



**BHARAT HEAVY ELECTRICALS
LIMITED**
PROJECT ENGINEERING MANAGEMENT

BHEL PEM,PPEI
PLOT No.25, SECTOR-16A,
NOIDA-201301 (U.P.)
PHONE: 0120-4368877

Ref. No: PE/PG/BIF/E-5804/2017/CORRIGENDA/08

Date: 22.03.2018

DC LEAD ACID BATTERIES / Ni-Cd BATTERIES FOR 2 X 660 MW BIFPCL MAITREE KHULNA STPP-BANGLADESH.

CORRIGENDA/ADDENDA-08

Tender Enquiry No: PE/PG/BIF/E-5804/2017, DTD. 02.01.2018

DUE DATE
02.04.2018
BY 02:00 PM (IST)

The bid submission of tender for **DC LEAD ACID BATTERIES / Ni-Cd BATTERIES** invited vide Enquiry No: PE/PG/BIF/E-5804/2017, DTD. 02.01.2018 is **extended up to 02.04.2018 at 02:00 PM (IST)**.

Further, please find attached technical change as Annexure I.

Bidders are requested to submit their offer on or before the due date & time. This is the **Final Extension** for the submission of offer, no further extension shall be granted.

Thanking You.

For & on Behalf of **BHEL**,

DEVENDRA SINGH
SR. ENGR/PG1

DEVENDRA SINGH
SR. ENGINEER/PG-I
BHEL/PS-PEM
POWER PROJECT ENGINEERING INSTITUTE,
PLOT NO. 25, SECTOR - 16A, NOIDA (UP)

Regd. Office:
BHEL House
Siri Fort
New Delhi-110049

2 X 660MW MAITREE KHULNA BANGLADESH PROJECT				
Corrigendum-1 (23.03.2018)				
220V DC Battery (Annexure-1)				
S. NO.	REFERENCE	DESCRIPTION	UPDATED DESCRIPTION	REMARKS
1.	S. No. 9 of Datasheet-A of Section-I: End cell voltage	1.85V/cell (Lead Acid) / 1.14V/cell (Ni- Cd Pocket/ Fibre Type)	1.8V/cell (Lead Acid) / 1.14V/cell (Ni- Cd Pocket/ Fibre Type)	
2.	Annexure-II of Section-I: Load Duty Cycle	LOAD DUTY CYCLE OF MAIN PLANT & ASSOCIATED STATION	Please refer attached updated sheet.	
3.	Annexure-II of Section-I: Load Duty Cycle	LOAD DUTY CYCLE OF FGD/ FOPH	Please refer attached updated sheet.	
4.	Annexure-II of Section-I: Load Duty Cycle	LOAD DUTY CYCLE OF RAW WATER INTAKE	Please refer attached updated sheet.	

Megha
22/03/18



TECHNICAL SPECIFICATION FOR 220V DC Lead Acid / Ni-Cd BATTERY

SPECIFICATION NO. PE-TS-421-508-E001

VOLUME II

SECTION I

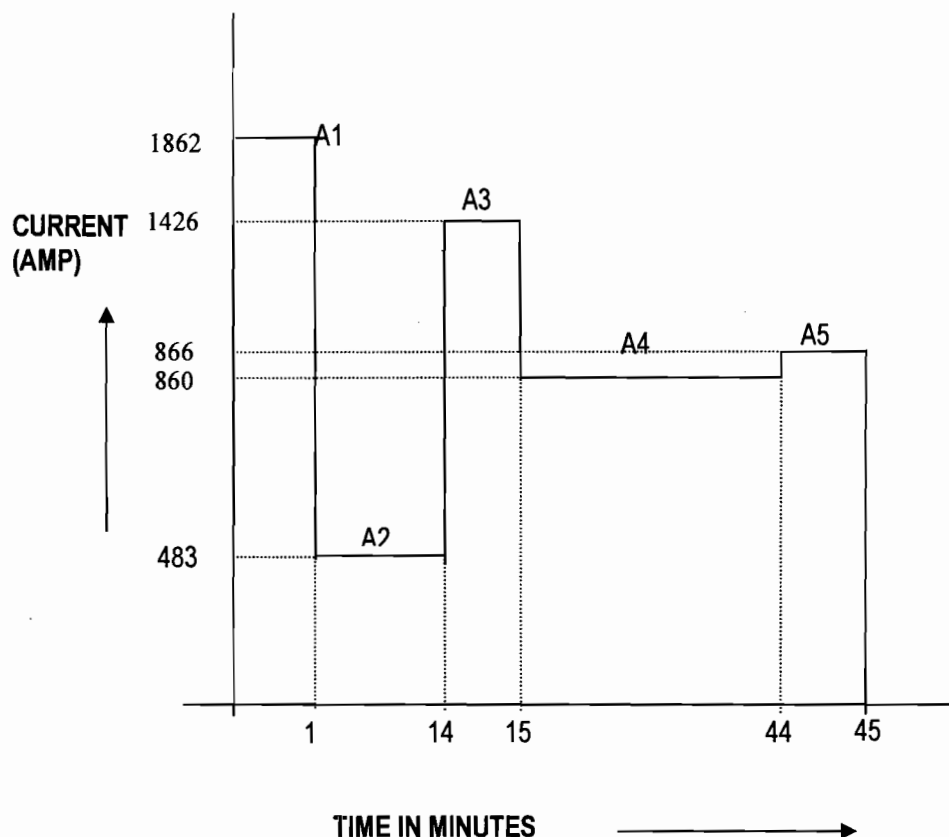
REVISION 01

DATE: 23.03.18

SHEET 1 OF 3

ANNEXURE-II

LOAD DUTY CYCLE LOAD DUTY CYCLE OF MAIN PLANT & ASSOCIATED STATION



Duration	0-1 min	1-14 min	14-15 min	15-44 min	44-45 min
Current	1862	483	1426	860	866

FACTORS TO BE CONSIDERED FOR BATTERY SIZING:

1. AGEING FACTOR : 1.0 for Lead-Acid/ 1.25 for Ni-Cd
 2. MIN.ELECTROLYTIC TEMP. : 0 °C
 3. END CELL VOLTAGE : 1.8V/cell for Lead-Acid/ 1.14V/cell for Ni-Cd
 4. DESIGN MARGIN : 1.1
 5. TEMPERATURE CORRECTION FACTOR : IEEE 485 for Lead Acid and IEEE 1115 for Ni-Cd
- shall be the principle for sizing the battery including temperature correction factor.

Note:

1. Supporting Calculation for temp correction factor as per IEEE shall be furnished for batteries which are not designed at 25 °C.
2. Due to maximum AH capacity limitation, bidder can offer battery with parallel banks. However, because of layout constraint, bidder can offer maximum of 2 banks in parallel.



TECHNICAL SPECIFICATION FOR 220V DC Lead Acid / Ni-Cd BATTERY

SPECIFICATION NO. PE-TS-421-508-E001

VOLUME II

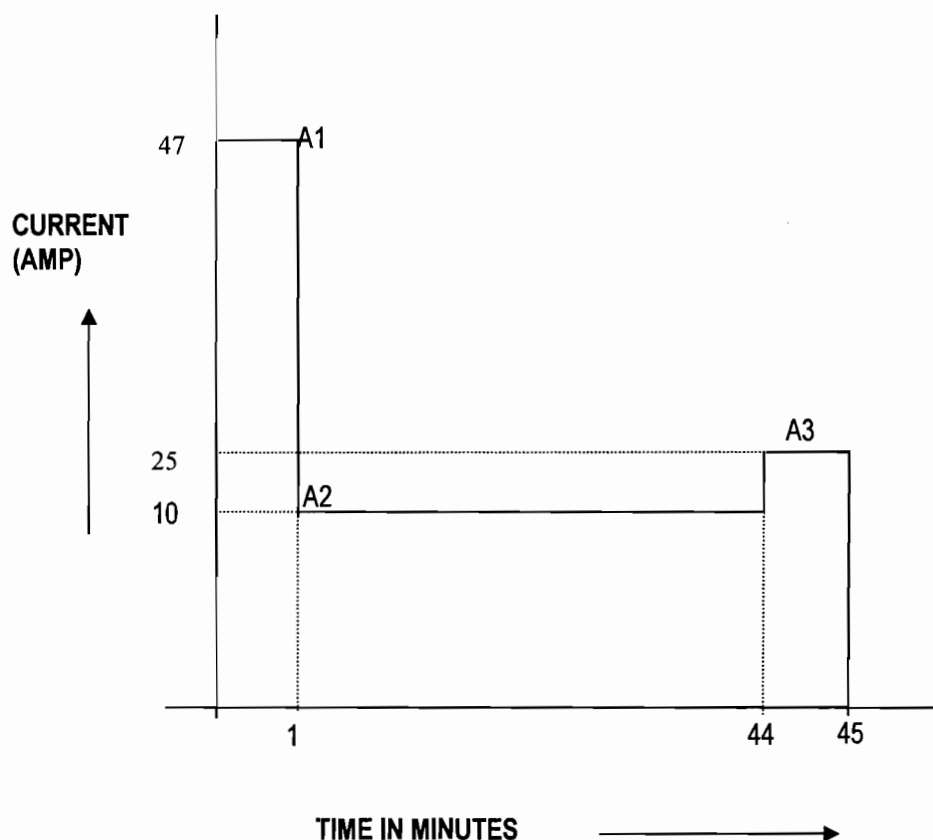
SECTION I

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DATE: 23.03.18

SHEET 2 OF 3

LOAD DUTY CYCLE OF FGD/ FOPH



Duration	0-1 min	1-44 min	44-45 min
Current	47	10	25



FACTORS TO BE CONSIDERED FOR BATTERY SIZING:

1. AGEING FACTOR : 1.0 for Lead-Acid/ 1.25 for Ni-Cd
2. MIN.ELECTROLYTIC TEMP. : 0 °C
3. END CELL VOLTAGE : 1.8V/cell for Lead-Acid/ 1.14V/cell for Ni-Cd
4. DESIGN MARGIN : 1.1
5. TEMPERATURE CORRECTION FACTOR : IEEE 485 for Lead Acid and IEEE 1115 for Ni-Cd shall be the principle for sizing the battery including temperature correction factor.



Note:

Supporting Calculation for temp correction factor as per IEEE shall be furnished for batteries which are not designed at 25 °C



**TECHNICAL SPECIFICATION FOR
220V DC Lead Acid / Ni-Cd
BATTERY**

SPECIFICATION NO. PE-TS-421-508-E001

VOLUME II

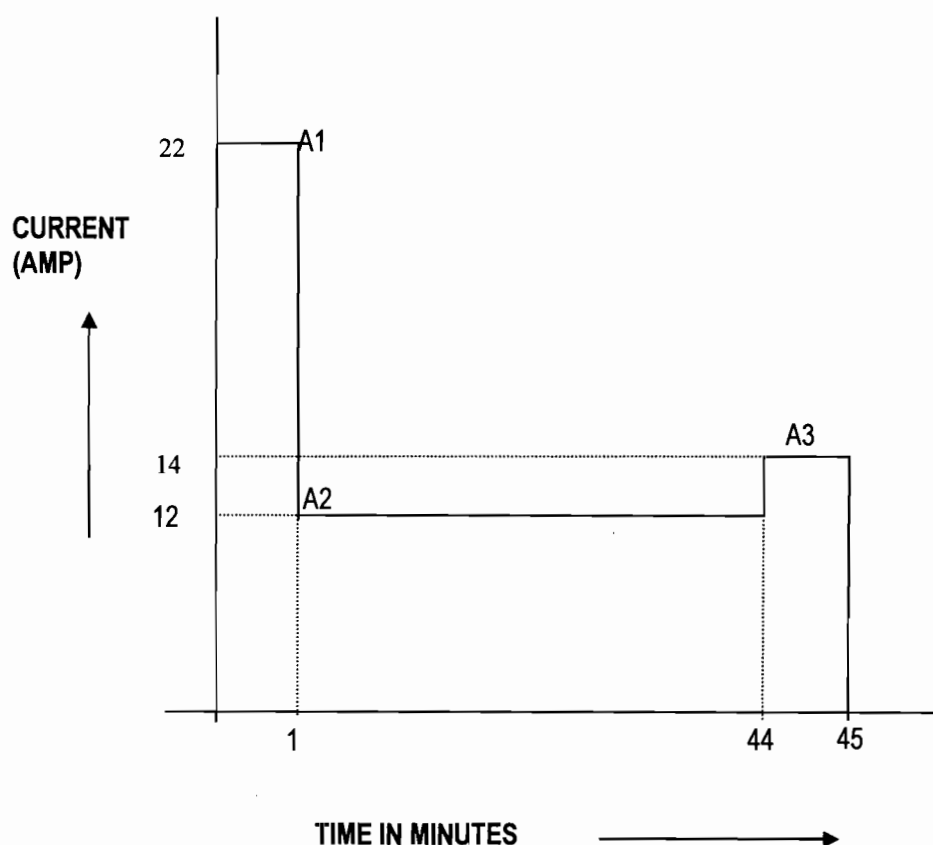
SECTION I

REVISION 01

DATE: 23.03.18

SHEET 3 OF 3

LOAD DUTY CYCLE OF RAW WATER INTAKE



Duration	0-1 min	1-44 min	44-45 min
Current	22	12	14

FACTORS TO BE CONSIDERED FOR BATTERY SIZING:

- | | | |
|----------------------------------|--|--|
| 1. AGEING FACTOR | : 1.0 for Lead-Acid/ 1.25 for Ni-Cd | |
| 2. MIN.ELECTROLYTIC TEMP. | : 0 °C | |
| 3. END CELL VOLTAGE | : 1.8V/cell for Lead-Acid/ 1.14V/cell for Ni-Cd | |
| 4. DESIGN MARGIN | : 1.1 | |
| 5. TEMPERATURE CORRECTION FACTOR | : IEEE 485 for Lead Acid and IEEE 1115 for Ni-Cd | |
- shall be the principle for sizing the battery including temperature correction factor.

Note:

Supporting Calculation for temp correction factor as per IEEE shall be furnished for batteries which are not designed at 25 °C