TEST REPORT

Non-Transferable

Test Report No.: C T 0 G P 8 1 7 4 | **Date: 14.08.2020**

1.0 **NAME AND ADDRESS OF THE CUSTOMER** : **M/s. Okaya Power Private Limited**
H-19, Udyog Nagar, Rohtak Road -110041
New Delhi INDIA

1.1 **NAME AND ADDRESS OF THE MANUFACTURER** : Same as serial No. 1.0

2.0 **CUSTOMER LETTER REF.** : CCTNOKYAPHEEL106948 Dated 14-July-.2020

3.0 **DESCRIPTION OF DEVICE UNDER TEST (DUT):**

DUT Name	Battery Pack, 60V
Battery Type	Lithium Battery
Battery Capacity(Ah)	140AH (Ah in 3 hrs)
Rated Voltage	60V DC
Id/Model No.	LFP60140E
Quantity	01 No. of Battery Pack (ICAT/EEL/106948/01)
Trade Name	OKAYA

4.0 **DATE OF RECEIPT OF SAMPLE :** 04.08.2020

5.0 **CONDITION OF SAMPLE:** No physical damage observed.

6.0 **TEST OBJECTIVE:**
To validate the Performance Requirements of Traction Battery as per ISO 12405-4:2018(E) as amended upto date.

7.0 **TEST METHOD:** Test method referred from ISO 12405-4:2018(E) as amended upto date.

8.0 **ANY DEVIATION FROM TEST METHOD:** No

9.0 **FUNCTIONAL VERIFICATION:** Functional verification done and battery was found satisfactory.

10.0 **CONCLUSION:**
The battery specified in Sr.No.3.0 of this test report met all the test requirements when tested as per ISO 12405-4:2018(E) amended upto date as mentioned in Annexure-I of this report.

11.0 **TEST DESCRIPTION:** Please refer the Annexure-I of this report.

12.0 **DATE OF PERFORMANCE OF TEST:** Please refer the Annexure-I of this report.

13.0 **TEST RESULTS:** Please refer the Test requirements and Results in Annexure-I of this report.

14.0 **LOCATION OF TEST:**ICAT CENTRE-I

Prepared By	Checked By		Approved By	
UDIT KAUL	MAHENDAR PAL		PAMELA TIKKU	
Dy. Manager	Asst. General Manager		Sr. General Manager	

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(An ISO 9001, ISO 14001 and ISO 45001 certified, scope wise NABL accredited and BIS recognised Test House)

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Prepared By		Checked By	
UDIT KAUL Dy. Manager		MAHENDAR PAL Asst. General Manager	Page 02 of 03 [106948]

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Annexure – I

1.0 TEST REQUIREMENTS AND RESULTS:

1.0	Test Specification	
1.1	Test Details	To measure Energy Content of the battery pack
1.2	Reference Standard	ISO 12405-4:2018(E)
1.3	Test Date	06.08.2020 to 11.08.2019.
2.0	**Preparation of battery pack:** 1. The battery pack was physically inspected for normal functionality and interface with the battery cycler. 2. Test equipment was programmed to operate within safe operating limits as per the specification of the battery pack. Active over current protection device was enabled. 3. Test environment was conditioned to RT i.e. (25 ± 2) ° C.	
3.0	**Test Procedure:** 1. Three continuous pre-conditioning cycles were performed, with charging as per manufacturer recommendation* (Not more than 8 hours) and discharge by C/3 rate after sufficient rest period for thermal equilibrium. 2. Standard charge (SCH) on the battery pack followed by 60 min rest period was performed. 3. Standard cycle (SC) consisting of Standard discharge (SDCH) and Standard charge(SCH) were performed. 4. The battery pack was discharged at C/3 rate to determine Energy content in KWh. ***Note:** As per manufacturer's recommendation vehicle charger was used to charge the battery pack.	
4.0	**Test Equipment**	
4.1	Battery Pack Cycler: **Regenerative Charge and Discharge Tester ID:ICAT/EEL/BC/P/03**	
5.0	Manufacturer declared energy content of the battery **=8.4 KWh (C/3)**	
6.0	The measured C/3 battery energy is **8.440 kWh**	
7.0	**Test Results:** The measured energy content **8.440 kWh** is within ±5% of the declared energy content of the battery, hence manufacturer declared value of **8.4 KWh** is taken as rated energy content of the battery.	

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UDIT KAUL Dy. Manager		MAHENDAR PAL Asst. General Manager	Page 03 of 03 [106948]

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