



中国认可
国际互认
检测
TESTING
CNAS L0095

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No.: RZUN012025-1747

检测报告

TEST REPORT

UN38.3

NAME OF SAMPLE:

1MW/2.17MWh Integrated Liquid-cooled Energy
Storage Container

产品名称:

1MW/2.17MWh 一体式液冷储能集装箱

CLIENT:

SHANGHAI ELECNOVA ENERGY STORAGE CO.,
LTD.

委托单位:

上海伊莱诺瓦储能技术有限公司

CLASSIFICATION OF TEST:

Commission Test

检测类别:

委托测试

威凯检测技术有限公司
CVC Testing Technology Co., Ltd.

检测报告

TEST REPORT

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Name of samples: 1MW/2.17MWh Integrated Liquid-cooled Energy Storage Container 样品名称: 1MW/2.17MWh 一体式液冷储能集装箱	Type/Model: 型号规格: ECO-E20FT2170LP-2 768V 2826Ah 2170kWh
Color: White 样品颜色: 白色	Physical shape: Prismatic 样品形状: 棱柱形
Commissioned by: SHANGHAI ELECNOVA ENERGY STORAGE CO., LTD. 委托单位: 上海伊莱诺瓦储能技术有限公司	Commissioner address: T1-3F, Hongqiao Hui, No. 990 Shenchang Road, Minhang District, Shanghai 委托单位地址: 上海市闵行区申长路 990 号虹桥汇 T1-3F
Manufacturer: SHANGHAI ELECNOVA ENERGY STORAGE CO., LTD. 制造商: 上海伊莱诺瓦储能技术有限公司	Manufacturer address: T1-3F, Hongqiao Hui, No. 990 Shenchang Road, Minhang District, Shanghai 制造商地址: 上海市闵行区申长路 990 号虹桥汇 T1-3F
Factory: JIANGSU SFERE ELECTRIC CO.,LTD. 生产厂: 江苏斯菲尔电气股份有限公司	Factory address: No.1 Dongding Road, Jiangyin 生产厂地址: 江阴市东定路 1 号
Classification of test: Commission Test 检测类别: 委托测试	Quantity of sample: 1 Battery assembly 样品数量: 1 集成电池组
Tested according to: 测试标准: ST/SG/AC.10/11/Rev.8/ Section 38.3	Sample identification: S1# 样品标识序号: S1#
Receiving date: 接样日期: 2025-07-28	Means of receiving: Submitted by commissioner 接样方式: 委托单位送样
Completing date: 完成日期: 2025-09-08	Test item: - 测试项目: -
Test conclusion: 检测结论: <p>The 1MW/2.17MWh Integrated Liquid-cooled Energy Storage Container submitted by SHANGHAI ELECNOVA ENERGY STORAGE CO., LTD. complies with the requirements of Section 38.3 of the Eighth revised edition of the Manual of Tests and Criteria (ST/SG/AC.10/11/Rev.8/Section 38.3).</p> <p>由上海伊莱诺瓦储能技术有限公司送检的 1MW/2.17MWh 一体式液冷储能集装箱, 符合联合国《试验和标准手册》第八修订版第 38.3 相关要求。</p> <p style="text-align: center;">Seal of CVC CVC 印章 Date of issue: 签发日期: 2025-09-17</p>	

Title: Manager
批准人职务: 经理

Approved by: Zhang Siyao Reviewed by: Liu Zhen Tested by: Lin Qingyuan

批 准: Zhang siyao 审 核: Liu Zhen 检 测: Lin Qingyuan

Description and illustration of the sample/样品说明及描述:

- The sample's status is good. / 样品状况良好;
Sample weight/样品重量: 28000kg ;
- Sample information and compositions/ 样品信息及组成

Name of samples 样品名称	Sample category 样品类别	Type/Model 型号	Specifications 规格参数	Composition 组成结构
1MW/2.17MWh Integrated Liquid- cooled Energy Storage Container 1MW/2.17MWh 一 体式液冷储能集装 箱	Battery assembly 集成电池组	ECO- E20FT2170LP-2	768V 2826Ah 2170kWh	Consists of 9 battery clusters / 由 9 个电池簇组成
ECO-R1P240LP	Battery Cluster 电池簇	ECO-R1P240LP	768V 314Ah 241,15kWh	Consists of 5 batteries / 由 5 个 电池组组成
Liquid cooled pack (1P48S) 液冷 pack (1P48S)	Battery 电池组	ECO-P1P48LP	153,6V 314Ah 48,23kWh	Consists of 48 component cells / 由 48 个内部电芯 组成
Cell 电芯	Component Cell 内部电芯	LFP71173207/31 4Ah	3,2V 314Ah 1004,8Wh	Single cell / 单电芯

3. Item information /项目信息

Name of samples 样品名称	Item 项目	Sample No. 样品编号	State 状态	Remark 备注
1MW/2.17MWh Integrated Liquid- cooled Energy Storage Container 1MW/2.17MWh 一体式 液冷储能集装箱	38.3.3.1(g)	S1#	more than 6200Wh 超过 6200Wh	-

Description of the sampling procedure/取样程序的说明:

/

Description of the deviation from the standard, if any/测试结果不符合标准项的说明:

/

Remarks/备注:

- Throughout this report a comma is used as the decimal separator.
本报告中以逗号代替小数点。
- The 1MW/2.17MWh Integrated Liquid-cooled Energy Storage Container (ECO-E20FT2170LP-2) described in this report is a collection of Liquid cooled pack (1P48S) (ECO-P1P48LP). The Liquid cooled pack (1P48S) (ECO-P1P48LP) has passed the testing of ST/SG/AC.10/11/Rev.8/ Section 38.3. See the report RZUN012025-1748. According to the standard requirements, T.1~T.8 not need to be verified for 1MW/2.17MWh Integrated Liquid-cooled Energy Storage Container (ECO-E20FT2170LP-2).
本报告所述 1MW/2.17MWh 一体式液冷储能集装箱 (ECO-E20FT2170LP-2) 是液冷 pack (1P48S) (ECO-P1P48LP) 的集合体。该液冷 pack (1P48S) (ECO-P1P48LP) 已通过 ST/SG/AC.10/11/Rev.8/ Section 38.3 测试, 详情见报告 RZUN012025-1748。根据标准要求, 1MW/2.17MWh 一体式液冷储能集装箱 (ECO-E20FT2170LP-2) 无需进行 T.1~T.8 测试。

样品照片 Photos of Samples

集成电池组/ Battery assembly
 (ECO-E20FT2170LP-2 768V 2826Ah 2170kWh)



Elecnova
Energy Storage System

Product Model	ECO-E20FT2170LP-2
Grid Input/Output Port	
Nominal AC Voltage	3/N/PE AC 230/400V
Nominal AC Frequency	50/60Hz
Max. AC Current	1520A
Max. AC Power	1000kW
Integrated Battery System Parameters	
Nominal Voltage	DC 768V
Voltage Range	DC 672V ... , 864V
Rated Capacity	2826Ah
Rated Energy	2170.368kWh
Auxiliary Power Supply	
Nominal Input Voltage	3/N/PE AC 230/400V
Nominal Frequency	50/60Hz
Max. Nominal Input Current	AC 50A Max
General Parameters	
Ingress Protection	IP54
Protective Class	I
Operation Ambient Temperature	-25°C ... , 55°C

Shanghai Elecnova Energy Storage Co., Ltd.

样品照片 Photos of Samples

电池簇 / Battery Cluster
(ECO-R1P240LP 768V 314Ah 241,15kWh)



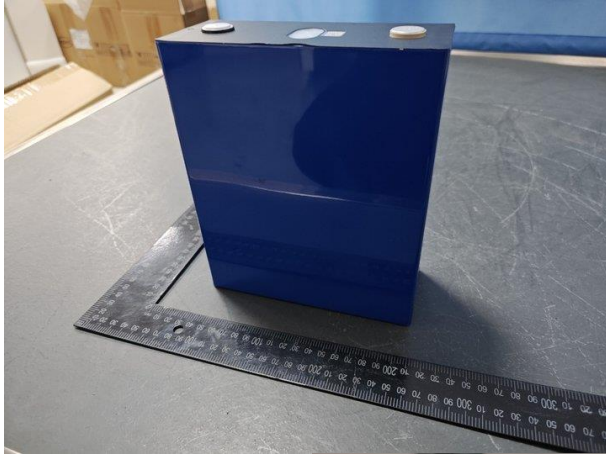
样品照片 Photos of Samples

电池组/ Battery
(ECO-P1P48LP 153,6V 314Ah 48,23kWh)



样品照片 Photos of Samples

内部电芯 / Component Cell
(LFP71173207/314Ah 3,2V 314Ah 1004,8Wh)



ST/SG/AC.10/11/Rev.8/ Section 38.3			
Clause 章节	Requirements 标准要求	Result 结果	Verdict 判定
38.3.3.1 (g)	<p>Requirements/标准要求</p> <p>When lithium batteries that have passed all applicable tests are electrically connected to form a battery in which the aggregate lithium content of all anodes, when fully charged, is more than 500g, or in the case of a lithium ion battery, with a Watt-hour rating of more than 6200Wh, the assembled battery does not need to be tested if the assembled battery is of a type that has been verified as preventing:</p> <p>(i) Overcharge; (ii) Short circuits; and (iii) Over discharge between the batteries.</p> <p>/对于已通过所有适用试验的若干锂电池组以电路连接而成的集成电池组，如在完全充电时所有正极的合计锂含量大于 500 克，或在锂离子电池组的情况下，如额定的瓦时数超过 6200 瓦时，该集成电池组如经过验证属于可防止下列状况，即无需进行试验（T.1~T.8 测试项）：</p> <p>(一) 过度充电； (二) 短路；以及 (三) 电池组之间过度放电。</p>	<p>The watt-hour rating of 1MW/2.17MWh Integrated Liquid-cooled Energy Storage Container (ECO-E20FT2170LP-2) is 2170kWh (more than 6200Wh);</p> <p>该 1MW/2.17MWh 一体式液冷储能集装箱（ECO-E20FT2170LP-2）的额定瓦时数为 2170kWh（超过 6200Wh）；</p> <p>After verification, the 1MW/2.17MWh Integrated Liquid-cooled Energy Storage Container (ECO-E20FT2170LP-2) is equipped with the energy storage system management unit, which can monitor and control each battery component. By sending instructions and cutting off the loop of the battery cluster, it can prevent overcharging, short circuit, and excessive discharge among the battery strings in the battery component.</p> <p>经验证，1MW/2.17MWh 一体式液冷储能集装箱（ECO-E20FT2170LP-2）具备储能系统管理单元，能够监测并控制各电池组件，通过发送指令，切断电池簇的回路等方式，达到防止过度充电、防止短路，以及防止电池组件内各电池组之间过度放电的功能。</p>	P

注 意 事 项 Important

1. 报告无检测单位印章无效。
The test report is invalid without the seal of CVC.
2. 未经本试验室书面同意，不得部分地复制本报告。
Nobody is allowed to photocopy or partly photocopy this test report without written permission of CVC.
3. 本报告无批准人、审核人及检测人签名无效。
The test report is invalid without the signatures of Ratifier, Reviewer and Testing engineer.
4. 本报告涂改无效。
The test report is invalid if altered,
5. 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。
Objections to the test report must be submitted to CVC within 15 days.
6. 本报告仅对送检样品负责。
The test report is valid for the tested samples only.
7. 判定栏中“-”表示“不需要判定”，“P”表示“通过”，“F”表示“不通过”，“N/A”表示“不适用”。
As for the Verdict, “-” means “no need for judgement”, “P” means “pass”, “F” means “fail” and “N/A” means “not applicable”.

***报告中未加 CMA 标志时，检测数据和结果仅供科研、教学或内部质量控制之用。**
The test data and test results given in this test report should only be used for purposes of scientific research, teaching and internal quality control when the CMA symbol is not presented.*

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