

#### भारत सरकार Government of India

# राष्ट्रीय परीक्षण शाला (पूर्वी क्षेत्र)

### National Test House (Eastern Region)

11/1 जजेस कोर्ट रोड, अलीपुर, कोलकाता - 700 027 11/1, Judges' Court Road, Alipore, Kolkata - 700 027



## TEST CERTIFICATE

Test certificate no NTH(ER)/EL(B)/2018/004

Date of Issue 16/05/2018

Code No 1517388459032

"BAT-13369"

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Marking: (i) Printed on both wider sides of a Battery

OKAYA

Chalti Rahe Yeh Zindagi

SOLAR

TUBULAR BATTERY

Zindagi Ka Roop

Badhaye Shaandar Dhoop

ST120S

Capacity 120Ah @ C<sub>10</sub> Sp. Gr.:1.240±0.005 (27°C)

(ii) Paper sticker pasted on top of the Battery :

Capacity: 120 Ah @ 10h rate Battery Model: ST120S

Country of Origin: India

Mfg. Address - Fujikawa Power, Baddi (H.P.)

(iii) On the top of a Battery:

Positive polarity embossed with '+' symbol & marked with red colour. Negative polarity embossed with '-' symbol & marked with blue colour.

(iv) Engraved on the top of a Battery : ASUM058503064683

The marking of the other Batteries are same & identical except Nos. ASUM058503065157, FSUN058503492323, FSUN058503492303 & FSUN058503508519. Five nos. 12V,120Ah Batteries were marked randomly as FW1,FW2,FW3,FW4 & FW5 by this laboratory for identification purpose.

Tested By

Sayantan Das SO (Electrical) Checked By

Pradip Kumar Bera Scientist - B (Electrical) Approved By



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Tests:

[Carried out as per IS:13369-1992 (Amndt. no.1 to 3) & customer requirements]

SI. No		Requirements	THE TREES.	य अस्या भारत	Test Res	ult we	क्षेत्र समिताः जन्म	Remarks
EST H	HOUSE THE THE TELEVILLE SHELL WILLOW	NOWAL TEST HOUSE TO	Battery marked			THE STICK NATIO		
		MATIONAL TEST HOUSE	FW1	FW2	FW3	FW4	FW5	Wall Shey
AL 75	Verification of marking: (Carried out as per Cl.11.3	of the specification	Alaska Alaska	वर्षाक्ष्मा आ	T NATIONAL	AL TEST HOUSE	SE TREPA	Unsatisfactor
CHAN	a) Indicating the source of manufacturer	The information shall be indelibly	NSE THE	Fujikawa (Provide	Power,B	addi(H.P.) er sticker)	NUSE THE	THE CHINAM SHE
NATIC	b) Ah capacity at 10-h rate	and durably marked on the outside of the Battery	THOUSE STHOUSE	THE PER THER	12V120A	The state of the s	STHOUSE TEST HOUSE TEST HOUSE	मार्थाच महोस्राम इस्ट्रोच महोसमा
-01 11	c) Year of manufacture	SALL SILLAILO NALIONAL	TEST HOUS	TICON TO	वर्गास्त्रा	TI WATTONIA	L TEST HOUSE	TOTAL DE
शाला	d) Country of origin	ASSEMIL ALLAL WATCH	NAL TEST H	(Provide	India d on pape	er sticker)	ONAL TEST HOUSE	USE TREPA
am at	e)Electrolyte level indicator	मूत्र प्रशेष्ट्रमण शास्त्रा भूता वर्ष प्रशेष्ट्रमण शास्त्रा भूता	Opac	que containe	1200		vided.	HOUSE THE
TEL O	Verification of dimensions : (Carried out as per Cl.11.4 of the specification)			TEST HOUSE	The late	वर्षस्या आस्य	NATIONAL TE	Satisfactory
	(i) Length (in mm):	535 (Max.)	508	509	508	509	509	AL TEST HOUSE
	(ii) Width (in mm):	295 (Max.)	193	193	194	193	194	WAL TEST HOUSE
	(iii) Height (in mm);	450 (Max.)	410	409	410	411	411	HONAL TEST HO

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SI.	Test Name	Requirements		Test Result			Remarks	
SHO.	प्रदेश पर्रारंगा आया म	ATOMAL TEST HOUSE TREPT TERM	Battery marked					
DUSE	ग्रास्थ्रीय वहासमा आसा	WHICHAL TEST HOUSE THE THE THE	FW1	FW2	FW3	FW4	FW5	MATIONAL MATIONAL
HI 3 ST HOW TEST HOW	First charge: (Carried out as per Cl.10,3 of the specification & customer requirements)	Samples shall be filled with electrolyte and shall be given first charging as per manufacturer's instruction. After full charge specific gravity of electrolyte shall be 1.240±0.005 corrected to 27°C.	per manu	. Sampl ıfacturer	es were 's instru	e given	in elect	g charge as
4,00	Test for Capacity: (Carried out as per	CI.11.5 of the specification)	E STEELS OF	देशहरूमा सार्	TOTT NATO	ONAL TEST	HOUSE IT	Satisfactory
MAT	Capacity in	On the First discharge the ceil Shall give not less than 85% of the rated capacity.i.e.Min.102Ah and shall not be more than 130%	Battery marked			They waster		
THE TEST	ampere-hours (Ah) at C <sub>10</sub> rate		FW1	FW2	al allege	V3	FW4	ार्ट सार्ट्याय प्रयोग
भारता आस्त्रा इस्स	corrected to 27°C	of the rated capacity i.e Max.156Ah & the rated capacity shall be reached within 10 discharges	150.117	152.876	143	.003	146.940	USE TIZH
5.	Ampere-hour & Watt-hour efficiency Test: (Carried out as per CL.11.8 of the specification)  Satisfactory							
TRIT	Battery marked						LATEST HOUSE	
da	THE THE WATCHER TEST HOUSE THE TEST THE THE WATCHER TEST HOUSE FW1 THE						ONAL TEST HOUSE	
gra T	(i) Ampere-Hour efficiency:(in %)	Shall not be less than 90%	NATIONAL T	TEST HOLD	4.01	A LEFERM	I sticil W	TIONAL TEST HOUS
They	(ii) Watt-Hour efficiency : (in %)	Shall not be less than 75%	NOTEN TETTS	MALTEST HOS	2.26	TENTA THE	हम्मा साला हमा साला	NATIONAL TEST HO NATIONAL TEST H

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SI. No.	Test Name	Requirements	Test	Remarks	
01.6 HOUSE	Test for loss of capacity on storage : (Carried out as per Cl.11.6 of the specification)				
A HON	THE STEEL MATERIAL SHEET NATIONAL NATIONAL PROPERTY NATIONAL PROPE	MAY LEEL HOUSE THE LA LEGISLA SIL	Battery	marked	वर्षाय प्रश्निम श
68) , 408) ,	ONZE THE TAY THE WALL SHELL WE	ONNE TEST HOUSE TIEST TOTAL	FW2	FW3	Stated the beauti
TEST	Loss of capacity (in %):	Shall not exceed 10%	1.97	2.98	The test the

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Tests:

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SI.	Test Name	Requirements	Test Result	Remarks
HOUSE			Battery marked	
			FW1 FW2 FW3 FW4 FW5	
TEST H		tructional requirements : .11.2 of the specification)		Satisfactory.
	(i) Electrolyte level Indicator :	Each cell shall be provided level indicator	Level Indicators provided in each case.	
	(ii) Terminal Posts:	Positive and negative terminal posts shall be clearly and unmistakably identifiable	Positive and negative terminal posts were clearly embossed in each case	
	(iii) Connections:	Shall be made of lead plated aluminium/copper strips or of flexible cables	Lead plated in each case	
	(iv) Terminal Connectors :	Shall be effectively lead coated	Lead coated in each case	
2	Loss of Water Test: (Carried out as per Cl.1	1.9 of the specification & custon	ner requirements)	Satisfactory.
क्ष्मण व	TIETT NATIONAL TEST HOUSE	They at a the such NATIONAL	Battery marked	ATIONAL TEST HOUSE
15/8/10	THE NATIONAL TEST HOL	THE STAND ASSESSED ALLEN MULLONA	FW4 where	NATIONAL TEST HOUS
परीक्ष	Loss of Water (in g/Ah/Battery) :	18 (Maximum)	TESTHOUSE 10.8	NATIONAL TEST HO

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FORM NO: NTH/ALP/F/5



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SI. No.	Test Name	Requirements	Test Result	Remarks
3.E	Test for Equilibrium Float (Carried out as per Cl.11.10 o	Current:  If the specification & customer rec	quirements)	Satisfactory.
STHOU	USE TREATE ATTENDED THE NAME OF	ONA TEST HOUSE TISTED THE THE THE	Battery marked	ीय परीक्षण शाला भग परीक्षण शाला
TEST	OTHER STEETS ASSESSED STEET IN	TIONAL TEST HOUSE TICKET TELEPOT THE	MATION FW4 HOUSE	राष्ट्रीय गरीक्षण र
ALTES	Equilibrium Float Current (in mA/Ah/Battery) :	MATONAL TES (Maximum)	THEY NATIONAL TEST HOUSE	रार्द्धात महिस्ता
MA.	Endurance Test: (Carried out as per Cl.11.7	of the specification & customer re	quirements)	Satisfactory.
ATIONA TION	AL TEST HOUSE TREAT TO THE TOTAL	TEST NATIONAL TEST HOUSE TOO PER TO	Battery marked	DAZE SLESJA A
NATIO	WALTEST HOUSE TREAT TITLES	THEIR NATIONAL TEST HOUSE TREATED	THE TOWALTEST	THOUSE TREAT
AM TH		The battery shall give not less		ESTHOUSE ELECTION
ताला शाला		than 9 Hrs.of discharge at the final test discharge of the last period of charge		TEST HOUSE TO

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