



# भारत हेवी इलेक्ट्रिकल्स लिमिटेड

( भारत सरकार का उपक्रम )

## BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 02

Ref: PSER:SCT:SRG-M1552:TCN-02

Date: 10-06-2014

Sub	Tender change notice (TCN) 02	
Job	Design, engineering, manufacturing, supply/delivery, erection & commissioning of Electro chlorination Package for RRVUNL, 2x660 MW, Stage-V, Unit # 7 & 8 Suratgarh Super Critical TPS, Rajasthan	
Ref	1.0	PSER:SCT:SRG-M1552:14.
	2.0	BHEL's NIT, vide reference no PSER:SCT:SRG-M1552:3752, dated 20-05-2014.
	3.0	BHEL's TCN-01, vide reference no: Ref: PSER:SCT:SRG-M1552:TCN-01, Dated 03.06.2014.
	4.0	All other pertinent issues till date.

With reference to above, following points/ documents, relevant to tender, may please be noted and complied with while submitting offer.

1.0 With reference to SI. no. 12 of salient features of NIT (Page 2 of 15) , please note the following :

#### DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)

**Shri D. R. S Chaudhary, IAS (Retd.)**  
**Flat No. L-202 & L-203 (1<sup>st</sup> Floor)**  
**Ansal Lake View Enclave**  
**Shamla Hills**  
**Bhopal- 462 013**

2.0 Amendment-1 to tech. spec. has been attached herewith.

3.0 Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached format only.

4.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,  
for BHARAT HYEAVY ELECTRICALS LTD

#### Encl :

1. Revised 'No deviation certificate' format (ANNEX-II).
2. Amendment-1 to tech. spec.

SR. ENGR (SCT)

पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय )

POWER SECTOR EASTERN REGION, DJ-9/1, SECTOR-II, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : 23211691, 23211798, 23211796

**FORMAT FOR NO DEVIATION CERTIFICATE**  
**(To be submitted in the bidder's letter head)**

BHARAT HEAVY ELECTRICALS LIMITED,  
Power Sector - Eastern Region,  
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,  
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Design, engineering, manufacturing, supply/delivery, erection & commissioning of Electro chlorination Package for RRVUNL, 2x660 MW, Stage-V, Unit # 7 & 8 Suratgarh Super Critical TPS, Rajasthan	
Ref	1.0	Tender No. PSER:SCT:SRG-M1552:14
	2.0	BHEL's NIT, vide reference no PSER:SCT:SRG-M1552:3752, dated 20-05-2014.
	3.0	BHEL's TCN-01, vide reference no: Ref: PSER:SCT:SRG-M1552:TCN-01, Dated 03.06.2014.
	4.0	BHEL's TCN-02, vide reference no: Ref: PSER:SCT:SRG-M1552:TCN-02, Dated 10.06.2014.
	5.0	Other references (if any).

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.


In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.


Thanking you,

Yours faithfully,

(Signature, date & seal of authorised representative of the contractor)

	<b>AMENDMENT TO TECHNICAL SPECIFICATION</b> <b>PE-TS-392-174-12000A-A001 REV.00 FOR</b> <b>ELECTRO CHLORINATION PLANT FOR</b> <b>2X660 MW SURATGARH SUPER CRITICAL TPS,</b> <b>STAGE-V UNIT 7 &amp; 8 AT SURATGARH, RAJASTHAN</b>	SPEC NO: PE-TS-392-174-12000A-A001	
		AMENDMENT: 1	
		REV NO: 00	

# AMENDMENT 1

	<b>AMENDMENT TO TECHNICAL SPECIFICATION</b> <b>PE-TS-392-174-12000A-A001 REV.00 FOR</b> <b>ELECTRO CHLORINATION PLANT FOR</b> <b>2X660 MW SURATGARH SUPER CRITICAL TPS,</b> <b>STAGE-V UNIT 7 &amp; 8 AT SURATGARH, RAJASTHAN</b>	SPEC NO: PE-TS-392-174-12000A-A001	
		AMENDMENT: 1	
		REV NO: 00	

**CLAUSE NO 1) DESIGN PHILOSOPHY FOR ELECTRO CHLORINATION PLANT OF SECTION D1 PAGE NO 85 OF TENDER TECHNICAL SPECIFICATION PE-TS-392-174-12000A-A001 SHOULD BE READ AS BELOW**

**1) DESIGN PHILOSOPHY FOR ELECTRO CHLORINATION PLANT**

A common Electro Chlorination Plant has been designed to dose required quantity of hypochlorite solution to Pre-treatment Plant, circulating water system, potable water system (for plant) and sewage treatment plant

The hypochlorite solution thus generated shall be dosed in the following systems as per the indicated dosing rates.

- a. Circulating water system and Auxiliary circulating water system is common for both the units.
- b. Total no of ACW Pumps shall be 5 nos (4 working + 1 standby) and total no of CW Pumps shall be 7 nos. (6 working + 1 standby). However Dosing provision shall be given each chamber (i.e. total 12 chambers).
- c. Total ACW flow shall be 5542 cum/hr and Total CW flow shall be 137560 cum/hr.
- d. Circulating Water (CW) chlorination system - : System has been designed for 2 ppm shock dosing of chlorine for half an hour once in a shift of 8 hours in each CW and ACW pump chamber and 1 ppm of continuous dosing for 22.5 hours per day in each CW and ACW pump chamber. A provision of continuous dosing (with all the diffusers, instrument, piping etc) is also provided to dose in the CW Fore bay. Piping Layout to be planned by bidder accordingly.
- e. For capacity and sizing calculation of hypochlorite dosing pumps (Pumps for dosing in ACW pump chambers, CW pump chambers and CW forebay) and line sizing, the net capacity of each ACW pump to be considered as 1550 cum/hr and each CW pumps should be considered as 24100 cum/hr.
- f. Hypochlorite dosing pumps capacity and line sizing for dosing in each Stilling chamber, clarifier and each clariflocculator outlet ( PT Plant) should be designed based on Pre-treatment plant having two nos of clariflocculators each of net output capacity 2200 cum/hr and one no of clarifier of output capacity 200 cum/hr
- g. Two nos of stilling chambers are there one common for two clariflocculators and one dedicatedly for a clarifier.
- h. Pre-treatment Plant: System has been designed for continuous dosing of chlorine for 24 hours. Dosing is done @ 2.5 ppm in each stilling chamber and @ 1ppm at the outlet of each clarifier and clariflocculator. However pump sizing and line sizing to be done considering dosing of 3.5 ppm in each stilling chamber and @ 1 ppm at the outlet of each clarifier and clariflocculator.
- i. Potable Water System: Potable water Flow rate for colony is 20 cum/hr and for plant is 10 cum/hr. The system has been designed for 1 ppm continuous dosing of chlorine in potable water system for both colony and plant.
- j. Sewage Treatment Plant: Sewage Treatment Plant has a Flow rate of 5 cum/hr. System has been designed for 10 ppm continuous dosing of chlorine in Sewage Treatment Plant.

(For chlorine dosing rate, equivalent amount of hypo solution generated shall be dosed)