| 7 M 7 Can Su 7 Can Su 38.3.4.4 | Test cells and batteries shall be secured to the testing machine, and each shall be subjected to a half-sine shock of peak acceleration of 150gn (or Acceleration(gn)= √ which is smaller) and pulse duration of 6 milliseconds, large cells and large batteries shall be subjected to a half-sine of peak acceleration of 50gn (or Acceleration(gn)= √ which is smaller) and pulse duration of 11 milliseconds. Each cell or battery shall be subjected to three shocks in the positive direction followed by three shocks in the negative direction of three mutually perpendicular mounting positions of the cell or battery for a total of 18 shocks. 以稳固的托架固定住每个电芯和电池样品的全部配件表面。对每个电芯或电池以峰值为 150gn (或与√ wind) 中的较小值)的半正弦的加速度撞击,脉冲持续6毫秒,大型电池和大型电池组须经受最大加速度 50gn (或与√ wind) 中的较小值)和脉冲持续时间 11 毫秒的半正弦波冲击。每个电池或电池组须在三个互相垂直的电池安装方位的正方向经受三次冲击,接着在反方向经受三次冲击,总共经受 18 次冲击。 Requirement/标准要求: 1. Cells and batteries Mass loss limit: ≤0.1%. 样品质量损失≤0.1%. 2. Open circuit voltage not less than 90%, The requirement relating to voltage is not applicable to test cells and batteries at full discharged states. 样品试验后开路电压应不低于试验前开路电压的 90%,此要求不适用于完全放完电的电池和电芯。 3. No leakage, no venting, no disassembly, no rupture and no fire. | | | | | | |
| | | | | | | | |
| | 样品(电池 Result/测试组 | 1000 | :排气、无解体、 | 无破裂以及无 | 着火现象的发生。 | Tian S Sa | " 天寶 |
| Sample No. | Befor | re Test 式前 | | r Test 式后 | Mass loss | Residual OCV | Test result |
| 样品编号 | Mass 样品质量 (kg) | Voltage 开路电压(V) | Mass 样品质量(kg) | Voltage 开路电压(V) | 质量损失(%) | 剩余电压(%) | 测试结果 |
| B01# | 2.348 | 24.959 | 2.348 | 24.954 | 0.00 | 99.98 | Р |
| B02# | 2.343 | 24.918 | 2.343 | 24.908 | 0.00 | 99.96 | Р |
| B03# | 2.349 | 24.976 | 2.348 | 24.956 | 0.04 | 99.92 | Р |
| B04# | 2.343 | 24.935 | 2.343 | 24.918 | 0.00 | 99.93 | Р |
| B05# | 2.351 | 24.949 | 2.351 | 24.922 | 0.00 | 99.89 | , P |
| B06# | 2.349 | 24.934 | 2.349 | 24.917 | 0.00 | 99.93 | Р |
| B07# | 2.343 | 24.947 | 2.343 | 24.922 | 0.00 | 99.90 | Р |
| | | | | | | | |

Other supplements: Test result "P" decides that the test item passes.

24.957

2.343

24.942

0.00

99.94

其他补充:测试结果"P"代表判定该测试项目通过。

2.343

B08#

Page 11 / 16 Pages

| 38.3.4 | Procedure/测试步骤 | | ian Su— |
|----------------------------------|--|---|--|
| 584 | Test 5: External short | circuit/测试 5:外部短路 | 7 ian 5" |
| 7 ian 54 7 ian 54 38.3.4.5 | temperature reaches 57 condition with a total ex condition is continued for has returned to 57±4°C, to be concluded. 保持试验环境温度稳定和度下,将其正负极用小一 | e tested shall be temperature stabilized so 7±4℃ and then the cell or battery shall be ternal resistance of less than 0.1 ohm at 5 or at least one hour after the cell or battery the cell or battery must be observed for a 4 cell or battery must be observed for a 4 cell or battery must be observed for a 4 cell or battery must be observed for a 57±4℃,以使电芯或电池样品外表温度过于 0.1 欧姆的线路短接,待电芯或电池的外电芯或电池必须进一步观察 6 个小时才能下 | subjected to a short circuit i7±4℃, This short circuit external case temperature further six hour for the test 达到 57±4℃,然后,在此温表温度恢复到 57±4℃之后 |
| | Requirement/标准要求: | a EM | u X Mi 7ian 51 |
| | 1.Cells and batteries me 170℃; 电芯或电池的外壳温质 | eet this requirement if their external tempe 度应不超过 170℃; | rature does not exceed |
| | 2. No disassembly, no r 试验后 6 小时内无解作 | upture and no fire during the test and with 体、无破裂、无起火。 | in six hours after this test. |
| | Result 测试结果 | フcan ラ 天 州 天 州 | 天瀬 Téan Su |
| Sample No. 样品编号 | (1) 天衛 7:an 5 | Max External Temp 样品表面最高温度(℃) | Test result 测试结 |
| B01# | 7100- | 57.3 F. M. | Pin |
| B02# | 7ian Su | 57.6 | A P P P P P P P P P P |
| B03# | 71ax 54 | た Wh gran 5年 58.3 天 例 | Tian P |
| B04# | te 7ian 5u | 58.4 | 7 ian Su P |
| | S | 58.4 | 54 £ 11 7:11 54 P |
| B05# | <u> </u> | | 32 - 27AU |
| B05# | F WIN 7ian Su | 57.3 | 7ian 5a P. |
| | 天湖 Tean Sm 天湖 | 57.3 57.3 57.7 | P P |

| Rep. | No.:T | SZ2203 | 0333-F | 08-R01 |
|------|-------|--------|--------|--------|
|------|-------|--------|--------|--------|

| 38.3.4 | Procedure/测试步骤 | ian Su— |
|---------------|---|--------------------------|
| 天湖 Tian Su | Test 6: Crush\Impact/ 测试 6: 挤压(适用) 撞击(不适用) | ¥7 |
| | Crush 挤压 | 夫願 Tian Su |
| | A cell or component cell is to be crushed between two flat surfaces. The crushing is to be gradual with a speed of approximately 1.5 cm/s at the first point of contact. The crushing is to be continued until the first of the three options below is reached. | A Su |
| | (a) The applied force reaches 13kN±0.78kN; | |
| | (b) The voltage of the cell drops by at least 100 mV; | 2 |
| | (c) The cell is deformed by 50% or more of its original thickness. | |
| | Once the maximum pressure has been obtained, the voltage drops by 100mV or more, or the cell is deformed by at least 50% of its original thickness, the pressure shall be released. 电池芯或组成电池芯在两个平面间挤压。挤压在第一个接触点以约 1.5cm/s 的速度慢慢进 | 天湖 Tian Si |
| | 行,直到下面三个选项之一达到为止: | |
| | (a)作用力达到 13kN±0.78kN; | 支網 |
| | (b)电池芯电压降至少达到 100mV; | 7 ian 54 |
| | (c)电池厚度和最初比较变形至少 50%。 | |
| | 一旦达到最大压力, 电压降超过 100 mV 或者电池芯变形超过 50%, 压力应该解除。 | A . |
| | Impact 7 in St. 7 in | d |
| | 撞击 | * |
| 38.3.4.6 | (applicable to cylindrical cells not less than 18mm in diameter) | Р |
| | The sample cell or component cell is to be placed on a flat smooth surface. A 15.8 mm ± 0.1 mm diameter, at least 6 cm long, or the longest dimension of the cell, whichever is greater, Type 316 stainless steel bar is to be placed across the centre of the sample. A 9.1 kg ± 0.1 kg mass is to be dropped from a height of 61 ± 2.5 cm at the intersection of the bar and sample in a controlled manner using a near frictionless, vertical sliding track or channel with minimal drag on the falling mass. The vertical track or channel used to guide the falling mass shall be oriented 90 degrees from the horizontal supporting surface. | 天湖 7ian Su A Su |
| | The test sample is to be impacted with its longitudinal axis parallel to the flat surface and perpendicular to the longitudinal axis of the 15.8 mm ± 0.1 mm diameter curved surface lying across the centre of the test sample. Each sample is to be subjected to only a single impact. | 天 V Tian |
| | Cells and component cells meet this requirement if their external temperature does not exceed 170°C and there is no disassembly and no fire during the test and within six hours after this test. | 天湖 Tian Su |
| | (适用于直径不小于 18 毫米的圆柱形电池)将电池或元件电池样品平放在一个平面上,其纵轴平行于测试台面年,将一直径为 15.8 mm ± 0.1 mm 的 316 型不锈钢棒横放在电池中心位置。然后,将一质量为 9.1 kg ± 0.1 kg 的物体从 61±2.5 cm 的高度落向样品。样品在进行试验时,其外表温度应不超过 170℃。且试验结束后 6 个小时之内,样品应无解体、无起火现象发生。 | A 5" |
| | Requirement/标准要求: | 710 |
| | 1.Cells and component cells meet this requirement if their external temperature does not | |
| | exceed 170°C; | 98.0 |
| | 电芯的外壳温度应不超过 170℃; | 天 M |
| | 2. No disassembly, no fire during the test and within six hours after this test. | |



Page 13 / 16 Pages

| in Tian | Result 测试结果 | 天湖 天湖 7ian Su 天湖 | 天 MA 7ian Su |
|--------------------|-------------------------------|----------------------------------|---------------------|
| Sample No. 样品编号 | OCV prior to test 试验前电压(V) | Max External Temp 样品表面最高温度(℃) | Test result 测试结果 |
| C01# | 3.842 | 24.6 | Pin |
| C02# | 3.834 | £ ₩ 24.9 £ ₩ | Р |
| C03# | 3.829 | 24.8 | Р |
| C04# | 3.843 | 24.4 | 7 in Su P |
| C05# | 3.840 | 24.3 | Р |
| C06# | 3.835 | 25.0 | Р |
| C07# | 3.833 | 24.9 | P- Vill |
| C08# | 3.831 | 24.5 | Р |
| C09# | 3.840 | 25.0 | K P |
| C10# | 3.834 | 24.6 £ 184 | Р |

Other supplements: Test result "P" decides that the test item passes.

Page 14 / 16 Pages

| 38.3.4 | Procedure/测试步骤 | ian Su— | |
|---|---|---------------------|--|
| 4.0 | Test 7: Overcharge/测试 7: 过度充电 | | |
| 71an Su 71an Su 38.3.4.7 | When the manufacturer's recommended charge voltage is not more than 18V, the minimum voltage of the test shall be the lesser of two times the maximum charge voltage of the or 22V, whichever is less. When the manufacturer's recommended charge voltage is more than 18V, the charging voltage of the test shall be 1.2 times maximum charge voltage. The charging current is 2 times of the maximum charging current recommended by the manufacturer. 如果厂家推荐的充电电压不超过 18V,本测试的最小充电电压应该是两倍的厂家标定最大充电电压或者是 22V,取其中较小者。如果厂家推荐的充电电压超过 18V,充电电压应该为 1.2倍的厂家标定最大充电电压。充电电流为厂家推荐的最大充电电流 2 倍。 | | |
| | Requirements/标准要求: No disassembly and no fire during the test and within seven days after the test. 试验样品在试验中和试验后 7 天内,应无解体和无起火现象发生。 | | |
| | o him 5" & M | | |
| | o him 5" & M | z 渊 Tian Sa | |
| Sample No. 样品编号 | 试验样品在试验中和试验后7天内,应无解体和无起火现象发生。 Result 测试结果 | Test result 测试结果 | |
| Pian D' | 试验样品在试验中和试验后 7 天内,应无解体和无起火现象发生。 Result 测试结果 OCV prior to test | | |
| 样品编号 | 试验样品在试验中和试验后 7 天内,应无解体和无起火现象发生。 Result 测试结果 OCV prior to test 试验前电压 (V) | 测试结果 | |
| 样品编号 B09# | 试验样品在试验中和试验后 7 天内,应无解体和无起火现象发生。 Result 测试结果 OCV prior to test 试验前电压 (V) 25.088 | 测试结果 P | |
| 样品编号 B09# B10# | 试验样品在试验中和试验后 7 天内,应无解体和无起火现象发生。 Result 测试结果 OCV prior to test 试验前电压 (V) 25.088 25.131 | 测试结果 P P | |
| 样品编号 B09# B10# B11# | 试验样品在试验中和试验后 7 天内,应无解体和无起火现象发生。 Result 测试结果 OCV prior to test 试验前电压 (V) 25.088 25.131 | 测试结果 P P | |
| 样品编号 B09# B10# B11# B12# | 试验样品在试验中和试验后 7 天内,应无解体和无起火现象发生。 Result 测试结果 OCV prior to test 试验前电压 (V) 25.088 25.131 25.097 | 测试结果 P P P | |
| 样品编号 B09# B10# B11# B12# B13# | 试验样品在试验中和试验后 7 天内,应无解体和无起火现象发生。 Result 测试结果 OCV prior to test 试验前电压 (V) 25.088 25.131 25.097 25.098 25.091 | 测试结果 P P P | |

Page 15 / 16 Pages

| 天湖 7ian Su 38.3.4.8 天湖 7ian Su 天湖 | Procedure/测试步骤 Test 8: Forced discharge/测 | 试 8: 强制放电 | Tian 5" | * The True Su | | |
|--|--|---------------------|--------------------|-------------------------------|--------------------|--|
| | Each cell shall be forced discharged at ambient temperature by connecting it in series with a 12V D.C power supply at an initial current equal to the maximum discharge current specified the manufacturer The specified discharge current is to be obtained by connecting a resistive load of the appropriate size and rating in series with the test cell, Each cell shall be forced discharged for a time interval(in hours) equal to its rated capacity divided by the initial test current(in ampere). 在 20±5℃的环境温度下,将单个电芯连接在 12V 的直流电源上进行强制放电,此直流电源提供每个电芯初始电流为制造厂指定的最大放电电流,放电时间为额定容量除以初始电流。 | | | | | |
| | Requirements/标准要求: No disassembly and no fire during the test and within seven days after the test. 试验样品在试验中和试验后 7 天内,应无解体和无起火现象发生。 Result 测试结果 | | | | | |
| Sample No. 样品编号 | OCV prior to test 试验前电压(V) | Test result 测试结果 | Sample No. 样品编号 | OCV prior to test 试验前电压(V) | Test resul 测试结果 | |
| C11# | 3.306 | Р | C21# | 3.317 | Р | |
| C12# | 3.336 | 7ian 54 P | C22# | 3.309 | Р | |
| C13# | 3.309 | o P 7ian | C23# | 3.314 | Р | |
| C14# | 3.305 | Р | C24# | 3.326 | Tian Su P | |
| C15# | 3.335 | P. S. | C25# | 3.334 | Р | |
| C16# | 3.300 7101 54 | Р | C26# | 3.300 | ^{™S™} P | |
| C17# | 7uu Su 3.348 | Film Su P | C27# | 3.343 | P | |
| | 3.312 | Р | C28# | 3.317 | Р | |
| C18# | | | 2// | 美型 | - 34 | |
| C18# | 3.328 | Р | C29# | 7100 S 3.305 | ⊢P. | |

Page 16 / 16 Pages

STATEMENTS

声明

- 1. The test report is invalid without the official stamp of Tiansu. 本报告无检测单位印章无效。
- 2. This report shall not be copied partly without the written approval of Shenzhen Tiansu Calibration and Testing Co.,Ltd.

除非全部复制,否则无深圳天溯计量检测股份有限公司书面批准本报告不得部分复制。

- 3. This report is invalid without the signature of the approver, reviewer, and tester. 本报告无批准人、审核人及检测人签名无效。
- 4. The test report is invalid if altered. 本报告涂改无效。
- 5. Objections to the test report must be submitted to Tiansu within 15 days. 对检测报告若有异议,应于收到报告之日起十五天内向检测单位提出。
- 6. The test report is valid for the tested samples only. 本报告仅与送检样品有关。

----报告结束-----