

CPRI

TEST REPORT



Central Power Research Institute

(A Govt. of India Society)

P.B.No. 8066, Sadashivanagar Post Office,

Sir C.V. Raman Road,

Bangalore - 560 080 (INDIA)

CENTRAL POWER RESEARCH INSTITUTE



TEST REPORT

Test Report Number : CPRI BLREATD20T0231 Date: 14 August 2020

Name and Address of the Customer : M/s. Sai Accumulator Industries,
Plot No. 52, 53 & 76,
Sangamner Co-Op Industrial Estate,
Sangamner – 422 608, Ahmednagar, Maharashtra, India

Name and Address of the Manufacturer : M/s. Sai Accumulator Industries,
Plot No. 52, 53 & 76,
Sangamner Co-Op Industrial Estate,
Sangamner – 422 608, Ahmednagar, Maharashtra, India

Particulars of sample tested : 12 V – 200 Ah @ C₁₀, Tubular Batteries
Type : Tubular Lead Acid Batteries
Description of test sample : Refer Sheet 2 of 7
Serial Number : N-106220, N-106221
Number of samples tested : Two
Date(s) of Test(s) : 07 July 2020 to 12 August 2020
CPRI Sample code Number(s). : EATDBAT20S0074, EATDBAT20S0075
Particulars of tests conducted : Refer Sheet 3 of 7
Test in accordance with : IS 13369:1992 (RA 2017, Amd. 3)
Standard/Specification

Sampling Plan : Not Applicable
Customer's Requirement : As above
Deviations if any : Nil

Name of the witnessing persons :
Customers representative : Nil
Other than customer's representatives : Nil
Test subcontracted with address of the laboratory : None

Documents constituting this report (in words)
Number of Sheets : Seven
Number of Oscillogram(s) : Nil
Number of Graph(s) : Nil
Number of Photograph(s) : Nil
Number of Test Circuit Diagram(s) : Nil
Number of Drawing(s) : One


(Dr. Kuldeep Singh Rana)
Test Engineer




(Dr. P Chandra Sekhar)
Head of Division
Approved by

ULR-TC5452200EAD0231F
Discipline: Electrical Testing
Group: Cells & Batteries

ELECTRICAL APPLIANCES TECHNOLOGY DIVISION
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Date: 14 August 2020

DESCRIPTION OF SAMPLE TESTED

(As assigned by the manufacturer)

Sample	: Tubular Lead Acid Batteries
Model Number	: TT 200
Brand	: Turbo King Tubular Battery
Rating	: 12 V – 200 Ah @ C ₁₀ (at 27°C)


(Dr. Kuldeep Singh Rana)
Test Engineer

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Date: 14 August 2020

SUMMARY OF TESTS CONDUCTED

1. Tests conducted : Type Tests in accordance to IS 13369:1992 (RA 2017, Amd. 3)
2. Rating for which tested : 12 V – 200 Ah @ C10
3. Schedule of tests

Tests Conducted	Clause Numbers	Sheet
Verification of Constructional Requirements	11.2 & 6	4 of 7
Verification of Marking	11.3 & 8.1	5 of 7
Verification of Dimensions	11.4	5 of 7
Test for Capacity	11.5	6 of 7
Test for Loss of Capacity on Storage	11.6	6 of 7
Ampere-hour and watt-hour efficiency tests	11.8	6 of 7

4. Oscillogram Numbers : Nil
5. Graph Numbers : Nil
6. Photograph Numbers : Nil
7. Test Circuit Diagram Numbers. : Nil
8. Drawing Numbers :

The manufacturer has guaranteed that the sample submitted for the test(s) has been manufactured in accordance with the following drawings

Sl. No.	Drawing Number	Revision Number	Date	Sheet Number
1	SS/IT/DRW/01	0	1.6.2020	1 of 1

It is verified that these drawings adequately represent the sample tested. Verification of this drawing by CPRI is limited to dimensional check only wherever possible.


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Test Report Number: CPRIBLREATD20T0231

Date: 14 August 2020

TEST RESULTS

Sl. No	Test Conducted	Clause Reference/ Specified Requirements/ conditions	Results/values obtained		Compliance Statement
			S0074	S0075	
1.	Verification of Constructional Requirements	Clause 11.2 & 6:			
		Clause 6.1. Cell lids: Cell lids of deep sealing type shall be provided for cells.	Suitable Cell lid is provided		Complies
		Clause 6.2. Electrolyte level indicator: A suitable electrolyte level indicator indicating lower and upper limits shall be provided.	Provided (6 floats are provided)		Complies
		Clause 6.3. Terminal Posts: Positive and Negative terminal posts shall be clearly and unmistakably Identifiable.	The Positive terminal is marked with '+' signs. The Negative terminal is marked with '-' sign.		Complies
		Clause 6.4. Connections: Suitable connectors shall be provided.	Suitable connectors are provided.		Complies
		Clause 6.5. Terminal connectors, Nuts & Bolts: Suitable Nuts & Bolts shall be provided with lead coating to prevent corrosion.	Suitable Nuts and Bolts are provided.		Complies

Conclusion: The samples tested comply with the requirement of Clause 11.2 & 6 of IS 13369:1992 (RA 2017, Amd. 3) for the test conducted


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TEST REPORT

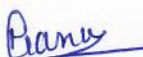
Test Report Number: CPRIBLREATD20T0231

Date: 14 August 2020

TEST RESULTS

Sl. No	Test Conducted	Clause Reference/ Specified Requirements/ conditions	Results/values obtained		Compliance Statement
			S0074	S0075	
2.	Verification of Marking and Packing	Clause 11.3 & 8: The following information shall be indelibly and durably marked on each cells: a). The source of manufacture. b). Ah capacity at 10-hour rate. c). Upper and Lower electrolyte level in case of transparent containers. d). Year of manufacture. e). Country of origin.	Batteries are marked with: M/s. Sai Accumulator Industries 12 V-200 Ah @ C ₁₀ -Not Applicable- 2020 India		Complies Complies Complies Complies
		Packing: The cells shall be suitably packed so as to avoid any loss or damage during transit.	The Batteries were Packed in a carton box with thermocol packing to avoid any spillage, damage or loss during transit.		Complies
3.	Verification of Dimensions	Clause 11.4: The Overall dimensions of the 200 Ah Cells shall be within the limit of: a) Length shall not exceed 535 mm. b) Width shall not exceed 295 mm. c) Height shall not exceed 450 mm.	The measured overall dimensions in mm are given below:		Complies Complies Complies
			505 mm	504 mm	
			190 mm	190 mm	
			411 mm	409 mm	

Conclusion: The samples tested comply with the requirement of Clause 11.3, 8 and 11.4 of IS 13369:1992 (RA 2017, Amd. 3) for the test conducted


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Date: 14 August 2020

TEST RESULTS

Sl. No.	Test Conducted	Clause Reference/ Specified Requirements / conditions	Results/values obtained	Compliance Statement
4.	Test for Capacity	Clause 11.5 The Battery shall reach not less than 85 percent of the rated capacity at the first discharge. The rated capacity of 200 Ah shall be reached within 10 discharges. The measured capacity shall not be more than 130 percent of the rated capacity corrected to 27°C.	The capacity of the Batteries at 27°C are given below: First Cycle S0074 = 219.81 Ah S0075 = 222.35 Ah	Complies
5.	Test for Loss of Capacity on Storage	Clause 11.6 The loss of capacity of the Batteries shall not exceed 10 percent.	The loss of Capacity of the Batteries are: S0074 = 2.64 % S0075 = 3.58 %	Complies
6.	Ampere-hour & Watt-hour Efficiency Tests	Clause 11.8 The Ampere-hour efficiency shall not be less than 90 percent	Ampere- hour efficiency S0074 = 96.13 % S0075 = 96.29 %	Complies
		The Watt-hour efficiency shall not be less than 75 percent	Watt-hour efficiency S0074 = 80.25 % S0075 = 80.59 %	Complies

Conclusion: The samples tested comply with the requirement of Clause 11.5, 11.6 and 11.8 of IS 13369:1992 (RA 2017, Amd. 3) for the tests conducted


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Date: 14 August 2020

NOTE

- a) The Test results relate only to the sample(s) tested.
- b) Publication or reproduction of this Test Report /Test Certificate in any form other than by complete set of the whole Test Report /Test Certificate and in the language written is not permitted without the written consent of CPRI.
- c) Any Corrections/erasure invalidates the Test Report/Test Certificate
- d) NABL has Accredited this laboratory as per ISO/IEC17025:2017, vide certificate no.TC-5452 for the tests carried out.
- e) Any anomaly/discrepancy in the Test Report / Test Certificate should be brought to the notice of CPRI within 45 days from the date of issue.


(Dr. Kuldeep Singh Rana)
Test Engineer

SAI SAMRAT

I

इस चित्र का सत्यापन केवल आयाम की जांच तक ही सीमित है।

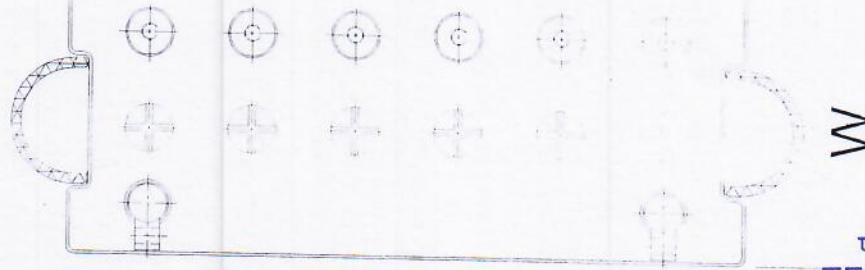
यह चित्र परीक्षण रिपोर्ट संख्या.....दिनांक.....से संबंधित है।

Attestation of this drawing is limited to the checking of Dimensions only.

This Drawing pertains to the Test

Report No. CPRI/BL/REATD/2020/231

dated: 14 AUGUST 2020



परीक्षण इंजीनियर
TEST ENGINEER
ई ए टी डी, सी पी आर आई
EATD / CPRI
बेंगलूरु - 560 080
BENGALURU - 560 080

Tall Tubular Container Dimensions.

S.no.	Model	Cap. 10 Hrs	L	W	H
1	12WT200SL	200 Ah	505	190	410

SAI ACCUMULATOR INDUSTRIES

PREPARED BY

UB REDDY

APPROVED BY

SS/IT/DRW/01

DRAWING NO.

DATE

1.6.2020

REV.0

