BARC(T)/NRB/ INRPO / ESS /2025-26 / 102/A/18802

GOVERNMENT OF INDIA
BHABHA ATOMIC RESEARCH CENTRE
NUCLEAR RECYCLE BOARD
Reprocessing & Waste Management, Tarapur

MOM OF PRE BID MEETING

Date :- 28/04/2026

Tender No. : BARC(T)/NRB/ INRPO / ESS /2025-26 / 102/A/18802

Name of the work : SITC of 220V 60A Battery chargers (2 no) and 220V 250A DC distribution panel, 110V 200AH (1set) battery bank, 220V 350AH (1set) battery bank & associated site works as per attached technical specifications.

Venue :FF conference room. Date : 28/04/2026Time : 11.00 HRS

NO bidder representative have attended the meeting and one bidder have send quaries by mail Following points are discussed & clarified.

BIDDER-1

QUERY-

1) Is Battery charger and DC Distribution panel natural cooled or forced air.

CLARIFICATION-

1) All Battery charger and DC Distribution Panel should be Natural air cooled and vermin Proof.

QUERY-2

In DC Distribution panel 70 Sq mm 2 core armored cable 500 meter is copper conductor or aluminum conductor.

CLARIFICATION-

2) **It is Copper conductor.**

Query 3

Please clarify regarding the quantity mentioned as 2 Nos. - whether 02 sets each set comprising of 1 no. each of Load ACVR & Float cum boost ACVR or 1 set each set comprising of 1 no. each of Load ACVR & Float cum Boost ACVR. Also, no. of battery sets in the configuration may be indicated – one 220V Battery or two 220V Batteries.

Clarification -

02 sets each set comprising of 1 no. each of Load ACVR & Float cum boost ACVR

Query 4

Please let us know whether separate AC supply will be provided for Load ACVR & Float cum Boost ACVR or one AC supply common to both Load ACVR & Float cum boost ACVR

Clarification –

Separate AC supply shall be provided for Load ACVR & Float cum Boost ACVR

Query 5

Please let us know the maximum allowable permissible load voltage from 220V DC during normal operation in float mode to determine whether voltage dropper diodes will have to be provided in the load circuit to maintain the load voltage within the limit.

Clarification –

Max 275 Volt ,

Query 6

Please share SLD of DC System, if available, which would clarify the points raised above especially the configuration.

Clarification –

Already in Annexure 1

Query 7

Battery vendors recommend float voltage of 2.25V/cell for plante battery as per which the float voltage works out to 247.5V (110 x 2.25V/cell). The maximum voltage indicated in float mode as 275V is more. Please review & revert to us with your comments

Clarification – 200V – 300V Suitable for 110 no lead acid cells of 350AH capacity

Query 8

This description amounts to configuration of the DC system to be interpreted as dual Float cum boost charger (FCBC1 & FCB2)– each FCBC to act as Float Charger in float mode or to act as boost charger when battery needs to be boost charged when discharged. Pease llarify whether our understanding is in order.

Clarification

YES

Query 9

(1) Clause no. 1.15 – GTP: Not received. Please arrange to send the same

Clarification

Attached with prebid mom MOM

Query 10

Please clarify whether we should follow this list or as per tabulated list of accessories as per S. No. 9.

Clarification

Yes as per S. No. 9

Query 11

(1) Clause no. 1.15 – GTP: Not received. Please arrange to send the same

Clarification

Attached with prebid mom MOM

Query 12
Quantity of components (especially principal power components) listed in the table does not match with quantity indicated in the SLD as listed below
Clarification
Extra components shall be supply as spare

Query 12
Does this DC Distribution Board has to work with 60A/220V Battery Charger listed in item no. 1 of the scope of work.
Clarification: YES

Addition of clarification :-
It is preferable to visit the site before submission of bids.

(Kalpesh Patel)
SA/F

(B Paramesh)
SO/C

P H Kshirsagar
EIC

Rajkumar 25/4/26
Supdt, Electrical

Rohit Ameta 4/5/26
AGM(EE&I)

Approved By : { K S Vasudevan}
PM INRPO NRB BARC Tarapur
के. एस वासुदेवन K.S. Vasudevan
परियोजना प्रबंधक, आईएनआरपी (ओ)
Project Manager, INRP(O)
भा. प. अ. बो. (तारापुर)/ NRB (T)
भा. प. अ. के. तारापुर / BARC Tarapur
पोस्ट चिवली, तालुका और जिला-पालघर 401502
Po: Chivali, Tal & Dist. Palghar 401502

GUARANTEED TECHNICAL PARTICULARS :-

S.No.	Particulars		
1	Type of cell		
2	Voltage per cell		
3	Manufacturer's Name		
4	Standards to which battery is manufactured		
5	IS Nomenclature		
6	Nominal voltage of battery		
7	Capacity		
8	At 27 degree C		
	a) Initial		
	b) Rated		
	c) End of life		
9	Rated capacity at minimum ambient temperature		
10	Rated capacity at maximum ambient temperature		
11	Capacity in AH at various end cell voltages		
	and duration of discharge		
	a) 5 minutes		
	b) 15 minutes		
	c) 30 minutes		
	d) 45 minutes		
	e) 1 hour		
	f) 2 hour		
	g) 3 hour		
	h) 4 hour		
	i) 5 hour		
	j) 6 hour		
	k) 7 hour		
	l) 8 hour		
	m) 9 hour		
	n) 10 hour		
12	Maximum momentary current 1 min.		
13	Expected life of battery under normal operation		
	and maintainence conditions		
14	Equalising charge		
	a) Voltage / Current		
	b) Duration		
	c) Interval between succesive equalising charge		
15	Internal Resistance of cell (IR)		
16	Short-circuit current for a dead-short across		
	battery terminals, when		
	a) Float charge		
	b) Boost charge		
17	Expected fault level at bus due to battery		
18	Total resistance of battery		
19	Resistance of intercell connectors		
20	AH efficiency at rated load		
21	WH efficiency		
22	No. of positive plate per cell		
23	No. of negative plates		
24	No. of cells required to give rated D.C.voltage		
25	No. of spare cells		
26	No. of end cells		
27	Whether positive plates of individual cells are		
	interchangeable		

28	Whether negative plates of individual cells are		
	interchangeable		
29	Overall dimensions		
	a) Each cell L x W x H		
	(tolerance of +/- 2 mm in each case)		
	b) Complete Battery		
30	Distance between the cell centres		
31	Weight (+/- 5%)		
	a) Each cell (with acid)		
	b) Each cell (without acid)		
	c) Complete battery (with acid)		
	d) Complete battery (without acid)		
32	Whether explosion vents are offered		
33	Ventilation requirements		
	a) Cubic content of battery room		
	b) Exhaust fans Numbers & rating of each		
34	List of accessories		
35	Gasification voltage per cell		
36	Loss in capacity in 21 Hrs due to self discharge		
37	Material & type of plates		
	a) positive plates		
	b) negative plates		
38	Height of positive plates		
39	Thickness of positive plate		
40	Area of positive plate		
41	Height of negative plates		
42	Thickness of negative plate		
43	Area of negative plate		
44	Material & type of separetors		
45	Thickness of separator		
46	Type of vent & filling plugs		
47	Thickness of containers		
48	Material of containers		
49	Material of intercell connectors		
50	Thickness of intercell connector		
51	Method of connection		
52	Material of bolt ,nut & washer for intercell &		
	cable connections		
53	Quantity of electrolyte per cell		
54	Quantity of electrolyte for battery		
	(including 10% extra)		
55	Recommended specific gravity at 27 C		
	a) for first filling		
	b) at full charge		
	c) when battery is discharged at 10 Hrs rate		
56	Permissible max. temperature of electrolyte		
	a) During initial charging		
	b) During normal operation		
57	Characteristic Curves (furnish curve Nos.&		
	attach separate sheet)		
	a) Charge Hours VS Volts during boost mode		
	b) Discharge Hours VS Volts		
	c) Discharge Hours VS AH in % of 10 Hrs		
	Discharge Rate(Capacities at various discharge rates)		
	d) Capacity VS Ambient temperature		
	e) Discharge rate VS minimum discharge voltage		
58	Recommended charging rate for		
	a) float charging		

	b) boost charging		
	I) starting rate		
	II) finishing rate		
	c) trickle charging rate		
	I) minimum		
	II) maximum		
59	Cell voltage characteristic during charging furnished		
60	Recommended Max. period of cells storage before		
	the first charge (After installation & filling of electrolyte)		
61	Recommonded storage life of battery (Not installed)		
62	Clearance between bottom of the plate & the bottom		
	of the containers		
63	Clearance between top of the plate & the top		
	of the containers		
64	Type of cover		
65	Material of cover		
66	Does the battery meet the required duty cycle curve		
67	Cell voltage charateristics during duty cycle furnished		
68	Minimum discharge voltage at various discharge rate		
69	Minimum cell voltage during duty cycle		
70	Racks		
	a) Number of racks per battery		
	b) Number of cells per rack		
	c) Type of rack		
	d) Material of rack		
	e) Dimension of the racks		
71	Racks provided with		
	a) Numbering tags for cells		
	b) Teakwood clamps for cables		
72	Insulators with 5% extra furnished for		
	a) cell		
	b) stand		
73	Interrow,intertier connectors & end takeoffs furnished ?		
74	Connection hardware with 5% extra furnished		
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	a) cell		
	b) stand		
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