

E-TENDER SPECIFICATIONS

S. No.	E- TENDER SPECIFICATION NUMBER
01	BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

For

**WORK FOR CAPACITY ENHANCEMENT OF 100TPH AFBC
BOILER UNIT # 1 & 2 AT BIRLA CELLULOSIC PLANT KHARACH,
KOSAMBA GUJARAT.**

VOLUME – I

TECHNICAL BID

THIS TENDER SPECIFICATION CONSISTS OF:

Notice Inviting Tender	
Volume-IA	Technical Conditions of Contract
Volume-IB	Special conditions of Contract
Volume-IC	General conditions of Contract
Volume-ID	Forms & Procedures
Volume-IE	Technical Specifications
Volume II	Price Bid



Bharat Heavy Electricals Limited
(A Government of India Undertaking)
Power Sector - Western Region
345-Kingsway, Nagpur-440001

CONTENTS		
Volume No	Description	Hosted in website bhel.com (Briefly) and detailed in BHEL e-Procurement Portal as files titled
NIL	Tender Specification Issue Details	Part of Vol-I-2431
NIL	Notice Inviting Tender	Part of Vol-I-2431
I-A	Technical Conditions of Contract	Vol-IA-2431
I-B	Special Conditions of Contract	Part of Vol-I-BCD-2431
I-C	General Conditions of Contract	Part of Vol-I-BCD-2431
I-D	Forms & Procedures	Part of Vol-I-BCD-2431
I-E	Technical Specifications	
II	Price Bid Specification as specified at E-Procurement Portal	VoLIIPriceBid2431

S. No.	E- TENDER SPECIFICATION NUMBER
01	BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

For

**WORK FOR CAPACITY ENHANCEMENT OF 100TPH AFBC BOILER UNIT #
1 & 2 AT BIRLA CELLULOSIC PLANT KHARACH, KOSAMBA GUAJARAT.**

EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR TENDER SUBMISSION **Refer Notice Inviting Tender**

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING VOLUME-I AND VOLUME- II ARE ISSUED TO:

M/s.

.....

**PLEASE NOTE:
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.**

For Bharat Heavy Electricals Limited

AGM (Purchase)

Place: Nagpur

Date:

2431

NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 5 of 89

Ref: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Dt: 19/06/2021

NOTICE INVITING E-TENDER (NIT)

NOTE: BIDDER MAY DOWNLOAD/ UPLOAD THE TENDER/ OFFER FROM/ON BHEL E-PROCUREMENT PORTAL → <https://eprocurebhel.co.in>

To,

Dear Sir/Madam,

Sub : NOTICE INVITING E-TENDER

Sealed offers in two part bid system (National competitive bidding (NCB) or International Competitive Bidding (ICB) are invited from reputed & experienced bidders (meeting [PRE QUALIFICATION CRITERIA](#) as mentioned in Annexure-1) for the subject job by the undersigned on the behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender document. Following points relevant to the tender may please be noted and complied with.

1.0 Salient Features of NIT

S No.	ISSUE	DESCRIPTION	
i	E-TENDER NUMBER	BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431	
ii	Broad Scope of job	WORK FOR CAPACITY ENHANCEMENT OF 100TPH AFBC BOILER UNIT # 1 & 2 AT BIRLA CELLULOSIC PLANT KHARACH, KOSAMBA GUJARAT.	
iii	DETAILS OF TENDER DOCUMENT		
A	Volume-IA	Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc.	Applicable
B	Volume-IB	Special Conditions of Contract (SCC)	Applicable
C	Volume-IC	General Conditions of Contract (GCC)	Applicable
D	Volume-ID	Forms and Procedures	Applicable
E	Volume-IE	Technical Specifications	Applicable
F	Volume-II	Price Bid as specified in E-Procurement Portal	Applicable
iv	Issue of Tender Documents	Tender documents will be available for downloading from BHEL website (www.bhel.com) or e-procurement portal (https://eprocurebhel.co.in) as per schedule below: Start : 19/06/2021 , Time : 17:00 Closes : 12/07/2021 , Time : 14:00 Brief information of the tenders shall also be available at central public procurement portal. (https://eprocure.gov.in/epublish/app)	Applicable
v	DUE DATE & TIME OF OFFER SUBMISSION	Date: 12/07/2021, Time: 14.00 Hrs • Place: on E-Tender Portal https://eprocurebhel.co.in	Applicable
vi	OPENING OF TENDER (Techno-Commercial Bid)	Date: 12/07/2021, Time: 17.00 Hrs Notes: (1) In case the due date of opening of tender becomes a non-	Applicable

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 5 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 6 of 89

S No.	ISSUE	DESCRIPTION	
		working day, then the due date & time of offer submission and opening of tenders get extended to the next working day. (2) Bidder may depute representative to witness the opening of tender. For e-Tender, Bidder may witness the opening of tender through e-Procurement portal only.	
vii	EMD AMOUNT	<p>₹2,40,000/- (Rupees Two Lakhs Forty Thousand Only)</p> <p>Important Note 1: Bidders kindly to take note that EMD (Earnest Money Deposit) shall be furnished by MSE bidders as well, as per the amount and procedure indicated in the NIT/GCC.</p> <p>Note 2: Bidder's One Time EMD certificate worth Rs. 5 Lakhs will be acceptable only if it is issued from/amount available with BHEL PSWR.</p>	Applicable
viii	COST OF TENDER	Free	
ix	LAST DATE FOR SEEKING CLARIFICATION	<p>One day before due date of offer submission. Along with soft version also, addressing to undersigned & to others as per contact address given below:</p> <p>1) Name: P R Chiwarkar Designation: AGM Deptt: Purchase Address: Floor no. 5 & 6, Shree Mohini Complex, 345 Kingsway, Nagpur-440001 Phone: Landline: +91-712-2858-633 Email :prchiwarkar@bhel.in Fax:+91-712-2858600</p> <p>2) Name: Shubhangi Tembhurne Designation: Dy Manager Deptt: Purchase Address: Floor no. 5 & 6, Shree Mohini Complex, 345 Kingsway, Nagpur-440001 Phone: Land Line: +91-712-2858742 Email :shubh@bhel.in Fax:+91-712-2858600</p>	Applicable
x	SCHEDULE OF Pre Bid Discussion (PBD)	-	Not Applicable
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	-	Not Applicable
xii	Latest updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage (www.bhel.com -->Tender Notifications →View Corrigendum), Central Public Procurement portal (https://eprocure.gov.in/epublish/app)	

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 6 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 7 of 89

S No.	ISSUE	DESCRIPTION
) & on e-tender portal https://eprocurebhel.co.in and not in the newspapers. Bidders to keep themselves updated with all such information.

- 2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly signed digitally using Class III DSC & uploaded in E-Procurement Portal, as part of offer. **Rates/Price including discounts/rebates, if any, mentioned anywhere/in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.**
- 3.0 Not Used
- 4.0 Unless specifically stated otherwise, bidder shall deposit EMD as per clause 1.9 of General Conditions of Contract.

For Electronic Fund Transfer the details are as below:-

NAME OF THE BENEFICIARY	BHARAT HEAVY ELECTRICALS LTD
ADDRESS OF THE COMPANY	SHREE MOHINI COMPLEX 345, KINGSWAY,NAGPUR
NAME OF BANK	STATE BANK OF INDIA
NAME OF BANK BRANCH AND BRANCH CODE	SBI,KINGSWAYBRANCH,BRANCH CODE-00432
CITY	NAGPUR
ACCOUNT NUMBER	31380025872
ACCOUNT TYPE	CURRENT A/C
IFSC CODE OF THE BENEFICIARY BANK BRANCH	SBIN0000432
MICR CODE OF THE BANK BRANCH	440002002

(Note -: In case of E-Tenders, proof of remittance of EMD should be uploaded in the E-Procurement Portal and originals, as applicable, shall be sent to the officer inviting tender within a reasonable time, failing which the offer is liable to be rejected.

5.0 Procedure for Submission of Tenders:

This is an E-tender floated online through our E-Procurement Site (<https://eprocurebhel.co.in>). The bidder should respond by submitting their offer online only in our e-Procurement platform at (<https://eprocurebhel.co.in>). Offers are invited in two-parts only.

Documents Comprising the e-Tender

The tender shall be submitted online ONLY EXCEPT EMD (in physical form) as mentioned below:

a. Technical Tender (UN priced Tender)

All Technical details (e.g. Eligibility Criteria requested (as mentioned below)) should be attached in e-tendering module, failing which the tender stands invalid & may be REJECTED. Bidders shall furnish the following information along with technical tender (preferably in pdf format):

- i. Earnest Money Deposit (EMD) furnished in accordance with NIT Clause 4.0. ~~Alternatively, documentary evidence for claiming exemption as per clause 2.9 of NIT.~~
- ii. Technical Bid (without indicating any prices).

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 8 of 89

b. Price Bid:

- i. Prices are to be quoted in the attached Price Bid format online on e-tender portal.
- ii. The price should be quoted for the accounting unit indicated in the e-tender document.
- iii. Note: It is the responsibility of tenderer to go through the Tender document to ensure furnishing all required documents in addition to above, if any. Any deviation would result in REJECTION of tender and would not be considered at a later stage at any cost by BHEL.
- iv. A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warrantee that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages.
- v. A tender, which does not fulfill any of the above requirements and/or gives evasive information/reply against any such requirement, shall be liable to be ignored and rejected.

DO NOT'S

Bidders are requested NOT to submit the hard copy of the Bid. In case offer is sent through hard copy/fax/telex/cable/electronically in place of e-tender, the same shall not be considered. **Also, uploading of the price bid in prequalification bid or technical bid may RESULT IN REJECTION of the tender.**

Digital Signing of e-Tender

Tenders shall be uploaded with all relevant PDF/zip format. The relevant tender documents should be uploaded by an authorized person having Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION digital signature certificate (DSC).

The Requirement:

1. A PC with Internet connectivity &
2. DSC (Digital Signature Certificate) (**Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION**)

BHEL has finalized the e-procurement service Provider:-

NIC PORTAL (<https://eprocurebhel.co.in>)

For E-PROCUREMENT ASSISTANCE & TRAINING, NIC PORTAL HELPDESK CONTACTS AS PER FOLLOWING:

For any technical related queries, please call at 24 x 7 Help Desk Number

0120-4001 002

0120-4200 462

0120-4001 005

0120-6277 787

1. Peter Raj, NIC, Ph: 9942069052

Email Support: support-eproc@nic.in

Other details/update yourself from : <https://eprocurebhel.co.in>

The process of utilizing e-procurement necessitates usage of **DSC (Digital Signature Certificate) (Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION)** and you are requested to procure the same immediately, if not presently available with you. Please note that only with DSC, you will be able to login the e-procurement secured site and take part in the tendering process.

The contact details of the DSC certifying authority:-

please refer <http://www.mca.gov.in/> → MCA SERVICES → DSC SERVICES

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 8 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 9 of 89

Vendors are requested to go through seller manual available on <https://eprocurebhel.co.in>.

Procedure for Submission of Tenders (To be used in case of Paper bid only): The Tenderers must submit their Tenders to Officer inviting Tender, as detailed below:

- PART-I consisting of 'PART-I A (Techno Commercial Bid)' & 'PART-I B (EMD)' in two separate sealed and superscribed envelopes (ENVELOPE-I & ENVELOPE-II)
- PART-II (Price Bid) in sealed and superscribed envelope (ENVELOPE-III)
- One set of tender documents shall be retained by the bidder for their reference

6.0 The contents for ENVELOPES and the superscription for each sealed cover/Envelope are as given below. **(All pages to be signed and stamped) (To be used in case of Paper bid only):**

Sl. no.	Description	Remarks
	Part-I A	
	<u>ENVELOPE – I superscribed as:</u> PART-I (TECHNO COMMERCIAL BID) TENDER NO.: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION: <u>CONTAINING THE FOLLOWING:-</u>	
i. —	Covering letter/Offer forwarding letter of Tenderer.	
ii. —	Duly filled in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above. <u>Note:</u> a. In case of any deviation, the same should be submitted separately for technical & commercial parts, indicating respective clauses of tender against which deviation is taken by bidder. The list of such deviation shall be placed after document under sl no (i) above. It shall be specifically noted that deviation recorded elsewhere shall not be entertained. b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding. i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL ii). In case of unacceptable deviations, BHEL reserves the right to reject the tender	
iii. —	Supporting documents/ annexure/ schedules/ drawing etc. as required in line with Pre-Qualification criteria. It shall be specifically noted that all documents as per above shall be indexed properly and credential certificates issued by clients shall distinctly bear the name of organization, contact ph. no, FAX no, etc.	
iv. —	All Amendments/Correspondences/Corrigenda/Clarifications/Changes/ Errata etc. pertinent to this NIT.	
v. —	Integrity Pact Agreement (Duly signed by the authorized signatory)	If

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 9 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 10 of 89

		applicable
vi.——	Duly filled-in annexures, formats etc. as required under this Tender Specification/NIT	
vii.——	Notice inviting Tender (NIT)	
viii.——	Volume – I A : <u>Technical Conditions of Contract (TCC)</u> consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc.	
ix.——	Volume – I B : <u>Special Conditions of Contract (SCC)</u>	
x.——	Volume – I C : <u>General Conditions of Contract (GCC)</u>	
xi.——	Volume – I D : <u>Forms & Procedures</u>	
xii.——	Volume – II (UNPRICED – without disclosing rates/price, but mentioning only 'QUOTED' or 'UNQUOTED' against each item	
xiii.——	Any other details preferred by bidder with proper indexing.	

	PART-I-B	
	<u>ENVELOPE – II superscribed as:</u> PART-I (EMD) TENDER NO: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION: <u>CONTAINING THE FOLLOWING:-</u>	
	Earnest Money Deposit (EMD) in the form as indicated in this Tender	

	PART-II	
	PRICE BID consisting of the following shall be enclosed	
	<u>ENVELOPE-III</u> superscribed as: PART-II (PRICE BID) TENDER NO: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION: <u>CONTAINING THE FOLLOWING</u>	
i	Covering letter/Offer forwarding letter of Tenderer enclosed in Part-I	
ii	Volume II – PRICE BID (Duly Filled in Schedule of Rates – rate/price to be entered in words as well as figures)	

	OUTER COVER	
	<u>ENVELOPE-IV (MAIN ENVELOPE / OUTER ENVELOPE)</u> superscribed as: TECHNO-COMMERCIAL BID, PRICE BID & EMD TENDER NO: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION: <u>CONTAINING THE FOLLOWING:</u>	
i	⊖ Envelopes I	

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 10 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 11 of 89

	<ul style="list-style-type: none">○ Envelopes II○ Envelopes III	
--	--	--

- **SPECIAL NOTE: All documents/ annexures to be submitted should be uploaded in respective places in the E-Tender portal as per the list mentioned given in this NIT. BHEL shall not be responsible for any in-complete documents.**

7.0 Deviation with respect to tender clauses and additional clauses/suggestions in Techno-commercial bid / Price bid shall NOT be considered by BHEL. Bidders are requested to positively comply with the same.

8.0 BHEL reserves the right to accept or reject any or all Offers without assigning any reasons thereof. BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).

9.0 ~~**Assessment of Capacity of Bidders:**~~
~~**Bidder's capacity for executing the job under tender shall be assessed 'LOAD' wise and 'PERFORMANCE' wise as per the following:**~~

I. ~~**LOAD:**~~ Load takes into consideration ~~**ALL**~~ the contracts of the Bidder under execution with BHEL Regions, irrespective of whether they are similar to the tendered scope or not. The cut off month for reckoning 'Load' shall be the 3rd Month preceding the month corresponding to the 'latest date of bid submission', in the following manner -

~~(Note: For example, if latest bid submission is in Jan 2017, then the 'load' shall be calculated up to and inclusive of Oct 2016)~~

Total number of Packages in hand = Load (P)

Where 'P' is the sum of all unit wise identified packages (refer table-1) under execution with BHEL Regions as on the cut off month defined above, including packages yet to be commenced, excepting packages which are on Long Hold.

II. ~~**PERFORMANCE:**~~ Here 'Monthly Performance' of the bidder for all the packages (under execution/ executed during the 'Period of Assessment' in all Power Sector Regions of BHEL) ~~**SIMILAR**~~ to the packages covered under the tendered scope, excepting packages not commenced shall be taken into consideration. The 'Period of Assessment' shall be 6 months preceding and including the cut off month. The cut off month for reckoning 'Period of Assessment' shall be the 3rd Month preceding the month corresponding to 'latest date of bid submission', in the following manner:

~~(Note: For example, if 'latest date of bid submission' is in Jan 2017, then the 'performance' shall be assessed for a 6 months' period up to and inclusive of Oct 2016 (i.e. from May 2016 to Oct 2016), for all the unit wise identified packages (refer Table I))~~

i). ~~**Calculation of Overall 'Performance Rating' for 'Similar Package/Packages' for the tendered scope under execution at Power Sector Regions for the 'Period of Assessment':**~~

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for all the similar Package/packages', divided by the total number of Package months for which evaluation should have been done, as per procedure below:

a) ~~$P_1, P_2, P_3, P_4, P_5, \dots, P_N$ etc. be the packages (under execution/ executed during the 'Period of Assessment' in all Regions of BHEL) **SIMILAR** to the packages covered under the~~

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 12 of 89

tendered scope, excepting packages not commenced. Total number of similar packages for all Regions = P_T (i.e. $P_T = P_1 + P_2 + P_3 + P_4 + \dots P_N$)

b) Number of Months ' T_1 ' for which 'Monthly Performance Evaluation' as per relevant formats, should have been done in the 'Period of Assessment' for the corresponding similar package P_1 . Similarly T_2 for package P_2 , T_3 for package P_3 , etc. for the tendered scope. Now calculate cumulative total months ' T_T ' for total similar Packages ' P_T ' for all Regions (i.e. $T_T = T_1 + T_2 + T_3 + T_4 + \dots T_N$)

c) Sum ' S_1 ' of 'Monthly Performance Evaluation' Scores ($S_{1-1}, S_{1-2}, S_{1-3}, S_{1-4}, S_{1-5}, \dots S_{1-T_1}$) for similar package P_1 , for the 'period of assessment' ' T_1 ' (i.e. $S_1 = S_{1-1} + S_{1-2} + S_{1-3} + S_{1-4} + S_{1-5} + \dots S_{1-T_1}$). Similarly, S_2 for package P_2 for period T_2 , S_3 for package P_3 for period T_3 etc. for the tendered scope for all Regions. Now calculate cumulative sum ' S_T ' of 'Monthly Performance Evaluation' Scores for total similar Packages ' P_T ' for all Regions (i.e. ' $S_T = S_1 + S_2 + S_3 + S_4 + S_5 + \dots S_N$ ')

d) Overall Performance Rating ' R_{BHEL} ' for the Similar Package/Packages (under execution/ executed during the 'Period of Assessment') in all the Power Sector Regions of BHEL

~~Aggregate of Performance scores for all similar packages in all the Regions~~

~~Aggregate of months for each of the similar packages for which performance should have been evaluated in all the Regions~~

~~———— S_T~~

~~=====~~

~~———— T_T~~

e) Bidders to note that the risk of non-evaluation or non-availability of the 'Monthly Performance Evaluation' reports as per relevant formats is to be borne by the Bidder.

f) Table showing methodology for calculating 'a', 'b' and 'c' above

Sl. No.	Item Description	Details for all Regions							Total
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
1	Similar Packages for all Regions → (under execution/ executed during period of assessment)	P_1	P_2	P_3	P_4	P_5	...	P_N	Total No. of similar packages for all Regions = P_T i.e. Sum (Σ) of columns (iii) to (ix)

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 13 of 89

Sl. No.	Item Description	Details for all Regions							Total
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
2	Number of Months for which 'Monthly Performance Evaluation' as per relevant formats should have been done in the 'period of assessment' for corresponding Similar Packages (as in row 1)	T ₁	T ₂	T ₃	T ₄	T ₅	...	T _N	Sum (Σ) of columns (iii) to (ix) = T _T
3	Monthly performance scores for the corresponding period (as in Row 2)	S ₁₋₁₇ S ₁₋₂₇ S ₁₋₃₇ S ₁₋₄₇ ... S _{1-T1}	S ₂₋₁₇ S ₂₋₂₇ S ₂₋₃₇ S ₂₋₄₇ ... S _{2-T2}	S ₃₋₁₇ S ₃₋₂₇ S ₃₋₃₇ S ₃₋₄₇ ... S _{3-T3}	S ₄₋₁₇ S ₄₋₂₇ S ₄₋₃₇ S ₄₋₄₇ ... S _{4-T4}	S ₅₋₁₇ S ₅₋₂₇ S ₅₋₃₇ S ₅₋₄₇ ... S _{5-T5}	S _{N-17} S _{N-27} S _{N-37} S _{N-47} ... S _{N-TN}	-----
4	Sum of Monthly Performance scores of the corresponding Package for the corresponding period (as in row 3)	S ₁	S ₂	S ₃	S ₄	S ₅	...	S _N	Sum (Σ) of columns (iii) to (ix) = S _T

ii). Calculation of Overall 'Performance Rating' (R_{BHEL}) in case at least 6 evaluation scores for 'similar Package/Packages' for the tendered scope ARE NOT AVAILABLE, during the 'Period of Assessment':

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for ALL the packages, divided by the total number of Package months for which evaluation should have been done. ' R_{BHEL} ' shall be calculated subject to availability of 'performance scores' for at least 6 'package months' in the order of precedence below:

- 'Period of Assessment' i.e. 6 months preceding and including the cut-off month
- 12 months preceding and including the cut-off month
- 24 months preceding and including the cut-off month

In case, R_{BHEL} cannot be calculated as above, then Bidder shall be treated as 'NEW VENDOR'. Further eligibility and qualification of this bidder shall be as per definition of 'NEW VENDOR' described in 'Explanatory Notes'.

iii). Factor "L" assigned based on Overall Performance Rating (R_{BHEL}) at Power Sector Regions:

Sl. no.	Overall Performance Rating (R_{BHEL})	Corresponding value of 'L'
1	=60	NA
2	>60 and ≤ 65	0.4
3	>65 and ≤ 70	0.35
4	>70 and ≤ 75	0.25
5	>75 and < 80	0.2

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 14 of 89

6	≥ 80	NA
---	------	----

III. 'Assessment of Capacity of Bidder':

'Assessment of Capacity of Bidder' is based on the Maximum number of packages for which a vendor is eligible, considering the performance scores of similar packages, as below:

Max number of packages $P_{Max} = (R_{BHEL} - 60)$ divided by corresponding value of 'L', i.e. $(R_{BHEL} - 60)/L$

Note:

- i). In case the value of P_{Max} results in a fraction, the value of P_{Max} is to be rounded off to next whole number
- ii). For $R_{BHEL} = 60$, $P_{Max} = '1'$
- iii). For $R_{BHEL} \geq 80$, there will be no upper limit on P_{Max}

The Bidder shall be considered 'Qualified' as per 'Assessment of Capacity of Bidder' for the subject Tender if $P \leq P_{Max}$

(Where P is calculated as per clause 'I' above)

IV. Explanatory note:

i). Similar package means Boiler or ESP or Piping or Turbine or Civil or Structure or Electrical or C&I etc. at the individual level irrespective of rating of Plant and irrespective of whether the subject tender is a single package or as part of combined/composite packages. Normally Boiler, ESP, Piping, Turbine, Electrical, C&I, Civil, Structure etc. is considered individual level of package. For example, in case the tendered scope is a Boiler Vertical Package comprising of Boiler, ESP and Power Cycle Piping (i.e. the 'identified packages as per Table-1 below), the 'PERFORMANCE' part against sl.no. II above, needs to be evaluated considering all the identified packages (i.e. Boiler, ESP and Power Cycle Piping) and finally the Bidder's capacity to execute the tendered scope is assessed in line with III above.

ii). Identified Packages (Unit wise)

Table-1

Civil	Electrical and C&I	Mechanical
i). Enabling works ii). Pile and Pile Caps iii). Civil Works including foundations iv). Structural Steel Fabrication & Erection v). Chimney vi). Cooling Tower vii). Others (Civil)	i). Electrical ii). C&I iii). Others (Elect. and C&I)	i). Boiler & Aux (All types including CW Piping if applicable) ii). Power Cycle Piping/Critical Piping iii). ESP iv). LP Piping v). Steam Turbine Generator set & Aux vi). Gas Turbine Generator set & Aux vii). Hydro Turbine Generator set & Aux viii). Turbo Blower (including Steam Turbine) ix). Material Management x). FGD xi). ACC xii). Others (Mechanical)

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 14 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 15 of 89

- iii). Bidders who have not been evaluated for at least six package months in the last 24 months preceding and including the Cut-off month in the online BHEL system for contractor performance evaluation in BHEL PS Regions, shall be considered "NEW VENDOR".

A 'NEW VENDOR' shall be considered qualified subject to satisfying all other tender conditions.

A 'NEW VENDOR' if awarded a job (of package/packages identified under this clause) shall be tagged as "FIRST TIMER" on the date of first LOI from BHEL.

The "FIRST TIMER" tag shall remain till completion of all the contracts against which vendor has been tagged as First Timer or availability of 6 evaluation scores within last 24 months preceding and including the Cut-off month in the online BHEL system for contractor performance evaluation in BHEL PS Regions.

A Bidder shall not be eligible for the next job as long as the Bidder is tagged as "FIRST TIMER" excepting for the Tenders which have been opened on or before the date of the bidder being tagged as 'FIRST TIMER'.

After removal of 'FIRST TIMER' tag, the Bidder shall be considered 'QUALIFIED' for the future tenders subject to satisfying all other tender conditions including 'Assessment of Capacity of Bidders'.

- iv). Consequent upon applying the criteria of 'Assessment of Capacity of Bidders' detailed above on all the bidders qualified against Technical and Financial Qualification criteria, if the number of qualified bidders reduces to less than minimum no. of bidders required for conducting RA as per extant RA Guidelines, then for further processing of the Tender, BHEL at its discretion reserves the right to also consider the bidders who are "not qualified" as per criteria of 'Assessment of Capacity of Bidders' and for this, procedure described in following three options shall be followed:

- a) All the bidders having Overall Performance Rating (R_{BHEL}) ≥ 60 shall be considered qualified against criteria of 'Assessment of Capacity of Bidders'.
- b) If even after using option "a", the number of qualified bidders remains less than minimum no. of bidders required for conducting RA as per extant RA Guidelines, then in addition to bidders considered as per option "a", "First timer" bidders having average of available performance scores ≥ 60 upto and including the Cut Off month shall also be considered qualified against criteria of 'Assessment of Capacity of Bidders'.
- c) If even after using option "a" and "b", the number of qualified bidders remains less than minimum no. of bidders required for conducting RA as per extant RA Guidelines, then in addition to bidders considered as per option "a" and "b", "First timer" bidders for whom no performance score is available in the system upto and including the Cut Off month, shall also be considered qualified against criteria of 'Assessment of Capacity of Bidders'.

Note: In case, the number of bidders qualified against Technical and Financial Qualification criteria itself is less than minimum no. of bidders required for conducting RA as per extant RA Guidelines, then all bidders (a) having Overall Performance Rating (R_{BHEL}) ≥ 60 , (b) First timer bidders having average of available performance scores ≥ 60 upto and including the Cut Off month, (c) "First timer" bidders for whom no performance score is available in the system upto and including the Cut Off month, shall be considered qualified against criteria of 'Assessment of Capacity of Bidders' for further processing of tender.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 16 of 89

- v). 'Under execution' shall mean works in progress as per the following:
- a. Up to execution of 90% of anticipated Contract Value in case of Civil, MM, Structural and Turbo Blower Packages
 - b. Up to Steam Blowing in case of Boiler/ESP/Piping Packages
 - c. Up to Synchronization in all Balance Packages

Note: BHEL at its discretion can extend (or reduce in exceptional cases in line with Contract conditions) the period defined against (a), (b) and (c) above, depending upon the balance scope of work to be completed.

- vi). Contractor shall provide the latest contact details i.e. mail-ID and Correspondence Address to SCT Department, so that same can be entered in the Contractor Performance Evaluation System, and in case of any change/discrepancy same shall be informed immediately. Login Details for viewing scores in Contractor Performance Evaluation System shall be provided to the Contractor by SCT Department.
- vii). Performance Evaluation for Activity Month shall be completed in Evaluation Month (i.e. month next to Activity Month) or in rare cases in Post Evaluation Month (i.e. month next to Evaluation Month) after approval from Competent Authority. In case scores are not acceptable, Contractor can submit Review Request to GM Site/ GM Project latest by 25th of Evaluation Month or 3 days after approval of score, whichever is later. However, acceptance/rejection of 'Review Request' solely depends on the discretion of GM Site/GM Project. After acceptance of Review Request, evaluation score shall be reviewed at site and the score after completion of review process shall be acceptable and binding on the contractor.
- viii). Project on Hold due to reasons not attributable to bidder-
- a. **Short hold:** Evaluation shall not be applicable for this period, however Loading will be considered.
 - b. **Long hold:** Short hold for continuous six months and beyond or hold on account of Force Majeure shall be considered as Long Hold. Evaluation as well as Loading shall not be considered for this period.
- ix). Performance evaluation as specified above in this clause is applicable to Prime bidder and Consortium partner (or Technical tie up partner) for their respective scope of work.

~~10.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage structure, wage rules, etc. before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions.~~

11.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail and/or through e-procurement portal, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.

12.0 BHEL may decide holding of pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 17 of 89

may be decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.

- 13.0 In the event of any conflict between requirement of any clause of this specification/ documents/drawings/data sheets etc. or requirements of different codes/standards specified, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing error/missing pages/ other clerical errors in the tender documents, noticed must be pointed out before pre-bid meeting/submission of offer, else BHEL's interpretation shall prevail.
- 14.0 Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
- 15.0 ~~Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer), **if applicable**, along with techno-commercial bid. This pact shall be considered as a preliminary qualification for further participation. The names and other details of Independent External Monitor (IEM) for the subject tender is as given at point (1) above.~~

"Integrity Pact (IP)"

- ~~(a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.~~

Sl. No.	IEM	Email
1.	Shri Arun Chandra Verma, IPS (Retd.)	acverma1@gmail.com
2.	Shri Virendra Bahadur Singh, IPS (Retd.)	vbsinghips@gmail.com

- ~~(b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.~~
- ~~(c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.~~

~~**Note:**~~

~~No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:~~

~~**Details of contact person(s):**~~

~~**Name:** (1) P R Chiwarkar/ AGM (Purchase) ————— 2) Shubhangi Tembhurne / Dy Manager (Purchase)
Dept.: Purchase Department
Address: Floor No. 5 & 6, Shreemohini Complex, 345 Kingsway, Nagpur-440001~~

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 17 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 18 of 89

Phone: (LL/ Mobile) (1) 0712 2858633 0712 2858742
Email: prchiwarkar@bhel.in shubh@bhel.in
Fax: 0712 2858699

- 16.0 The Bidder has to satisfy the Pre-Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of satisfying the Pre-Qualification Criteria specified in this NIT as per Annexure-I (as applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.
- 17.0 In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorized representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.
- 18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.
- 19.0 **Reverse Auction:** Applicable. "BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com on "**supplier registration page**".) for this tender. RA shall be conducted among the techno-commercially qualified bidders.
- Price Bids of all the techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 21.0 In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR, along with supporting documents.
- 22.0 The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.
- 23.0 Consortium Bidding (or Technical Tie up) shall be allowed only if specified in Pre-Qualifying Requirement (PQR) criteria, and in such a case the following shall be complied with:
- 23.1 Prime Bidder and Consortium Partner or partners are required to enter into a consortium agreement for the said contract with a validity period of six months initially. In case bidder becomes L1, Consortium Agreement valid till contractual completion period shall be submitted to BHEL before signing the contract. Consortium Agreement shall be kept valid till scope of work awarded to consortium partner(s) as per contract is completed.
- 23.2 'Standalone' bidder cannot become a '**Prime Bidder**' or a '**Consortium bidder**' or '**Technical Tie up bidder**' in a consortium (or Technical Tie up) bidding. Prime bidder shall neither be a consortium partner to other prime bidder nor take any other consortium partners. However, consortium partner may enter into consortium agreement with other prime bidders. In case of non-compliance, consortium bids of such Prime bidders will be rejected.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 19 of 89

-
- 23.3 Number of partners for a Consortium Bidding (or Technical Tie up) including Prime Bidder shall be NOT more than 3 (three).
- 23.4 Prime Bidder shall be as specified in the Pre-Qualification Requirement, else the bidder who has the major share of work.
- 23.5 In order to be qualified for the tender, Prime Bidder and Consortium partner or partners shall satisfy (i) the Technical 'Pre Qualifying Requirements' specified for the respective package, (ii) "Assessment of Capacity of Bidder" as specified in clause 9.0.
- 23.6 Prime Bidder shall comply with additional 'Technical' criteria of PQR as defined in 'Explanatory Notes for the PQR'.
- 23.7 Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified
- 23.8 In case customer approval is required, then Prime Bidder and Consortium Partner or partners shall have to be individually approved by Customer for being considered for the tender.
- 23.9 Prime Bidder shall be responsible for the overall execution of the contract.
- 23.10 In case of award of job, Performance shall be evaluated for Prime Bidder and Consortium Partner or partners for their respective scope of work(s) as per prescribed formats.
- 23.11 In case the Consortium partner or partners back out, their SDs shall be encashed by BHEL and BHEL shall take necessary action as per extant guidelines. In such a case, other consortium partner or partners meeting the PQR have to be engaged by the Prime Bidder, and if not, the respective work will be withdrawn and executed on risk and cost basis of the Prime Bidder. The new consortium partner or partners shall submit fresh SDs as applicable.
- 23.12 In case Prime Bidder withdraws or insolvency / liquidation / winding up proceedings have been initiated / admitted against the Prime Bidder, BHEL reserves the right to cancel, terminate or short close the contract or take any other action to safeguard BHEL's interest in the Project / Contract. This action will be without prejudice to any other action that BHEL can take under Law and the Contract to safeguard interests of BHEL.
- 23.13 After execution of work, the work experience shall be assigned to the Prime Bidder and the consortium partner or partners for their respective scope of work. After successful execution of one work with a consortium partner under direct order of BHEL, the Prime Bidder shall be eligible for becoming a 'standalone' bidder for works similar to that for which consortium partner was engaged, for subsequent tenders.
- 23.14 The consortium partner shall submit SD equivalent to 1% of the total contract value in addition to the SD to be submitted by the Prime Bidder for the total contract value. In case there are two consortium partners, then each partner shall submit SD equivalent to 0.5% of the total contract value in addition to the SD to be submitted by the Prime Bidder for the total contract value. However, Prime Bidder has also option for submission of SD on behalf of consortium partner (s).

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 20 of 89

SD submitted by Consortium Partner(s) may be released in case corresponding scope of work of the respective Consortium partner(s) has been completed upto the extent of 80% based on certification by Construction Manager and concurrence by the prime bidder.

23.15 In case of a Technical Tie up, all the clauses applicable for the Consortium partner shall be applicable for the Technical Tie up partner also.

24.0 The bidder shall submit/upload documents in support of possession of 'Qualifying Requirements' duly self-certified and stamped by the authorized signatory, indexed and properly linked in the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.

25.0 The bidder may have to produce original document for verification if so decided by BHEL.

26.0 The consultant / firm (and any of its affiliates) shall not be eligible to participate in tender(s) for the related works or services for the same project, if they were engaged for the consultancy services.

27.0 Guidelines/rules in respect of Suspension of Business dealings, Vendor evaluation format, Quality, Safety & HSE guidelines, Experience Certificate, etc. may undergo change from time to time and the latest one shall be followed. The abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' is available on www.bhel.com on "**supplier registration page**".

28.0 The offers of the bidders who are on the banned/ hold list and also the offer of the bidders, who engage the services of the banned/ hold firms, shall be rejected. The list of **banned/ hold firms** is available on BHEL web site www.bhel.com.

28.1 Integrity commitment, performance of the contract and punitive action thereof:

28.1.1 Commitment by BHEL:

BHEL commits to take all measures necessary to prevent corruption in connection with the tender Process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.

28.1.2 Commitment by Bidder/ Supplier/ Contractor:

- (i) The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.
- (ii) The bidder/ supplier/ contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.
- (iii) The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the prices or acts or omits in any manner which tantamount to an offence punishable under any provision of the

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 21 of 89

Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such bidder/ supplier/ contractor as per extent guidelines of the company available on www.bhel.com and / or under applicable legal provisions.

29.0 Micro and Small Enterprises (MSE)

Any Bidder falling under MSE category, shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.

Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ ST & Women
— Micro			
— Small			

Note: - If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.

a) MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011 MA dtd. 09/11/2016 office of AS & DC, MSME) only if they submit along with the offer, attested copies of either Udyam Registration Certificate or EM-II certificate having deemed validity (five years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or Udyog Aadhar Memorandum (UAM) & Acknowledgement or EM-II Certificate along with attested copy of a CA certificate (format enclosed as Annexure - 3) where deemed validity of EM-II certificate of five years has expired applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for this enquiry if the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer. Documents submitted by the bidder may be verified by BHEL for rendering the applicable benefits.

30.0 The Bidder along with its associate/ collaborators/ sub-contractors/ sub-vendors/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

31.0 PREFERENCE TO MAKE IN INDIA:

For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/Non-Local Supplier and purchase preferences to Class I local supplier, is as defined I Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.

31.1 Compliance to Restrictions under Rule 144 (xi) of GFR 2017

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. The Competent Authority for the purpose of this Clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 22 of 89

venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

III. "Bidder from a country which shares a land border with India" for the purpose of this Clause means: -

- a. An entity incorporated established or registered in such a country; or
- b. A subsidiary of an entity incorporated established or registered in such a country; or
- c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
- d. An entity whose beneficial owner is situated in such a country; or
- e. An Indian (or other) agent of such an entity; or
- f. A natural person who is a citizen of such a country; or
- g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

IV. The beneficial owner for the purpose of (III) above will be as under:

1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation

- a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company.
- b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.
2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.
3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person has ownership of or entitlement to more than fifteen percent of the property or capital or profits of the such association or body of individuals.
4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 22 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 23 of 89

- VI. *The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.*

Note:

- (i) *The bidder shall provide undertaking for their compliance to this Clause, in the Format provided in Annexure-11.*
- (ii) *Registration of the bidder with Competent Authority should be valid at the time of submission as well as acceptance of the bids.*

32.0 Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection. All overwriting/cutting, etc., will be numbered by bid opening officials and announced during bid opening.

33.0 In the course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders.

In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss/ draw of lots, in the presence of the respective L-1 bidder(s) or their representative(s).

Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding.

34.0 The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.

35.0 **Order of Precedence:**

In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:

- a. Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL
- b. Notice Inviting Tender (NIT)
- c. Price Bid
- d. Technical Conditions of Contract (TCC)—Volume-1A
- e. Special Conditions of Contract (SCC) —Volume-1B
- f. General Conditions of Contract (GCC) —Volume-1C
- g. Forms and Procedures —Volume-1D

It may please be noted that guidelines/ circulars/ amendments/ govt. directives issued from time to time shall also be applicable.

For BHARAT HEAVY ELECTRICALS LTD

(General Manager - Purchase)

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 23 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 24 of 89

Enclosure:

01. Annexure-1: Pre Qualifying Requirements.
02. Annexure-2: Check List.
- ~~03. Annexure-3: Certificate by Chartered Accountant~~
04. Annexure-4: Reverse Auction Process Compliance Form
05. Annexure-5: Authorization of representative who will participate in the online Reverse Auction Process
06. Annexure-6: RA Price Confirmation and Breakup
- ~~07. Annexure-7: Integrity Pact~~
08. Annexure-8: Undertaking for insolvency
09. Annexure-9: Declaration reg. Related Firms & their areas of Activities
010. Other Tender documents as per this NIT.
011. Annexure-10: DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04TH JUNE, 2020 AND SUBSEQUENT ORDER(S)
012. Annexure 11: DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017
013. Annexure 12: Important information.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 25 of 89

ANNEXURE - 1

PRE QUALIFYING CRITERIA

JOB	WORK FOR CAPACITY ENHANCEMENT OF 100TPH AFBC BOILER UNIT # 1 & 2 AT BIRLA CELLULOSIC PLANT KHARACH, KOSAMBA GUJARAT.		
TENDER NO	BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431		
SL NO	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Applicability	
A	<p>Submission of Integrity Pact duly signed (if applicable)</p> <p>(Note: To be submitted by Prime Bidder & Consortium / Technical Tie up partner jointly in case Consortium bidding is permitted, otherwise by the sole bidder)</p>	NOT APPLICABLE	
B	<p>TECHNICAL PQR</p> <p>Bidder shall essentially meet Qualifying Requirement(s) (i.e. B.1 or B.2) as under-</p> <p>B.1: Bidder must have executed Overhauling/R&M/E&C of "Boiler Pressure parts" or "Boiler Pressure Parts and 'Structure/Non Pressure Parts/ESP/Rotary Machines/Insulation/ Piping/Auxiliaries/ Ducting / any combination of these parts") of any rating, as per the criteria below:</p> <p>B.1.1) Executed One similar work of value not less than 96 Lakhs against single work order.</p> <p>OR</p> <p>B.1.2) Executed two similar works of value not less than 60 Lakhs against maximum two work orders each.</p> <p>OR</p> <p>B.1.3) Executed Three similar works each of value not less than 48 Lakhs against maximum three work orders each.</p> <p style="text-align: center;">OR</p> <p>B.2: Bidder must have Executed 'Erection & Commissioning'/ 'Renovation & Modernization' of At least One Boiler (Consisting of Pressure Parts) of a Unit of rating \geq 85 TPH.</p> <p>-----</p> <p>NOTE: Boiler shall not mean HRSG boiler.</p>		
C.1	<p><u>FINANCIAL TURNOVER:</u></p> <p>Bidders must have achieved an average annual financial turnover (audited) of Rs. 36,00,000/- (Rupees Thirty Six Lakhs Only) or more over last three Financial Years (FY) i.e. '2017-18, 2018-19 & 2019-20'</p>	APPLICABLE	

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 25 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 26 of 89

C.2	<u>NETWORTH</u> (only in case of Companies) Net worth of the Bidder based on the latest Audited Accounts as furnished for 'C-1' above should be positive.	APPLICABLE	
C.3	<u>PROFIT</u> Bidder must have earned profit in any one of the three Financial Years as applicable in the last three Financial Years as furnished for 'C-1' above.	APPLICABLE	
C-4	Bidder must not be under Bankruptcy Code Proceedings (IBC) by NCLT or under Liquidation / BIFR, which will render him ineligible for participation in this tender, and shall submit undertaking (Annexure-8) to this effect.	APPLICABLE	
D	Assessment of Capacity of Bidder: The "Assessment of Capacity of Bidders" for this Tender shall be carried out by considering the identified similar packages as "....."	Not APPLICABLE	
E	Approval of Customer (if applicable) Note: Names of bidders (including consortium/Technical Tie-up partners in case consortium bidding is permitted) who stand qualified after compliance of criteria A to D shall be forwarded to customer for their approval	Not APPLICABLE	
F	Price Bid Opening Note: Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E		BY BHEL
G	Consortium tie-ups	NOT APPLICABLE	
<u>Explanatory Notes for the PQR (unless otherwise specified in the PQR):</u> <u>Explanatory Notes for PQR B.1 (Technical)</u> <ul style="list-style-type: none"> For the criteria (B.1), actual executed value shall be considered. Value of work is to be updated with indices for "All India Avg. Consumer Price index for industrial workers" and "Monthly Whole Sale Price Index for All Commodities" with base month as per last month of work execution and indexed up to three (3) months prior to the month of latest due date of bid submission as per following formula- $P = R + 0.425 \times R \times \frac{(X_N - X_0)}{X_0} + 0.425 \times R \times \frac{(Y_N - Y_0)}{Y_0}$ <p>Where P = Updated value of work R = Value of executed work X_N = All India Avg. Consumer Price index for industrial workers for three months prior to the month of latest due date of bid submission (e.g. If latest bid submission date is 02-Mar-17, then bid submission month shall be reckoned as March'17 and index for Dec'2016 shall be considered). X₀ = All India Avg. Consumer Price index for industrial workers for last month of work execution Y_N = Monthly Whole Sale Price Index for All Commodities for three months prior to the month of latest due date of bid submission (e.g. If latest bid submission date is 02-Mar-17, then bid submission month shall be reckoned as March'17 and index for Dec'2016 shall be considered). Y₀ = Monthly Whole Sale Price Index for All Commodities for last month of work execution</p> 			

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 26 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 27 of 89

- The evaluation currency for this tender shall be INR.

Explanatory Notes for Technical Criteria (B2):

1. VOID
2. Unless otherwise specified, for the purpose of “B2 Technical Criteria”, the word 'EXECUTED' means achievement of milestones as defined below -
 - a. "ACHIEVEMENT OF PHYSICAL QUANTITIES" as per PQRs.
 - b. “READINESS FOR COAL FILLING” of at least one Bunker, in respect of Mill Bunker Structure.
 - c. “CHARGING” in respect of Power Transformers/ Bus Ducts/ “HT/LT Switchgears” / “HT/LT Cabling”.
 - d. For C&I works: "SYNCHRONISATION" in case of power project (excluding nuclear Projects) / “WORK EXECUTION of the value as defined in PQR” in case of industry & Nuclear Projects.
 - e. **"BOILER LIGHT UP" in respect of Boiler / CFBC / ESP.**
 - f. “CHARGING OF ATLEAST ONE PASS” in respect of ESP(R&M)
 - g. "GAS IN" in respect of HRSG.
 - h. “STEAM BLOWING” in respect of Power Cycle Piping.
 - i. “HYDRAULIC TEST”/ ANY OTHER EQUIVALENT TEST LIKE “100% RT/UT OF WELDED JOINTS” of the system in respect of Pressure parts/ LP Piping/CW Piping.
 - j. “FULL LOAD OPERATION OF THE UNIT” in respect of Insulation work.
 - k. "SYNCHRONISATION" in respect of STG / GTG.
 - l. "SPINNING" in respect of HTG.
 - m. “GAS IN” in respect of FGD
3. Boiler means HRSG or WHRB or any other types of Steam Generator.
4. Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass.
5. For the purpose of evaluation of the PQR, one MW shall be considered equivalent to 3.5 TPH where ever rating of HRSG/BOILER is mentioned in MW. Similarly, where ever rating of Gas Turbine is mentioned in terms of Frame size, ISO rating of the same in terms of MW shall be considered for evaluation.

Explanatory Notes for PQR -C (Financial):

C-1:

- i. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against C-1 above.
- ii. Evaluation of Turnover criteria shall be calculated from the Audited Balance Sheet and Profit & Loss Account for the three Financial Years (FY).
- iii. In case audited Financial statements have not been submitted for all the three years as indicated against C-1 above, then the applicable audited statements submitted by the bidders against the requisite three years, will be averaged for three years.
- iv. If financial statements are not required to be audited statutorily, then instead of audited financial statements, financial statements are required to be certified by Chartered Accountant.

C-2: Net Worth (Only in case of companies) of the bidder should be positive.

Note: Net worth shall be calculated based on the latest Audited Accounts as furnished for 'C-1' above.

Net worth = Paid up share capital + Reserves

C-3: Bidder must have earned profit in any one of the three financial years as applicable in the last three financial years as furnished for 'C-1' above.

Note: PROFIT shall be PBT earned during any one year of last three financial years as in

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 27 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 28 of 89

'C-1' above.

C-4: Bidder must not be under Bankruptcy Code Proceedings (IBC) by NCLT or under Liquidation / BIFR, which will render him ineligible for participation in this tender, and shall submit undertaking to this effect.

Common Explanatory Notes:

1. For evaluation of PQR, in case Bidder alone does not meet the pre-qualifying technical criteria B1 above, bidder may utilize the experience of its Parent/ Subsidiary Company along with its own experience, subject to following:
 - a. The parent company shall have a controlling stake of $\geq 50\%$ in the subsidiary company (as per Format-1).
 - b. The Parent Company/ Subsidiary Company of which experience is being utilized for bidding shall submit Security Deposit(SD) equivalent to 1% of the total contract value
 - c. The parent/ subsidiary company and bidder shall provide an undertaking that they are jointly or severally responsible for successful performance of the contract (as per Format-2).
 - d. In case Bidder is submitting bid as a Consortium Partner, option of utilizing experience of parent/subsidiary Company can be availed by Prime Bidder only.
 - e. Parent Company/ Subsidiary Company of which experience is being used for bidding, cannot participate as a 'Standalone Bidder' or as a 'Consortium bidder'.
2. **Completion date for achievement of the technical criteria specified in the Common QR should be in the last 7 years ending on the 'latest date of Bid Submission' of Tender irrespective of date of the start of work. Completion date shall be reckoned from the "FY quarter of bid submission"**
(For e.g – Work completed on 01.01.2014 shall be considered even if latest date of bid submission is 20.03.2021)
3. "Executed" means the bidder should have achieved the technical criteria specified in the Common QR even if the Contract has not been completed or closed.
4. In case the Experience/PO/WO certificate enclosed by bidders do not have separate break up of prices for the E&C portion for Electrical and C&I works (i.e. the certificates enclosed are for composite order for supply and erection of Electrical and C&I and other works if any), then value of Erection & Commissioning for the Electrical and C&I portion shall be considered as 15% of the price for supply & erection of Electrical and C&I.
5. Following shall be complied with in case of consortium:
 - a. The Prime Bidder and Consortium Partner(s) are required to enter in to a consortium agreement and certify to BHEL regarding existence and validity of their consortium agreement in line with validity period mentioned in NIT.
 - b. Prime Bidder and Consortium partners shall be approved by Customer for being considered for the tender (applicable if customer approval is required).
 - c. Number of partners including prime Bidder shall be NOT more than 3 (three).
 - d. Prime Bidder alone shall necessarily comply with "B1 Technical Criteria" except for mechanical package where B1 criteria is not applicable.
 - e. Prime Bidder and Consortium Partner shall together comply with the 'Pre-Qualification Requirements' specified for the respective category of technical requirement as per "B2 technical criteria".
 - f. Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified.
 - g. All other conditions shall be read in conjunction with clause no 23.0 of NIT.
 - h. Prime Bidder shall be the Bidder who has a major share of work.
 - i. Prime Bidder shall be responsible for the overall execution of the Contract.
 - j. Performance shall be evaluated for Prime Bidder and the Consortium partner for their

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 28 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 29 of 89

	<p>respective scope of work.</p> <p>k. In case the Consortium partner backs out, another consortium partner meeting the QRs, has to be engaged by Prime Bidder and if not, the respective work will be withdrawn and executed on risk and cost basis of the prime bidder.</p> <p>l. In case Prime Bidder withdraws or insolvency / liquidation / winding up proceedings have been initiated / admitted against the Prime Bidder, BHEL reserves the right to cancel, terminate or short close the contract or take any other action to safeguard BHEL's interest in the Project / Contract. This action will be without prejudice to any other action that BHEL can take under Law and the Contract to safeguard interests of BHEL</p> <p>m. After successful execution of one work with a consortium partner under direct orders of BHEL, the Prime Bidder shall be eligible for becoming a 'standalone' bidder for works similar to that for which consortium partner was engaged, for subsequent tenders.</p> <p>n. The Consortium partner shall submit SD equivalent to 1% of the total contract value in addition to the SD to be submitted by the Prime Bidder for the total contract value.</p>
--	---

BIDDER SHALL SUBMIT ABOVE PRE-QUALIFICATION CRITERIA FORMAT, DULY FILLED-IN, SPECIFYING RESPECTIVE ANNEXURE NUMBER AGAINST EACH CRITERIA AND FURNISH RELEVANT DOCUMENT INCLUSIVE OF WORK ORDER AND WORK COMPLETION CERTIFICATE ETC IN THE RESPECTIVE ANNEXURES IN THEIR OFFER.

Credentials submitted by the bidder against "PRE QUALIFYING CRITERIAS" shall be verified for its authenticity. In case, any credential (s) is/are found unauthentic, offer of the bidder is liable to the rejection. BHEL reserves the right to initiate any further action as per extant guidelines for Suspension of Business Dealings.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 30 of 89

Table-1:
Bidder's Response against BHEL TECHNICAL PQR

PQR No	Pre-Qualifying Requirement	Reference of Detailed Work Order, Name of the Work based on which bidder is claiming PQR	Ref of Completion Certificate/proof based on which bidder is claiming PQR
B	<p>TECHNICAL PQR Bidder shall essentially meet Qualifying Requirement(s) (i.e. B.1 or B.2) as under-</p> <p>B.1: Bidder must have executed Overhauling/R&M/E&C of “Boiler Pressure parts” or “Boiler Pressure Parts and ‘Structure/Non Pressure Parts/ESP/Rotary Machines/Insulation/ Piping/Auxiliaries/ Ducting / any combination of these parts”) of any rating, as per the criteria below: B.1.1) Executed One similar work of value not less than 96 Lakhs against single work order. OR B.1.2) Executed two similar works of value not less than 60 Lakhs against maximum two work orders each. OR B.1.3) Executed Three similar works each of value not less than 48 Lakhs against maximum three work orders each. OR B.2: Bidder must have Executed ‘Erection & Commissioning’/ ‘Renovation & Modernization’ of At least One Boiler (Consisting of Pressure Parts) of a Unit of rating \geq 85 TPH.</p> <p>----- NOTE: Boiler shall not mean HRSG boiler.</p>		

NOTE:

- BIDDERS MUST CLEARLY INDICATE IN THE TABLE ABOVE, HOW THEY ARE SATISFYING TECHNICAL PQR ALONG WITH THE REFERENCE OF THE SUPPORTING DOCUMENTS.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 31 of 89

Format 1

NA

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 32 of 89

Format 2

NA

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 33 of 89

ANNEXURE - 2

CHECK LIST

NOTE: - Tenderers are required to fill in the following details and no column should be left blank

1	Name and Address of the Tenderer		
2	Details about type of the Firm/Company		
3.a	Details of Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
3.b	Details of alternate Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
4	EMD DETAILS	DD No: Date : Bank : Amount: <u>Please tick (✓) whichever applicable:-</u> ONE TIME EMD / ONLY FOR THIS TENDER	
5	Validity of Offer	TO BE VALID FOR SIX MONTHS FROM DUE DATE	
		APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
6	Whether the format for compliance with PRE QUALIFICATION CRITERIA (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable	YES / NO
7	Audited profit and Loss Account for the last three years	Applicable/ Not Applicable	YES/NO
8	Copy of PAN Card	Applicable/ Not Applicable	YES/NO
9	Whether all pages of the Tender documents including annexures, appendices etc. are read understood and signed	Applicable/ Not Applicable	YES/NO
10	Integrity Pact	Applicable/ Not Applicable	YES/NO
11	Declaration by Authorized Signatory	Applicable/ Not Applicable	YES/NO
12	No Deviation Certificate	Applicable/ Not Applicable	YES/NO
13	Declaration confirming knowledge about Site Conditions	Applicable/ Not Applicable	YES/NO
14	Declaration for relation in BHEL	Applicable/ Not Applicable	YES/NO
15	Non-Disclosure Certificate	Applicable/ Not Applicable	YES/NO

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 33 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 34 of 89

16	Bank Account Details for E-Payment	Applicable/ Not Applicable	YES/NO
17	Capacity Evaluation of Bidder for current Tender	Applicable/ Not Applicable	YES/NO
18	Tie Ups/Consortium Agreement are submitted as per format	Applicable/ Not Applicable	YES/NO
19	Power of Attorney for Submission of Tender/Signing Contract Agreement Power of Attorney of Consortium Partner.	Applicable/ Not Applicable	YES/NO
20	Analysis of Unit rates	Applicable/ Not Applicable	YES/NO

NOTE: STRIKE OFF 'YES' OR 'NO', AS APPLICABLE. TENDER NOT ACCOMPANIED BY THE PRESCRIBED **ABOVE APPLICABLE DOCUMENTS** ARE LIABLE TO BE SUMMARILY REJECTED.

DATE :

AUTHORISED SIGNATORY

(With Name, Designation and Company seal)

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 35 of 89

ANNEXURE-3

Certificate by Chartered Accountant on letter head

(applicable upto 31st March'2021 in line with MSME notification no. S.O. 2119 (E), dated 26th June'2020)

This is to Certify that M/S
(hereinafter referred to as 'company') having its registered office at
..... is registered under MSMED Act 2006, (Entrepreneur
Memorandum No (Part - II)/ Udyam Registration Certificate No.
..... dtd:, Category: (Micro/Small/Medium)).
(Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the latest
audited financial year as per MSMED Act 2006 is as follows:

1. ~~For Manufacturing Enterprises:~~ Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No. S.O.1722(E) dated October 5, 2006:
Rs Laacs
2. ~~For Service Enterprises:~~ Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the **MSMED Act, 2006**:
Rs Laacs
3. ~~For Enterprises~~ (having EM - II Certificate/ valid NSIC Certificate or Udyog Aadhar Memorandum): Investment in plant and machinery or equipment is Rs Laacs and turnover is Rs. Laacs (as notified in MSME notification no. S.O. 2119 (E) dated 26.06.2020)
4. ~~For Enterprises~~ (having EM - II Certificate/ valid NSIC Certificate or Udyog Aadhar Memorandum): Investment in plant and machinery or equipment is Rs Laacs and turnover is Rs. Laacs (as notified in MSME notification no. S.O. 2119 (E) dated 26.06.2020)

(Strike off whichever is not applicable)

~~The above investment of Rs Laacs is within permissible limit of
Rs Laacs for Micro / Small/ Medium (Strike off which is not applicable)
Category under MSMED Act 2006.~~

~~Or~~

~~The enterprise has been graduated upward from its original category (micro/small/medium) (strike off which is not applicable), the enterprise shall maintain its prevailing status till expiry of one year from the close of year of registration, as notified vide S.O. No. 2119 (E) dated 26.06.2020 published in the gazette notification dated 26.06.2020 by Ministry of MSME.~~

~~Or~~

~~The enterprise has been reverse graduated from its original category (micro/small/medium) (strike off which is not applicable), the enterprise will continue in its present category till the closure of the financial year and it will be given the benefit of the changed status only with effect from 1st April of the financial year following the year in which such change took place, as notified vide S.O. No. 2119 (E) dated 26.06.2020 published in the gazette notification dated 26.06.2020 by Ministry of MSME.~~

~~Date:~~

~~(Signature)~~

~~Name:~~

~~Membership Number:~~

~~Seal of the Chartered Accountant~~

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 35 of 89

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 36 of 89

ANNEXURE-4

Reverse Auction Process Compliance Form

**(The bidders are required to print this on their company's letterhead and
sign, stamp before RA)**

To

- M/s. {Service provider}
- Postal address}

Sub: Agreement to the Process related Terms and Conditions

Dear Sir,

This has reference to the Terms & Conditions for the Reverse Auction mentioned in the RFQ document for {Items} against BHEL enquiry/ RFQ no.{} dt. {.....}

This letter is to confirm that:

- 1) The undersigned is authorized official/ representative of the company to participate in RA and to sign the related documents.
- 2) We have studied the Reverse Auction guidelines (as available on www.bhel.com), and the Business rules governing the Reverse Auction as mentioned in your letter and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the auction tool and have understood the functionality of the same thoroughly.
- 4) We also confirm that, in case we become L1 bidder, we will FAX/ email the price confirmation & break up of our quoted price as per Annexure - VI within **two** working days (of BHEL) after completion of RA event, besides sending the same by registered post/ courier both to M/s. BHEL and M/s. {Service provider.}

We, hereby confirm that we will honor the Bids placed by us during the auction process.

With regards

Signature with company seal

Name:

Company / Organization:

Designation within Company / Organization:

Address of Company / Organization:

Sign this document and FAX/ email it to M/s {Service provider} at {.....} prior to start of the Event.

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 37 of 89

ANNEXURE – 5

Authorization of representative who will participate in the on line Reverse Auction Process:

1	NAME OF THE BIDDER	
2	NAME & DESIGNATION OF OFFICIAL	
3	POSTAL ADDRESS (COMPLETE)	
4	TELEPHONE NOS. (LAND LINE & MOBILE BOTH)	
5	E-MAIL ADDRESS	
6	NAME OF PLACE/ STATE/ COUNTRY, WHEREFROM S/HE WILL PARTICIPATE IN THE REVERSE AUCTION	

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 38 of 89

ANNEXURE – 6

Reverse Auction price confirmation and breakup
(To be submitted by L1 bidder after completion of Reverse Auction)

To

- M/s. Service provider
- Postal address

CC: M/s BHEL POWER SECTOR WESTERN REGION, Nagpur

Sub: **Final price quoted during Reverse Auction and price breakup**

Dear Sir,

We confirm that we have quoted.

Rs. _____ (in value) &
_____ (in words)

for item(s) covered under tender enquiry No. dtd
.....

~~Total price of the items covered under above cited enquiries is inclusive of {Packing & forwarding, GST, E.D., C.S.T., freight and insurance charges up to {.....} District, {.....} State and Type Test Charges etc., (exclusive of service tax), other as per NIT}~~

as our final landed prices as quoted during the Reverse Auction conducted today {date _____} which will be valid for a period of {in nos. & in words} days. as mentioned in the subject tender.

Yours sincerely,

For _____

Name:

Company:

Date:

Seal:

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 39 of 89

ANNEXURE - 7

INTEGRITY PACT

Not Applicable

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 40 of 89

ANNEXURE – 8

UNDERTAKING

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir/Madam,

Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS

Ref: NIT/Tender Specification No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

I/We, _____ declare that, I/We
am/are not under insolvency resolution process or liquidation or Bankruptcy Code Proceedings (IBC) as
on date, by NCLT or any adjudicating authority/authorities, which will render us ineligible for
participation in this tender.

**Sign. of the AUTHORISED SIGNATORY
(With Name, Designation and Company seal)**

Place:

Date:

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 40 of 89

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 41 of 89

Annexure-9

DECLARATION

Date: _____

To _____
BHEL, _____

Email: _____

Sub: Details of related firms and their area of activities

Dear Sir/ Madam,

Please find below details of firms owned by our family members that are doing business/ registered for same item with BHEL, _____ (NA, if not applicable).

1	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
2	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
.....		

Note: I certify that the above information is true and I agree for penal action from BHEL in case any of the above information furnished is found to be false.

Regards,
(_____)

From: M/s _____
Supplier Code: _____
Address: _____

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 42 of 89

Annexure-10

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04TH JUNE,
2020 AND SUBSEQUENT ORDER(S)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04th June, 2020 and subsequent order(s).

Ref : 1) NIT/Tender Specification No:
2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... *(specify the name of the organization here)* has a local content of _____ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |

...

...

...

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

**** - Strike out whichever is not applicable.**

Note:

1. Bidders to note that above format Duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

**BHEL PSWR
Notice Inviting Tender**

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 43 of 89

Annexure-11

DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017
(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017

Ref : 1) NIT/Tender Specification No:
2) All other pertinent issues till date

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries. I certify that _____ *(specify the name of the organization here),*

(a) is not from such a country / ☐

(b) has been registered with the Competent Authority *(attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT));* ☐

and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. *(attach relevant valid registration, if applicable)*

I hereby certify that we fulfil all requirements in this regard and is eligible to be considered.

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines.

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 44 of 89

Annexure-12: IMPORTANT INFORMATION

E -Tender for this work is invited by BHEL PSWR NAGPUR and offer shall be submitted through BHEL e-procurement portal only. All correspondences regarding this tender shall be through E-procurement portal.

Postal Address:

AGM /Purchase BHEL PSWR,
SRIMOHINI COMPLEX, Floor No. 5 & 6, 345 KINGSWAY, NAGPUR 440001, INDIA

Following are the concerned BHEL officials to whom bidders can contact in case of any difficulty:

AGM Purchase, Email: prchiwarkar@bhel.in. Ph: +91 – 712 – 2858 – 633

Dy Manager Purchase, Email: shubh@bhel.in Ph: +91-712 – 2858 –742

Dy Manager Purchase, Email: vivekija@bhel.in Ph: +91 – 712 – 2858 –713

1. **Refer Chapter XII of Volume IB Special Conditions of Contract regarding Suspension of Business Dealings: The abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' has now been uploaded on www.bhel.com on "supplier registration page" at the following link: http://www.bhel.com/vender_registration/pdf/Suspension_guidelines_abridged.pdf**

2. **All Statutory Requirements as applicable for this project shall be complied with.**

3. **Following clause shall form part of the HSE documents issued under Chapter IX of Volume IB 'Special Conditions of Contract'**

"In case of any financial deduction made by Customer for lapses of safety other than what is provided elsewhere in the contract, the same shall be charged on back-to-back basis on the defaulting contractor without prejudice to any other right spelt anywhere in the tender /contract"

4. ~~**"Pradhan Mantri Kaushal Vikas Yojna: The contractor shall, at all stages of work deploy skilled/semi-skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/Industrial Training Institute/ National Institute of Construction Management and Research (NICMAR), National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/ Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled/semi-skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer-in-Charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer-in-Charge. Failure on the part of contractor to obtain approval of Engineer-in-Charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate of Rs.100 per such tradesman per day. Decision of Engineer-in-Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding".**~~

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 44 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 45 of 89

5. ~~The clause 2.7.9.1 below is added under the heading “Rights of BHEL” of General Conditions of Contract Volume-IC GCC.~~

~~2.7.9.1 Provision of Penalty in case of slippage of Intermediate Milestones:~~

- ~~i) Two major Intermediate Milestones are mentioned as M1 & M2 in Chapter VI: Time Schedule of Vol IA Technical Conditions of Contract.~~
- ~~ii) In case of slippage of these identified Intermediate Milestones, Delay Analysis shall be carried out on achievement of each of these two Intermediate Milestones in reference to Form 14.~~
- ~~iii) In case delay in achieving M1 Milestone is solely attributable to the contractor, 0.5% per week of Executable Contract Value*, limited to maximum 2% of Executable Contract Value, will be withheld.~~
- ~~iv) In case delay in achieving M2 Milestone is solely attributable to the contractor, 0.5% per week of Executable Contract Value*, limited to maximum 3% of Executable Contract Value, will be withheld.~~
- ~~v) Amount already withheld, if any against slippage of M1 milestone, shall be released only if there is no delay attributable to contractor in achievement of M2 Milestone.~~
- ~~vi) Amount required to be withheld on account of slippage of identified intermediate milestone(s) shall be withheld out of respective milestone payment and balance amount (if any) shall be withheld @10% of RA Bill amount from subsequent RA bills.~~
- ~~vii) Final deduction towards LD (if applicable as per clause 2.7.9 above), on account of delay attributable to contractor shall be based on final delay analysis on completion / closure of contract. Withheld amount, if any due to slippage of identified intermediate milestone(s) shall be adjusted against LD or released as the case may be.~~
- ~~viii) In case of termination of contract due to any reason attributable to contractor before completion of work, the amount already withheld against slippage of intermediate milestones shall not be released and be converted into recovery.~~

~~* **Executable Contract Value** – Value of work for which inputs/ fronts were made available to contractor and were scheduled for execution till the date of achievement of that milestone.~~

6. ~~The following paragraph has been added in clause 2.7.1 under clause 2.7 “Rights of BHEL” of General Conditions of Contract (Volume-IC GCC):~~

~~In case of inadequate manpower deployed by contractor, BHEL reserves the right to deploy additional manpower through any other agency for expediting activities in the interest of the project. Supplied manpower shall be put on job by the contractor and payments and other statutory compliances related to manpower shall be the contractor's responsibly. In case of contractor's failure to fulfil his obligations in respect of such manpower, BHEL reserves the right to take necessary action as per contract conditions.~~

~~(Already incorporated in the SAS GCC)~~

7. ~~Clause 2.13.9 of General Conditions of Contract (Volume-IC GCC) is amended as below:~~

~~'2.13.9: Contractor to submit Bank Guarantee as per prescribed formats for each of the advance and shall be valid for at least one year or the recovery duration whichever is earlier. In case the recovery of dues does not get completed within the aforesaid BG period, the contractor shall renew the BG or submit fresh BG for the outstanding amount, valid for at least one year or the remaining recovery duration whichever is earlier.~~

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 46 of 89

9. **Delay in 1st submission of SDBG/ PBBG:** SDBG/ PBG is to be furnished by the vendor before start of work. No payment will be released till SDBG/PBG is submitted by the vendor. However if requested by the vendor, cash recovery equivalent to SDBG/ PBG value to be made from the running bills submitted by the vendor. In such case, recovery of interest calculated @SBI PLR +2% on amount equivalent to SDBG/ PBG value to be made for the gap period (difference between date of start of work and date of submission of BG/ cash recovery).
8. **Compensation in case of Death/ Permanent Incapacitation of Person:** BHEL shall recover the amount of compensation paid to victim (s) by BHEL towards loss of life/ permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employee as detailed below:
- a) Victim: Any person who suffers permanent disablement of dies in an accident as defined below.
 - b) Accident: Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious occurrence caused during the manufacturing/ operation and works incidental thereto at BHEL factories/ offices and precincts thereof, project execution, erection and commissioning, services, repairs and maintenance, trouble shooting, serving, overhaul, renovation and retrofitting, trial operation, performance guarantee testing undertaken by the company or during any works/ during working at BHEL Units/ Offices/ townships and premises/ Project sites.
 - c) Compensation in respect of each of the victims:
 - (ii) In the event of death or **permanent disability** resulting from **Loss of both limbs**: Rs 10,00,000/- (**Rs Ten Lakh**)
 - (iii) In the event of **other permanent disability**: Rs 7,00,000/- (**Rs Seven Lakh**)
 - d) Permanent Disablement: A disablement that is classified as a permanent total disablement under the proviso to Section 2(I) of the Employee's Compensation Act, 1923.
9. **Acceptance of Bank Guarantee (BG)**
Revision in Acceptance of Bank Guarantee (BG) Clause no. 1.10.3 (iii) of Vol I C GCC:
- Clause No. 1.10.3 (iii) of Vol IC GCC is revised as below: -**
"Bank Guarantee issued by:
- a. Any of the BHEL consortium bank listed below:
 - State Bank of India
 - ABN Amro Bank N.V.
 - Bank of Baroda
 - Canara Bank
 - Citi Bank N.A.
 - Corporation Bank
 - Deutsche Bank
 - HDFC Bank Ltd.
 - The Hongkong and Shanghai Banking Corporation Ltd
 - ICICI Bank Ltd.
 - IDBI Ltd.
 - Punjab National Bank

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 46 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 47 of 89

Standard Chartered Bank
State Bank of Travancore
State Bank of Hyderabad
Syndicate Bank

- b. Any public sector Bank (other than consortium banks) with a clause in the text of Bank Guarantee that **"It is enforceable at Nagpur, Maharashtra"**.
- c. Any private sector banks, with a clause in the text of Bank Guarantee that **"It is enforceable by being presented at any branch of the bank"**.

Note: "Bank Guarantees issued by Co-operative Banks are not acceptable".

10. Broad Terms & Conditions of Reverse Auction:

In continuation to Clause 19.0 of NIT (Notice Inviting Tender) following are the broad terms and conditions of Reverse Auction:

"BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) (<https://www.bhel.com/guidelines-reverse-auction-2021>) for this tender. RA shall be conducted among the techno-commercially qualified bidders.

Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking."

Note:-

- 1. No benefits to MSE bidders w.r.t Reverse Auction Guidelines as available on www.bhel.com against works contract.**
- 2. In case of enquiry through e-procurement the sealed electronic price bid (e-bid) is to be treated as sealed envelope price bid.**

- 11. Bidders kindly to take note that EMD (Earnest Money Deposit) shall be furnished by MSE bidders as well, as per the amount and procedure indicated in the NIT/GCC.**
- 12. Price Variation Compensation Clause no 2.17 of standard GCC shall not be applicable**
- 13. Overrun compensation clause no. 2.12 of standard GCC shall not be applicable**
- 14. LIQUIDATED DAMAGES/PENALTY clause no. 2.7.9 of standard GCC is amended as follows:
If the contractor fails to maintain the required progress of work which results in delay in the completion of the work as per the contractual completion period, BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 0.5% of the contract value, per day of delay or part thereof subject to a maximum of 10% of the contract value. For this purpose, the period of delay shall be the delay attributable to the Contractor for the completion of work as per contract. Contract Value for this purpose, shall be the final executed value exclusive of ORC, Extra Works executed on Manday rate basis, Supplementary/Additional Items and PVC.**

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 47 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 48 of 89

15. Progress Monitoring, Monthly Review and Performance Evaluation of Vol-I BCD is not applicable. Separate Performance evaluation as per SAS format shall be considered for evaluation purpose.
16. Interest bearing recoverable advances is not applicable.
17. Performance Guarantee of Workmanship for the work done / Defect liability period shall be 06 months commencing from the date of synchronization of Unit.
18. **CI 1.2.1 of '1.2 Submission of Tenders' of Chapter -1 of VOL IC- GCC (General Conditions of Contract) is amendment as below:**

Existing	Amended/To be read as
1.2.1) The tenderers must submit their tenders to Officer inviting tender (Or upload on E portal website https://bhel.abceprocure.com in case of E tender) as per instructions in the NIT.	1.2.1) The tenderers must submit their tenders to Officer inviting tender (Or upload on E portal website https://eprocurebhel.co.in in case of E tender) as per instructions in the NIT.

NOTE / New:

E procurement portal for E tendering is: E portal website - <https://eprocurebhel.co.in> All relevant clauses shall be read accordingly.

19. **Following Amendment in CI 1.14 EXECUTION OF CONTRACT AGREEMENT of the GCC:**

CI 1.14 EXECUTION OF CONTRACT AGREEMENT of the GCC	Amended as
<p>The successful tenderer's responsibility under this contract commences from the date of issue of the Letter of Intent by Bharat Heavy Electricals Limited. The Tenderer shall submit an unqualified acceptance to the Letter of Intent/Award within the period stipulated therein.</p> <p><i>The successful tenderer shall be required to execute an agreement in the prescribed form, with BHEL, within a reasonable time after the acceptance of the Letter of Intent/Award, and in any case before releasing the first running bill. The contract agreement shall be signed by a person duly authorized/empowered by the tenderer. The expenses for preparation of</i></p>	<p>The successful tenderer's responsibility under this contract commences from the date of issue of the Letter of Intent by Bharat Heavy Electricals Limited. The Tenderer shall submit an unqualified acceptance to the Letter of Intent/Award within the period stipulated therein.</p> <p><i>The successful tenderer shall be required to execute an agreement in the prescribed form, with BHEL, within a reasonable time after the acceptance of the Letter of Intent/Award, and in any case before releasing the first running bill. The contract agreement shall be signed by a person duly authorized/empowered by the tenderer. The expenses for preparation of agreement document shall be borne by BHEL.</i></p>

BHEL-PSWR (VOL-I-A- TECHNICAL BID)

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 48 of 89

BHEL PSWR
Notice Inviting Tender

E-Tender Spec No: BHE/PW/PUR/BCKSR BLR CAP ADDN U1 U2/2431

Page 49 of 89

<i>agreement document shall be borne by BHEL.</i>	<i>The contract agreement shall be deemed to have come into force from the date of acceptance of LOI by the subcontractor.</i>
---	--

20. Modality for award/operation: Subject job consist of works of Unit 1 and Unit 2. For ease of operation of the contract, it is decided to adopt following Modality for award/operation:

1. This is a common tender for U1 and U2.
2. Tender specification is common for both units.
3. Vol-II Price bid is invited only for Grand total of Unit 1 and Unit 2.
4. Both the two units shall be awarded to one agency.
5. However for ease of operation, work orders for both the Units shall be issued seperately and Both the Units shall be reckoned as separate contracts during operation of the contracts (i.e. 2 sub-sets of 1 main contract of 2 units) with separate contract period (30 days each), separate start dates and separate contract value (half of total contract value).
6. All the records under the subject contract shall be maintained for both the units separately.
7. Accordingly various clauses of GCC viz LD, Time Extension, retention amount, guarantee period, etc shall be applicable separately for individual units.

2431

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Common for both the
Units

BHARAT HEAVY ELECTRICALS
LIMITED



TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – Contents

SI No	DESCRIPTION	Chapter
Volume-IA	Part-I: Contract specific details	
1	Project Information	Chapter-I
2	Scope of Works	Chapter-II
	Drwg.No. 0-00-521-91910	Annexure I
	Drg No. 0-00-521-35211	Annexure II
	Drg No. 0-00-521-35210	Annexure III
	PPA approved drawing	Annexure IV
3	Special Terms and Other Conditions	Chapter-III
4	T&Ps and MMEs to be deployed by Contractor	Chapter-IV
5	Quality Requirements	Chapter-V
6	Time Schedule	Chapter-VI
7	Terms of Payment	Chapter-VII
8	Taxes and other Duties	Chapter-VIII
9	Penalty matrix	Annexure V
10	Contractor Safety plan Birla Cellulosic-Kharach	Annexure VI
11	Gate pass process- Birla Cellulosic-Kharach	Annexure VII
12	Guidelines for inspection control of portable equipments tools	Annexure VIII
13	Erection Welding Schedule	Annexure IX

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter I – PROJECT INFORMATION

1.0	Project Information
	<ol style="list-style-type: none">1. Purchaser : M/s Birla Cellulosic, Kharach, Kosamba, Gujarat2. Project Title : Capacity Enhancement of BCK Kharach 2X100 TPH BFBC Boilers3. Railway Station: Kosamba/Ankleshwar/Surat4. Nearest airport: Surat

The Bidder shall visit site and get acquainted himself with the conditions prevailing at site before submission of the bid. The information given here in under are for general guidance and shall not be contractually binding on BHEL/ Owner. All relevant site data/information as may be necessary shall have to be obtained /collected by the Bidder.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: SCOPE OF WORK

The work under the scope of these specifications is broadly as follows.

SCOPE OF WORK for **Each Unit**

PRE SHUTDOWN WORK

1. Mobilization of site.
2. Arranging Gate pass, Insurance & Accommodations to the contract personnel.
3. Shifting of material and T&Ps at store.
4. Shifting of special T&Ps to working floor.

JOB: - WORK FOR CAPACITY ENHANCEMENT OF 2X100 TPH AFBC BOILER UNIT # 1 & 2 AT BIRLA CELLULOSIC PLANT KHARACH, KOSAMBA GUJARAT.

Dismantling: - (Approx. Dismantling Weight – **23MT per Unit i.e. 23MT for U1 and 23MT for U2)**

- 1) Dismantling of Last 2 nos loop of convective SH (CSH-II) coil. (refer Drwg.No. 0-00-521-91910 enclosed as Annexure I)
- 2) Displacement of Existing CSH II outlet line from Main steam stop valve to link, to new DESH – 2 along with dismantling of its support structure. (Refer Drg No. 0-00-521-35211, enclosed as Annexure II)
- 3) Dismantling of Bed evaporator coils at selective locations.
- 4) Removal of refractory of existing lower wall combustor wherever required for facilitating insertion of Bed Superheaters coils.
- 5) Dismantling of Structural supports for CSH-II to MSSV piping.
- 6) Dismantling of existing coal mixing nozzles.
- 7) Dismantling of waterwall tubes wherever required for facilitating insertion of Bed Superheater coils and newly supplied SH-II loops.
- 8) Dismantling of skin casing and baffle plates wherever required for facilitating erection and welding of newly supplied SH-II loop tubes.
- 9) Dismantling tonnage may vary as it may require dismantling & restoration of items to facilitate erection & welding of newly supplied materials.

Erection: - (Approx. Erection Weight – **44MT per unit i.e. 44MT for U1 and 44MT for U2)**

- 1) Erection of final loop of CSH-II coils. (Refer Drg No. 0-00-521-91910, enclosed as Annexure I)
- 2) Erection of Newly supplied link from CSH-II outlet to Desuperheater-2 (DESH-2) inlet link along with structural supports and Hangers. (Refer Drg No. 0-00-521-35211, enclosed as Annexure II)

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: SCOPE OF WORK

- 3) Erection of newly supplied DESH-2 along with spray control station valve and feed tab off from existing feed line.
- 4) Erection of newly supplied link from DESH – 2 Outlet to Bed Superheater inlet header along with structural supports and Hangers. (Refer Drg No. 0-00-521-35210, enclosed as Annexure III)
- 5) Erection of newly supplied Bed Superheater coils with inlet and outlet headers along with drain line (routed to nearest drain point) and valves with structural supports and MTM pads and thermocouples.
- 6) Erection of newly supplied bed evaporator hanger tubes for supporting bed Superheater coils (Refer Drg No. 0-00-521-35210, enclosed as Annexure III).
- 7) Erection of newly supplied main steam line from Bed Superheater Outlet Header to existing MSSV along with structural supports and Hangers.
- 8) Erection of newly supplied coal mixing nozzles by cutting suitable length of existing PA air line.
- 9) Re-application of refractory in combustor area.
- 10) Erection of additional structure/platform for support of New Hangers of modified links and pipe line at 11 Mtr. & 17 Mtr. Elevation.
- 11) New Seal-box arrangement for bed Superheater Coils.
- 12) Boiler spray water piping up to Isolation valve before spray control station
- 13) Additional Desuperheater station along with associated feed water line.
- 14) De-superheater station includes Spray water control valve Class V, Bypass inching Type Motorized valve, Inlet Motorized isolation valves and Outlet manual isolation valves. Instrument air line for control valves from nearest tapping point.
- 15) All the drains, vents, instrument tapping (NB 15, 25, 40) valves (on boiler pressure parts) shall be with 2 valves in series, and class 1500.
- 16) Aluminium Cladding Sheets for Lining and Insulation for New Headers and link from Bed Superheater outlet Header to existing Main Steam Line with support arrangement.
- 17) Re-application of insulation wherever removed for facilitation of erection of items.
- 18) Erection of MOVs.
- 19) Relocation of Ash Drain Point subject availability sufficient margins in both PA and FD fans
- 20) Erection of Temporary piping and valves for steam blowing & alkali Boil out.
- 21) **Chemicals (Tri-sodium phosphate & di-sodium phosphate) for alkali boil out to be arranged by agency. (Quantity- 200 kg each (approx.) per unit) Agency for procurement of chemical to be confirmed by BHEL engineer & test certificate to be submitted.**
- 22) Final touch-up painting along with paints.
- 23) Boiler Hydro Test and any arrangement to be done for Boiler Hydrotest.
- 24) Manpower supports for Alkali boil out.
- 25) Manpower support for Steam Blowing activity.
- 26) Manpower support for Safety valve floating and manpower support for servicing of safety valve if required.
- 27) Any work not specifically mentioned in the scope of work but required to be carried out for successful completion of work will be in bidder scope.
- 28) NDT/RT of welding joints (as applicable) will be contractor scope.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – II: SCOPE OF WORK

- 29) Repair of 4 Nos. of SH Stage-II Coils at site which were damaged during transportation.
- 30) Modification/re-routing of existing line if fouling with newly supplied/erected system. Same to be re-routed or restored after activity completed.
- 31) Erection of pipe with stub in BFD line by cutting spool piece in BFD line at suitable location. (to be decided by BHEL & Customer).

SPECIAL NOTE applicable for Each Unit Separately:

1. CRANE/Winch Arrangement of Suitable capacity is to be arranged by Subcontractor of Lifting & Erection of materials.

2. Hydrotest pump of capacity 150-200 kg/cm² for hydro test to be arranged by bidder.

**3. Total no. of HP joints size 51 NB & below - 650
 HP joints of size 273 NB & above – 10**

These are approximate number of joints & may vary as per actual. Also, the number of joints may increase due to cutting of Water walls/SH coils at suitable location for facilitation of erection & welding purpose.

4. RT will be for 20% of joints/welder/shift for 51 NB or lower size joints. For higher size joints of 273 NB and above, RT will be 100%.

Statutory and regulatory Requirements -

- All coordination & liaisoning with IBR authorities and obtaining approvals wherever required.

Enclosed Annexure:-

- Drawings- (Annexure I to IV)
- Penalty matrix (Annexure V)
- Contractor Safety plan Birla Cellulosic-Kharach (Annexure VI)
- Gate pass process- Birla Cellulosic-Kharach (Annexure VII)
- Guidelines for inspection control of portable equipments tools (Annexure VIII)
- Erection Welding Schedule (Annexure IX)

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

3.1 SPECIAL TERMS AND CONDITIONS:

1. Due to COVID-19 situation, bidder has to mobilize the site in advance for completing all formalities & suitable arrangement for site operation. Bidder has to follow all guide lines issued by local authorities & customer. All worker & staff of bidder to have COVID Test (RT-PCR) report of not more than 72 hrs prior on arrival at Kharach and test report of the same is to be submitted for gate pass.
2. Medical Fitness Certificate of each worker from a registered Hospital to be submitted. The Medical tests to be done are mentioned in gatepass procedure as per attached Annexure-VII.
3. All expenses related to above situation shall be borne by bidder; no separate compensation shall be entertained by BHEL.
4. The bidder shall submit following documents to the BHEL Engineer in charge before starting of the work at site:-
 - a) Valid labour license of total Nos. of labours.
 - b) Valid labour Insurance policy to cover all the workers.
 - c) A photocopy of employment card issued to each worker as per format prescribed in factory rules.
 - d) List of safety appliance provided by the contractor to their workers with receipt.
 - e) Valid test certificate issued by competent authority as per factory rules for the T&P (like pulling / lifting devices, slings, machines etc.) to be utilised at site.
 - f) List of personnel's and workers deputed / deployed along with their full address proof, Police verification etc., shall be get done of his workers by the contractor.
 - g) Submission of Indemnity Bond.
5. Subcontractor should assure that the modification work covered in the scope of this offer will be conducted with the best of skills and know how available with Subcontractor and in conformance with the tolerances set forth in manufacture's drawing instruments and other information's furnished to Subcontractor.
6. Bidder shall visit site well in advance for identification & to ensure availability of required special T&P as well as other infrastructure required for carrying out the work.
7. During execution of site it may be required to close the site temporarily, In such a case De-Mobilization & re mobilization charges shall not be payable.
8. All consumables required for the job will be in bidder's scope.
9. The Welding electrodes & filler wire for welding of tubes & pipes will be issued by BHEL for free of cost. The total quantity of welding electrode & filler wire to be issued for both the Units (Unit 1 & Unit 2) is as follows:

S.No.	Electrode	Weight (in Kg)
001	ER90S-B3 GTAW ROD DIA.2.4MM	11.266

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

002	ER 70S-A1 GTAW ROD DIA2.4MM	12.364
003	E 9018-B3 SMAW DIA2.50MM	95.524
004	E 7018-1 SMAW ELECTRODE DIA 2.5 MM	114.048
005	E 9018-B3 SMAW DIA3.15MM	43.512
006	E 9018-B3 SMAW DIA4.00MM	83.712

The quantity of Welding electrode & filler wires in excess to above, if required, for job completion is to be arranged by the bidder.

10. For welding of structure, skin casing, fin welding & other works, electrodes are to be arranged by the bidder.
11. The various setting, adjustments and benchmarks will be restored to the extent possible during modification to the condition as per the erection and commissioning log sheets available with customer. If however we are not able to produce erection / commissioning log sheets, efforts will be made to attend the best possible parameter or the conditions as observed at the time of dismantling of the equipment in consultation with BHEL Engineer.
12. Subcontractor must prepare PERT CHART/BAR CHART. Daily monitoring will be done jointly and log sheets of important activities should be noted down and signed jointly.
13. Daily work planning, scheduling & reviewing of work will be done by the party every morning & evening and programme must be submitted on daily basis to EIC.
14. All the works shall be carried out as per the instructions and to the satisfaction of the Engineer In-charge.
15. The contractor will attend contributory to faulty and poor workmanship during commissioning and trial run of the equipment.
16. Round the clock working under expert supervision shall be ensured by the contractor deploying two equal parallel strength of groups in 12 hrs. Shift with equal T&P for all the jobs so as to complete the work in stipulated period or earlier.
17. It is the responsibility of contractor to keep the plant, equipment, machinery and surrounding area clean.
18. Removal of insulation and through cleaning of subjected area is in the scope of bidder. The same to be shifted to nearest marked area by customer.
19. The names of working persons like Site in-charge, supervisors, foreman, main fitters to be deployed during the job with full details has to be submitted stating their area of work and experience and specialization of the work to site in-charge before the start of work. BHEL may ask to change/delete the person not found suitable for the work at any point of time during execution of job. For any addition and deletion of the working person prior permission from BHEL shall be taken.
20. Subcontractor has to ensure that all the key persons must continue till completion of job i.e. until the completion of Demanstration Test. Subcontractor manpower (adequate) should remain at site for a period of **03 days after** completion of Demonstartion Test.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

21. Mobilization of full strength shall be done within **07 days on receipt of LOI & Intimation from BHEL.**
22. Work distribution sheet for all the workers/supervisors deployed shall be submitted to BHEL one day in advance on daily basis.
23. Subcontractor should mobilize additional resources such as plant, equipment's, material as may be required by site in-charge to improve the progress of the work if the progress of the work is not satisfactory.
24. Subcontractor should get registered under relevant sales tax and or work contract Act (VAT) where the jobs are executed.
25. Party has to quote lump sum rate for all activities mentioned in the price bid as the actual quantities may vary during execution of modification work of the unit for which the contractor is not permitted to raise any dispute or claims. Items mentioned as optional will be taken up depending on condition, availability of spares and requirement.
26. Radiography, NDT, pre-heat, DPT, UT and stress relieving of the joints are in the scope of the contractor and to be performed as per Erection welding schedule/Quality plan.
27. Removals of insulation are in the scope of the contractor.
28. Scrap & insulation etc. is to be shifted to scrap disposal area as indicated by the Site-in-charge.
29. One administrative personnel to control the resources and attendance of the workers to be ensured.
30. Contractor shall arrange certified HP welder for welding job as required whose welding test will be conducted.
31. Argon, Oxy- Acetylene gas shall be arranged by the contractor with cutting/welding set / argon welding set and other welding appliances.
32. If the duration of work continues beyond stipulated period due to any reason, no claim for compensation will be entertained.
33. The work details are brief & for Subcontractor knowledge only. Subcontractor will have to do all the related works as per requirement.
34. The contractor will be responsible to pay the damages to the property of Board or individual caused by his worker during the course of contract. If the contractor fails to pay the same it will be recovered from his bill.
35. No compensation claimed for idle labor for any reason will be entertained by BHEL.
36. All general tools and plants for execution of the work will have to be arranged/ maintained by the contractor at his own cost & risk.
37. In normal course, the interpretation of the under signed on any matter or decision given by him on any disputable points will be final and binding on the contractor.
38. Successful bidder is to obtain labor license before the start of the work.
39. Successful bidder is to obtain necessary "No Dues" certificate before de-mobilization from site.
40. LAP-TOP with latest configuration, DVD/CD writer/pen drive, its peripherals including printer-scanner and one USB Modem for Internet connectivity to be provided for BHEL site office.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

41. Sufficiently adequate man power T&P and other resources should be mobilized by the contractor to operate round the clock work progress with standby technicians to be deployed immediately if need arises. Offer should be submitted considering these requirements.
42. Accommodation for the sub-contractor's manpower will be in bidder's scope.
43. Contractor shall arrange vehicle for his manpower transportation.
44. Scaffolding pipes, clamp, Jallies are to be arranged by Sub-contractor for various platforms and Safety will be taken on priority basis.
45. Contractor reconciles the material and submits along with the bill. To credit the balance spares worn out articles/spares and scrap in the main store.
46. Contractor shall clean the surrounding working area within three days immediately after completion of work/ Machine taken onto barring.
47. Give proper assistance to maintain the readings at site for the protocol.
48. Adequate numbers of tarpaulin are to be arranged by the sub-contractor for covering of various equipment during insulation removal / application.
49. Ultrasound test kit, DP Test kit of standard makes like ITW SIGNODE / CHECK MATE / ORION 400 ml Aerosol cans and suitable colour paint to repaint the weld joint after DP test along with required accessories and consumables
50. Transportation of material required during overhauling from central work shop to site is in the scope of bidder.
51. Sufficient no. of 24 Volts lights for lighting of confined space and local work area to be arranged.
52. **CONTRACTOR SHOULD ENGAGE AT LEAST 01 QUALIFIED SAFETY ENGINEER IN EACH SHIFT DURING THE CONTRACT PERIOD IN CONSULTATION WITH BHEL SITE-IN-CHARGE. SAFETY ENGINEER SHOULD BE QUALIFIED FROM APPROVED INSTITUTE.**
51. **Safety penalties and inspection of all T & Ps to be as per guidelines (refer attached Annexures) of Birla Cellulose Plant Kharach. All daily formats and inspection related to safety are to be complied with as per customer safety policy.**

NOTE:

1. The specific (minor) work which is not mentioned in the scope of work but required to be carried out for completion of subject work is in the bidder's scope.
2. Decision of BHEL site in charge regarding interpretation of the scope of work shall be final.

3.2 LIAISON WITH ALL STATUTORY AUTHORITIES:

- a) Compliance of statutory provisions, whether mentioned in this contract or not shall be binding on the contractor.
- b) If there is any change in labour laws after the contract has been awarded, then the new law shall automatically be binding on the contractor.
- c) No additional financial compensation shall be paid by BHEL to the contractor on account of increased expenditure caused by a) and b) above.
- d) Liaisoning with local commercial tax dept. to obtain Coml. Tax exemption certificate.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

3.3 PAYMENT TO WORKERS:

- a) Payment to workers shall be done in the presence of BHEL representative or through bank account only.
- b) The contractor shall intimate the day of payment at least three days in advance in writing along with copy of the pay sheet and attendance cards.
- c) All workmen shall be covered by PF Rules irrespective of their period of employment.
- d) Payment shall be made inside the plant premises and during office hours.

3.4 SUBMISSION OF DOCUMENTS:

The contractor shall submit following documents at appropriate time either before or during the execution of the work and as directed by Site in-Charge.

1. Test certificates of Pulling and Lifting machines and appliances.
2. Details of workers to be deployed with name, address, category.
3. Details of supervisory staff to be deployed.
4. Authorization for receipt of materials and for signing of Measurement Books etc,
5. Labour license specific to the contract.
6. List of T&P brought into plant premises along with their serial numbers and dates/years of purchase.
7. All the Staff/Workers deputed for the Job should have Insurance Cover and document in this regard should be submitted along with 1st RA Bill.
8. List of consumables brought into plant premises along with their serial numbers and dates/years of purchase, along with test certificates wherever applicable.
9. Insurance policy for the workers to be deployed in this contract.
10. Safety undertaking.
11. Copy of ESI certificate to be furnished.
12. Proof of Payment of GST.

(Sl.No.11 to 12 are required before final bill is processed).

The contractor shall submit following documents in report form within 15 days from commissioning of unit after the overhaul/shut down work is completed:

- Details of work executed.
- Measurements against different schedules in compiled form.
- Material issue details.
- Material consumption details.
- Material returns details.
- Details of retrenchment benefits given to workmen.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

- Details of issue of PF slip to workmen.
- Details of settlement of accident benefits if any to workmen
- Copies of pay sheets to workmen.
- Details and proof of remittance of PF to workmen (before final bill).
- No dues clearance from different stores of customer
- Valid labour license

3.5 Statutory Inspection

Please refer General and Special Conditions of Contract. In addition to it the scope includes getting the approvals from the statutory authorities (like IBR, smoke nuisance inspector, anti-pollution authorities, labour officials). This includes arranging for inspection visits of such authorities periodically as per requirement, submitting documents etc. and payment of fees connected with it.

3.6 Safety:

Contractor should engage at least One Qualified Engineer in each shift during the contract period. Strict Safety measures have to be followed at Site. Contractor shall also adhere to all the safety provisions of our customer. In case violation of any provision at site fine of Rs.500/- to Rs.2000/- at the discretion of our site in-charge shall be imposed for each of such occasion and shall be recoverable from the contractor's bill.

1. The contractor should ensure the use of 24 volt hand lamps and 24 volt transformer by his workers. The all electrical gadgets shall have plug top & proper earthing.
2. All T&P like pulling and lifting machine, chain pulley blocks, slings, D-shackles should be maintained in proper working condition. Necessary test certificate has to be submitted by contractor for lifting tools & tackles.
3. The contractor shall be fully responsible for the safety of his workers.
4. The Use of ISI mark safety helmet, ISI mark safety shoes, Goggles, hand gloves, ear plugs and nose mask is a must. In addition to this, a full body (safety) harness, face shield must be provided to workers carrying out work at height & cutting/ welding/ grinding respectively. Gas cutting set with flash back arrester etc. should be provided by the contractor and should ensure the use of these safety equipment's, all PPE by his worker while working.
5. Scaffolding should be erected properly and strong enough with hand rails and it should not be used before getting it checked by Engineer-in-charge.
7. The contractor shall be solely responsible for the safety of his workers & employees. The contractor must ensure that the persons working in specialised nature jobs/ skilled jobs/ working with the welding machines, grinders, cutting set & other special T&P shall be having experience & expertise to perform that job. Contractor should engage physically and mentally fit manpower. The electrical connection / repair jobs shall be done only by the electricians.
8. The contractor shall ensure that prior to start of work all his workers shall get the safety training.
9. The contractor shall also take care for the safety of the equipments & persons working in the vicinity.
10. Customer at its own discretion may decide to recheck / retest some or all of the T&P / machines of the contractor inside the plant premises.
11. The helmets, safety shoes and safety belts issued by the contractor shall be conforming to relevant IS standards.
12. The contractor shall maintain the first aid box at site.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

13. **Safety Violation penalty of Birla Cellulose kharch is attached as per list. In case of any penalty levied on BHEL by customer due to any safety violation/lapses by sub-contracting agency, the same will be debited to the sub-contracting agency.**

3.7 PROVISION OF PPEs

- Personnel Protective Equipment (PPEs), in adequate numbers, will be made available at site & their regular use by all concerned will be ensured
- The following matrix recommends usage of minimum PPEs against the respective job.

Sl.NO	Type of Work	PPEs
1	Concrete and asphalt mixing	Nose mask ,hand glove ,apron and gum boot
2	Welders/Grinders/Gas cutters	Welding/face screen, apron, hand gloves, nose mask and ear muffs if noise level exceeds 90dB. Helmet fitted with welding shield is preferred for welders
3	Stone /concrete breakers	Ear muffs, safety goggles, hand gloves
4	Electrical Work	Rubber hand glove, Electrical Resistance shoes
5	Insulation Work	Respiratory mask, Hand glove, safety goggles
6	Work at height	Double lanyard full body harness, fall arrestor (specific cases)
7	Grit/Sand blasting	Blast suit, blast helmet, respirator, leather gloves
8	Painting	Plastic glove, Respirators (particularly for spray painting)
9	Radiography	As per BARC guidelines

- The PPEs shall conform to the relevant standards as below and bear ISI mark.

Relevant is-codes for personal protection

IS:2925-1984	Industrial safety Helmets
IS:4770-1968	Rubber gloves for electrical purpose.
IS:6994-1973(Part-I)	Industrial safety Gloves(Leather & Cotton Gloves)
IS:1989-1986	Leather Safety boots and shoes.
IS:5557-1969	Industrial and safety rubber knee boots.
IS:6519-1971	Code of practice for selections care and repair of Safety foot wear.
IS:11226-1985	Leather Safety footwear having direct molding sole.
IS:5983-1978	Eye protectors.
IS:9167-1979	Eye protectors.
IS:1179-1967	Eye & face protection during welding
IS:3521-1983	Industrial Safety Belt and Harness
IS:8519-1977	Guide for selection of industrial Safety equipment for body protection
IS:9473-2002, 14166-1994, 14746-1999	Respiratory Protective Devices

The list is not exhaustive. The safety officer may demand additional PPEs based on specific requirement.

NOTE: All employee of vendor should wear company uniform along with company logo at work place.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

3.8 OTHER TERMS AND CONDITIONS

- 1.0 Successful bidder has to extend manpower assistance for minor cleaning/scraping, etc.
- 2.0 ~~A copy of tender document with each page duly signed and stamped shall be submitted along with your offer as a token of your unconditional acceptance to this tender condition.~~ Also any deviation to the tender conditions shall be submitted in a separate paper duly signed by the bidder, any overwriting / correction by the bidder on the tender will not be recognized and the offer may be rejected on this ground.
- 3.0 General and special conditions of contract' enclosed herewith will be fully applicable, except otherwise stated in this enquiry. In case of any conflict, the conditions specified in this enquiry letter will prevail over that of the 'General and special conditions of contract'.

3.9 SAFETY INSTRUCTIONS FOR CONTRACTORS

Health and fitness for duty

- All workers must be medically examined and fit for the contracted work before starting any work in the plant.
- The contractor is responsible for defining and implementing health and fitness requirements for each type of duty (e.g. avoiding vertigo in elevated works and claustrophobia in confined spaces, etc.).

Training

- Safety training must be imparted to all new workers at Safety department before starting any work in the plant.
- Depending on the level of risk and/or complexity of the contracted work, the contractor is responsible for safety training for all its personnel working on the job site.
- The contractor is also responsible for identification of any additional training requirements in order to maintain required competency levels.
- Regular Tool Box talk is being arranged by Safety department which is to be attended by contractor's employees as and when scheduled.

3.9.1 Security procedures

- It is the responsibility of contractor's manager to ensure its employees, sub-contractor's employees and visitors comply with security rules.
- A complete list of all personnel present on site must be available and kept updated.

Emergency procedures

- Any abnormality, incident, near miss, minor or major accident inside the plant must be intimated to concerned immediately.

Safety Work Permit system

- Depending on the appreciation of the level of risk during the contracted work activities, a safety work permit system will be applied.
- Different kinds of work permits may be issued such as General Work Permit, Working at Height Permit, Hot Work Permit and Confined Space Entry Permit which must be taken as appropriate to the work assigned and displayed at work location.
- Do not start any work inside plant without valid work permit.
- All safety measures mentioned in the Safety work Permit must be followed before executing the assigned job.
- Safety Work Permit must be available with the person working at site. It should be produced on demand by plant personal or safety personal.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

Personal Protective equipment

- All workers should wear **Blue Color Safety Helmet** while working in plant premises. (Do not use **White or Yellow helmet**).
- Wearing Safety Helmet is compulsory inside plant.
- All workers must wear Safety shoes inside plant.
- Goggles and/or Face shield must be used while handling any chemical / using cutting set / grinding / welding work etc.
- Specific Personal Protective Equipments (PPE) like hand gloves, ear plug, dust mask, goggles, apron etc. as required during work must be worn.
- Full body harness must be used while working at height more than 1.8 meter where proper access is not available.
- All required PPEs to be provided and maintained by concern Contractors.

Housekeeping

- The contractor shall make sure workers adhere to housekeeping requirements of the company site.
- Work locations, equipment and buildings are to be kept clean and orderly at all times.
- Proper waste management is an environmental issue. The generation of waste has to be avoided or minimized.
- If waste is generated the contractor has to take all practical steps to ensure that all wastes are properly, safely and legally managed from the point at which they are created to the point of disposal.
- Disposal of general waste generated during contractor's work at site is not allowed at the plant site.
- If waste disposal is part of the contract or accepted by the management, it must be advised where the disposal should be made, preferably supervised by the plant manager/coordinator.
- Area must be cleaned after the any work is completed. No leftover is allowed.

Welding and Cutting

- For all welding, cutting and grinding activities, the contractor will only use competent and authorized welders and all welding activities will be subject to a hot work permit.
- **Welder must wear full sleeves shirt / Boiler suit. while welding**
- Welders shall check and correct their equipment before use for:
 - o Damage insulation on welding lids, electrode holders and connections.
 - o Faulty earth clamps gauges, pressure reducers, flashback arrestors and torches.
 - o Worn or damaged hoses.
- Welding machine must have proper earthing cable and all cable joints should be properly protected. Use proper lugs and cable and never ever use nuts as end connection.
- All welding machines must have standard identification no. The register should be maintained mentioning ID no., location and condition of welding machine.
- All cables, tools and tackles, scrap material, welding machine and its accessories must be removed at the end of the day or immediately after completion of job whichever is earlier.
- No domestic gas cylinder will be allowed in plant premises.
- Cylinders in use must be in trolley and tied with the chain.
- All cylinders not in use must be kept at identified location, in upright position and segregated as filled or empty cylinder.
- A flashback arrestor shall be fitted on oxy/fuel system immediately downstream of the pressure regulator and a non-return valve shall be fitted in each gas supply system at the torch.
- Use proper pin and industrial plug for all electrical connections.
- No loose cable connections will be allowed.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

Portable electrical equipment and hand tools

- Tools need to be kept in good condition and used for their intended purpose according to manufacturer's recommendations.
- Register must be maintained to keep record of inventory of tools and tackles.
- Damaged tools must be replaced immediately and in no condition should be taken in use.
- Tools to be placed in tool box / tool bag and at identified location after job completion.
- Sufficient tools must be available all the time for regular work.
- All chain blocks must be tested and certified by competent person. Testing date must be displayed on chain block case.
- Use proper pin and industrial plug for all electrical connections. No loose cable connections will be allowed.

Cranes and lifting equipment

- All cranes and lifting equipment, whether owned by contractor or hired, must carry relevant test certificates and thorough examination reports, together with the manufacturer's handbook.
- This documentation must be submitted before use.
- Only qualified operators and trained riggers, authorized by the contractor, shall be allowed to operate Cranes and forklift.
- The contractor must be able to prove, to the satisfaction of the company, the competence of its employees to operate such equipment prior to its use.
- Operators must be qualified for each make and model of crane/forklift operated.
- Crane operators or other competent persons must carry out daily inspections and enter these in the crane register. In addition contractor will implement a regular inspection and maintenance program to ensure that all components of the lifting devices are in good conditions.
- No rider is allowed on forklift other than driver.

Material handling

- The contractor shall make available mechanical equipment as necessary for the purpose of the contracted work in preference to manual handling.
- Use gloves when handling sharp or abrasive objects or where splinters are possible.

Equipment for elevated works

- Ladders, scaffolds and barriers, will be made available by the contractor whenever necessary.
- Only metallic scaffold is allowed. Bamboo scaffold is prohibited at site.
- Working at Height permit must be taken before executing any work above 2 meter height.
- Full body harness must be worn and tied with fixed support while working above 2 meter height.

Contractor must depute supervisor at the site who should be the in charge of the workmen and should be responsible for implementation of all the safety precautions.

All guidelines mentioned above must be followed as applicable by all contractors.. Appropriate action will be taken on contractor if any of the above condition is being violated.

Safety requirement and Uniform

A. The Contractor shall abide by the Safety policies and procedures and shall comply with statutory requirement thereof.

B. Contractor shall provide safety shoes to all their employees and hand gloves, goggles, mask, helmet etc. wherever necessary.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – III: SPECIAL TERMS AND CONDITIONS

C. If the user department find any of the employees of Contractor safety equipments Following Penalties shall be imposed

Sr.No	Violation	Type Penalties	Frequency Contractor
1.	Basic PPEs	Helmet & Safety Shoes	1st Time 100/- 2nd Time 200/- 3rd Time 500/- 4th Time 1000/-
2.	Job Specific PPE's	As specified in the relevant area's and mentioned in PTW	1st Time 300/- 2nd Time 500/- 3rd Time 700/- 4th Time 1000/-
3.	Non – Adherence to work permit (Including JSA)		1st Time 100/- 2nd Time 200/- 3rd Time 500/- 4th Time 1000/-
4	Non-Reporting of injuries in time		1st Time 200/- 2nd Time 300/- 3rd Time 500/- 4th Time 1000/-

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – IV: T&Ps and MMEs to be deployed by Contractor

4.0 LIST OF MANPOWER REQUIRED for Each Unit

Sl.No	Manpower	Category	No. of Persons for Unit 1	No. of Persons for Unit 2
1.	Site-in charge	Highly Skilled	1	1
2.	Foreman	Highly Skilled	4	4
3.	Supervisor	Graduate	3	3
4.	Store Keeper	Graduate	2	2
5.	HP Welder	Highly Skilled	6	6
6.	Welder	Skilled	8	8
7.	Gas cutter	Skilled	4	4
8.	Millwright Fitter	Highly Skilled	1	1
9.	Sarang	Skilled	3	
10.	Fitter	Skilled	6	6
11.	Electrician	Semi-Skilled	2	2
12.	Jr.Filter	Semi-Skilled	6	6
13.	Insn.Lagger / Carpenter	Semi-Skilled	6	6
14.	Grinder Man	Skilled	6	6
15.	Rigger	Semi-Skilled	8	8
16.	Helper	Un-Skilled	36	36
17.	Office Boy	Semi-Skilled	1	1
18.	Quality Engineer	Skilled	2	2
19.	Safety Engr	Safety officer	2	2

This is an indicative list; the sub-contractor shall deploy adequate manpower to carry out the work round the clock and as per requirement of the site during execution of the Job.

Note: Site in-charge should be qualified Engineer, B.E. (Mechanical) and all the supervisors should have diploma in engineering.

Successful bidder has to arrange suitable mobile communication facility for BHEL site-in charge

Man power & T&P:

1. Adequate manpower along with T&P should be deployed at site. All the T&P required for the work shall be arranged by the contractor and all T&P should reach the site immediately as machine is under

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – IV: T&Ps and MMEs to be deployed by Contractor

shutdown. All the measuring instruments shall be duly tested / calibrated and valid certificate to that effect should be submitted to our Site In-charge before start of the work.

2. A deployment plan along with experience and name of the Site In-charge, Engineers, Supervisors, Foreman and main technicians to be submitted on per shift basis.
3. LAP-TOP with latest configuration, DVD/CD writer, its peripherals including printer-scanner and one USB Modem for Internet connectivity to be provided for BHEL site office.
4. One office boy in each shift is to be provided for BHEL site office.

4.2 LIST OF TOOLS AND PLANTS TO BE ARRANGED BY CONTRACTOR

01. Hydrotest pump of capacity 150-200 kg/cm² for boiler hydro test.

02. Feeler gauge sets, feeler strips.
03. Vernier calipers, (150 and 300 mm), measuring steel tapes and 5 meters steel rulers.
04. 2 sets of D.E. and Ring spanners (6-36mm).
05. Allen keys of various sizes (from 2mm. onwards).
06. D.P.Test Kit (with consumables).
07. Crowbars tin cutters, pliers (cutting plier, nose plier grip plier circlip-outside and inside).
08. Screw drivers and sledge hammers – 10 lbs – 1 lbs.
09. Adjustable wrenches, pipe wrenches and heck saws.
10. Single ended spanners (36 Mm and above).
11. Files flat round, half round and square, rough and smooth (sizes 6", 9" and 12").
12. Bench Grinders, straight grinders GQ4 and GQ6, Angle grinders.
13. Drilling machine with magnetic stand upto –60 mm with drill bits.
14. Flexible grinders with grinding stones and cutters of different Shapes and sizes, Angles Grinders and Sander machine.
15. Number punch, letter punch, centre punch and hole punches etc.....
16. Steel wire brushes, wire brush wheels, nylon wire brushes and Painting bushes.
17. Lifting devices eye bolts, D-shackles, slings of various sizes Guide rods etc.....
18. Chain pulley blocks upto 5 tons, 2 tons, 1 tons, hook chuck, pull/lift.
19. Tap and die sets 6 to 36 mm.
20. Torch light/hand lamps with cables, 230/24 V transformer.
21. Torque wrench and torque multiplier.
22. Hand glover-asbestos, Manila rope, asbestos cloth leather and Rubber gloves.
23. Air blower – electric.
24. Electric drills – 1/4", 1/2", and 5/8".
25. Gas cutting and heating set with torches regulators, hoses and cylinder minimum two sets).
26. Arc welding generator/rectiformers with regulator, cables, Electrode holders and shields, TIG welding holders.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – IV: T&Ps and MMEs to be deployed by Contractor

27. Hose pipes for compressed air.
28. Electric switchboards and flood light arrangements with fuse boxes and isolating switches, Plugs and sockets.
29. In addition to above T and P contractor will be required to fabricate fixtures such as pullers etc. for removal of any other equipments related to the scope of work.
30. Gas cutting/welding goggles, grinding goggles.
31. Tarpaulin.
32. Any other T and P as per requirement and as per our General and special conditions of Contracts.
33. Digital Multimeter
34. Scaffolding materials
35. heating torch-4 nos,
36. Thermal chauk.
37. **NOTE:**
 1. The above list is only indicative for work in one unit; and not exhaustive. Arrangement for any other T and P required for completion of the job shall be the responsibility of the contractor and shall be arranged by him.
 2. All the tools and tackles/measuring instruments shall be duly tested/calibrated and valid certificate to that effect should be submitted to our site in-charge before the start of work.

4.3 CONSUMABLES TO BE ARRANGED BY CONTRACTOR

(The list is indicative only and not exhaustive)

01. Welding electrodes & filler wires as per EWS(Make: BHEL approved vendor)
02. **For welding of structure, skin casing, fin welding & other works, electrodes are to be arranged by the bidder.**
03. Kerosene oil.
04. Rustolene.
05. Petrol/white Petrol/Benzene/CRC/CTC.
06. Grease/Graphite Grease.
07. Hacksaw Blades.
08. Waste cloth/Cotton.
09. Marking/lint free cloth/Muslin.
10. Asbestos cloth/Asbestos cord.
11. Carborandum grinding paste coarse/fine/Diamond lapping paste.
12. Emery papers/Rolls.
13. Cutoff wheels.
14. Grinding wheels.
15. D. P. test chemicals.
16. Gas Cylinders for cutting/welding.
17. Insulation tape, Johnson Tapes.
18. Electric fuse wire, cables for the connections

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – IV: T&Ps and MMEs to be deployed by Contractor

19. Buffing wheel
20. plastic sheet general purpose electrodes for welding purpose, industrial oxygen, acetylene, Nitrogen gas cylinder,

NOTE: The above list is only indicative for work in one unit & not exhaustive. Arrangement for any other consumables required for completion of the job shall be the responsibility of the contractor & shall be arranged by him.

5. The Welding electrodes & filler wire for welding of tubes & pipes will be issued by BHEL for free of cost. The total quantity of welding electrode & filler wire to be issued for both the Units (Unit 1 & Unit 2) is as follows:

S.No.	Electrode	Weight (in Kg)
001	ER90S-B3 GTAW ROD DIA.2.4MM	11.266
002	ER 70S-A1 GTAW ROD DIA2.4MM	12.364
003	E 9018-B3 SMAW DIA2.50MM	95.524
004	E 7018-1 SMAW ELECTRODE DIA 2.5 MM	114.048
005	E 9018-B3 SMAW DIA3.15MM	43.512
006	E 9018-B3 SMAW DIA4.00MM	83.712

The quantity of Welding electrode & filler wires in excess to above, if required, for job completion is to be arranged by the bidder.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter – V: QUALITY REQUIREMENT

QUALITY REQUIREMENT

- 1.0 Various inspection/ quality control / quality assurance procedure/ methods at various stages will be as per BHEL/ customer quality control procedure/ codes/ IBR and other statutory provisions and as per BHEL Engineer's instructions.
- 2.0 Preparation of quality assurance log sheets and protocols with customer's engineers, welding logs, other quality control and quality assurance documentation as per BHEL Engineer's instructions, is within the scope of work/ specification.
- 3.0 A daily log book should be maintained by Area In-charge of contractor on the job incorporating erection / alignment / welding clearance /radiography / progress of work etc. and the same shall be submitted to BHEL. Also, daily reports shall be submitted to BHEL.
- 4.0 All the important measurements like pre-assembly checking of alignment leveling/ centering work etc. shall be recorded in the daily log book with sketches based on BHEL drawings indicating readings/ measurements actually taken and signed by BHEL/ Customer/ Contractor representatives.
- 5.0 The inspection/measuring and testing equipments should be of brand, quality and accuracy, as specified by BHEL engineer and should have valid calibration certificates traceable to national/international standards.
- 6.0 Total quality is the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He will follow the instructions as per BHEL drawings and quality standards.
- 7.0 The welder's performance will be reviewed from time to time as per the BHEL/ IBR standards and any welder not performing to the standards set by BHEL/ IBR standards will be removed from working, Contractor shall arrange for the alternate welders immediately.
- 8.0 STAGE INSPECTION BY BHEL / CUSTOMERS ENGINEERS

Apart from day-to-day inspection/ stage inspection of equipments by BHEL engineers, the equipments may be checked at various stages by customer's engineers and quality assurance teams. Contractor shall arrange all labour, tools/tackles etc. for such inspections free of cost.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VI: Time Schedule

6.1 TIME SCHEDULE & MOBILIZATION

6.1.1 INITIAL MOBILIZATION :

After receipt of fax LOI, Contractor shall discuss with Project Manager / Construction Manager/BHEL Site In charge regarding mobilization. A Full-fledged team with T&P shall be mobilized **within 07 days on receipt of LOI and BHEL intimation.**

6.1.2 MOBILIZATION FOR ERECTION, TESTING, ASSISTANCE FOR COMMISSIONING, OVERHAULING ETC.

The activities of Modification shall be started as per directions of Site In charge of BHEL. Contractor shall mobilize further resources (in addition to those required for activities under clause no. 6.1.1) as per requirement to commence the work of Capacity enhancement work of 100 TPH AFBC boiler in Unit #1 & 2 at Birla Cellulosic Kharach, Kosamba Gujarat.

TIME IS THE ESSENCE OF THIS CONTRACT. SUBCONTRACTOR SHOULD COMPLETE ALL WORK WITHIN 30 DAYS per Boiler i.e 30 Days for U1 and 30 Days for U2 (FROM THE START OF WORK TO COMPLETION OF HYDRO TEST IN ALL RESPECT) OF TIGHT SCHEDULE .

As informed by BIRLA Kharach, the work is scheduled to start tentatively from Septemeber 2021 for Unit#1 or Unit#2. However, agency shall be informed regarding any change in the schedule.

AA)

It is expected that shutdown for Unit#1 and Unit#2 will be given separately & work shall be carried out during different periods for both the units. In such case following may be noted:

This may require contractor to mobilize & demobilize the site more than once. (If done, no additional charges for mob de-mob shall be paid). In such case after completion of the work for one unit, contractor shall complete all contractual obligations viz, material reconciliation, HR clearances, Labour clearances, other statutory clearance & submit the final bill etc, w.r.t. the completed unit.

BB) However, it may so happen that shutdown for both units are available at a time. In such case, contractor shall mobilize paralelly for both units & carry out the work within schedule completion period from start of work as specified above.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VI: Time Schedule

7.1 Payment Terms

Payment shall be made Unit wise as per the following payment breakup:

A) For Unit#1

- 1.0 25% of lumpsum value on completion of dismantling work. **Documents like Insurance & Labour License to be submitted along with first bill.**
- 2.0 50% of lumpsum value after Boiler Hydro test.
- 3.0 15% of lumpsum value after completion of commissioning activity like Alkal Boil-out, steam blowing & safety valve floating.
- 4.0 Final 10% on machine synchronization/ machine full load, completion of pending points, demonstration of performance, payment of all dues and submission of all the documents like No Dues certificate from Customer, EPF challan, Insurance, Labour License, Labour Payment sheets, proof of payment of GST, **Indemnity Bond to be submitted along with final bill** etc.

Note:

1. Penalty of 1% per day of the total contract value will be levied for improper mobilization of man power and 1% per day for T & P and consumables separately subject to maximum 10% of the contract value shall be deducted from contractor's bill
2. Any delay that may take place in erection, testing & commissioning activities beyond contractual cut off date/stipulated period in the order shall be subjected to penalty at the rate of ½% of the contract price/order price per week or part thereof subject to a maximum of 10% of the total contract value.
3. While submitting the invoices, Vendor should mention their Bank Account No. on each of their invoices for the purpose of making e-payment.

B) For Unit#2

- 5.0 25% of lumpsum value on completion of dismantling work. **Documents like Insurance & Labour License to be submitted along with first bill.**
- 6.0 50% of lumpsum value after Boiler Hydro test.
- 7.0 15% of lumpsum value after completion of commissioning activity like Alkal Boil-out, steam blowing & safety valve floating.
- 8.0 Final 10% on machine synchronization/ machine full load, completion of pending points, demonstration of performance, payment of all dues and submission of all the documents like No Dues certificate from Customer, EPF challan, Insurance, Labour License, Labour Payment sheets, proof of payment of GST, **Indemnity Bond to be submitted along with final bill** etc.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VI: Time Schedule

Note:

4. Penalty of 1% per day of the total contract value will be levied for improper mobilization of man power and 1% per day for T & P and consumables separately subject to maximum 10% of the contract value shall be deducted from contractor's bill
5. Any delay that may take place in erection, testing & commissioning activities beyond contractual cut off date/stipulated period in the order shall be subjected to penalty at the rate of ½% of the contract price/order price per week or part thereof subject to a maximum of 10% of the total contract value.
6. While submitting the invoices, Vendor should mention their Bank Account No. on each of their invoices for the purpose of making e-payment.

7.2 Retention money:

i) Retention amount as indicated in Clause 2.22.1 of Vol. I C 'General Conditions of Contract'.

ii) Clause 2.22.2 Refund of Retention Amount of GCC is revised as below:

"Refund of Retention Amount shall be as follows:

100% of retention amount shall be retained towards "Performance Guarantee for Workmanship" and shall become refundable after expiry of Guarantee period, provided all the defects noticed during the guarantee period have been rectified to the satisfaction of BHEL Site Engineer/BHEL Construction Manager, and after deducting all expenses/other amounts due to BHEL under the contract/other contracts entered into by BHEL with them. This portion of the retention amount can be released on commencement of the Guarantee period, on submission of equivalent Bank Guarantee."

The bill due for payment shall be submitted to the Engineer in-charge of BHEL along with documentation of Refund of Retention Money Format No. F24 (Rev 00) (revised format is attached in VOL I BCD 'forms and procedure') at site for necessary verification and processing through proper channel. It may be noted that payment will be released from the office of the RSM/ Nagpur after minimum fifteen days from the date of receipt of the duly verified bill from site.

7.3 Retention towards HSE Compliance: 3% of the total contract value shall be retained from the first bill towards compliance of safety norms & deployment of safety engineers during the overhauling period & shall be release along with final bill on certification of BHEL site-in-charge.

7.4 Security Deposit:

i) Please refer our "General and special conditions of contracts".

ii) **RETURN OF SECURITY DEPOSIT shall be as per Clause 1.11 of GCC:**

"Security Deposit shall be refunded/Bank Guarantee(s) released to the Contractor upon fulfilment of contractual obligations as per terms of contract, after deducting all expenses / other amounts

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VI: Time Schedule

due to BHEL under the contract / other contracts entered into with them by BHEL.”

Documentation for Refund of Security Deposit shall be in line with “General and special conditions of contracts” (GCC) along with Format No. F23 (Rev 00). Format is revised for SAS works.

Note: Work may be started before the required Security Deposit is collected. However payment can be released only after collection/ recovery of initial 50% security deposit.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: TAXES AND DUTIES

8.0 TAXES, DUTIES, LEVIES (Rev 14 dated 09/10/2020)

1. All taxes excluding GST, GST Cess & BOCW Cess **but including, Royalties, fees, license, deposits, commission, any State or Central Levy and other charges whatsoever, if any, shall be borne by you and shall not be payable extra.**
2. Any increase of the taxes excluding GST, GST Cess & BOCW Cess, at any stage during execution including extension of the contract shall have to be borne by the contractor. Quoted/accepted rates/ price shall be inclusive of all such requirements. Please note that since GST on output will be paid by BHEL separately as enumerated below, your quoted rates/ price should be after considering the Input Credit under GST law at your end.
3. **GST :**
The successful bidder shall furnish proof of GST registration. GST along with Cess (as applicable) legally leviable & payable by the successful bidder as per GST Law, shall be paid by BHEL. Hence Bidder shall not include GST along with Cess (as applicable) in their quoted price.
4. GST charged in the Tax Invoice/Debit note by the contractor shall be released separately to the contractor only after contractor files the outward supply details in GSTR-1 on GSTN portal and input tax credit of such invoice is matched with corresponding details of outward supply of the contractor and has paid the GST at the time of filing the monthly return
5. E-invoicing under GST has been implemented with effect from 1st October 2020 for all the taxable persons having turnover more than the threshold limit in any preceding financial year from 2017-18 onwards. Therefore, for all the taxable persons falling under the purview of E-invoice, it is mandatory to mention a valid unique Invoice Reference No. (IRN) and QR code as generated from E-Invoicing portal of the Government for the purpose of issuing a valid Tax Invoice. Only an E-invoice issued in the manner prescribed under rule 48(4) of CGST Rules shall be treated as valid invoice for reimbursement of GST amount.
If the successful Bidder is not falling under the purview of E-Invoicing then he has to submit a declaration in that respect along with relevant financial statements.
6. Bidder shall note that the GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred there under) wherein the 'Bill To' details will as below:
BHEL GSTN – As per **Annexure -1**
NAME -- Bharat Heavy Electricals Limited
ADDRESS – Site address
7. Bidder to immediately intimate on the day of removal of Goods (in case of any supply of goods) to BHEL along with all relevant details and a scanned copy of Tax Invoice to below email ids to enable BHEL to meet its GST related compliances :-
Email id ---- to be intimated later on.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: TAXES AND DUTIES

In case of delay in submission of the abovementioned documents on the date of dispatch, BHEL may incur penalty /interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from the successful bidder, if such delay is not attributable to BHEL.

8. In case of raising any Supplementary Tax Invoice (Debit / Credit Note) Bidder shall issue the same containing all the details as referred to in Section 34 read with Rule 53.
9. Bidder shall note that in case GST credit is delayed/ denied to BHEL due to delayed / non receipt of goods and /or tax invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons not attributable to BHEL, GST amount shall be recoverable from the vendor along with interest levied / leviable on BHEL, as the case may be.
10. Bidder shall upload the Invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act. Bidder shall note that in case of delay in declaring such invoice in your return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law , GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from the bidder along with interest levied / leviable on BHEL.
11. Way Bill: Successful Bidder to arrange for way bill / e-waybill for any transfer of goods for the execution of the contract.

The Bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants & machinery at site for execution of the works under this contract, Road Permit/ Way Bill, if required, shall be arranged by the contractor and BHEL will not supply any Road Permit/ Way Bill for this purpose.

12. **New taxes and duties:-**Any New taxes & duties, if imposed subsequent to due date of offer submission as per NIT & TCN, by statutory authority during contract period including extension, if the same is not attributable to you, shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, you shall obtain prior approval from BHEL before depositing new taxes and duties.

Benefits and/or abolition of all existing taxes must be passed on to BHEL against new Taxes, if any, proposed to be introduced at a later date.

In case any new tax/levy/duty etc. becomes applicable after the date of bidder's offer but before opening of the price bid, the bidder must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of the price bids. Claim for any such impact after opening the price bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

13. For transportation work, bidder shall declare in his quotation whether he is registered under GST, if yes, whether he intends to claim GST on forward charge basis. In absence of this declaration, BHEL will proceed further with the assumption that bidder intends not to claim

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VIII: TAXES AND DUTIES

GST on forward charge basis. However, in case of GST registered transporter, the amount to the extent of goods and service tax will be retained till BHEL avails the credit of GST. Further, transporter shall issue tax invoice which inter alia includes gross weight of the consignment, name of the consigner and the consignee, registration number of vehicle in which the goods are transported, details of goods transported, details of place of origin and destination, GSTIN of the person liable for paying tax whether as consigner, consignee or goods transport agency, and also containing other information as mentioned under rule 46.

14. **TDS under Income Tax shall be deducted at prevailing rates on gross invoice value from the running bills unless exemption certificate from the appropriate authority/ authorities is furnished.**
15. **TDS under GST shall be deducted at prevailing rates on applicable value from the running bills.**
16. **TCS under Income Tax 1961 has been implemented with effect from 1st October 2020 for every seller having turnover more than threshold limit during financial year immediately preceding financial year in which the sale of goods is carried out, who receives any amount as consideration for sale of any goods of the value or aggregate of such value exceeding threshold limit other than export of goods or who is already covered under other provision of section 206C, collect from the buyer, TCS as per applicable rates of the sale consideration exceeding threshold limit subject to following conditions**
 - i. Buyer shall be as per clause (a) of section 206C- (1H)
 - ii. Seller shall be as per clause (b) of section 206C- (1H)
 - iii. No TCS is to be collected, if the seller is liable to collect TCS under other provision of section 206C or the buyer is liable to deduct TDS under any provision of the Act and has deducted such amount.

If Successful Bidder is falling under the purview of TCS then he has to submit a declaration in that respect along with relevant financial statements before the start of work or if bidder is falling under preview of TCS during the work in progress then bidder is compulsorily required to submit relevant financial statement in the beginning of the respective FY.

For TCS claim, vendor has to submit relevant documents required as per Income Tax Act.

17. Refer Annexure – 2 for BOCW Act & Cess Act.

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter-VIII: TAXES AND DUTIES

ANNEXURE-1

State wise GSTIN no.s of BHEL

Sl. No	Projects under state	GSTIN
1	Andhra Pradesh	37AAACB4146P7Z8
2	Bihar	10AAACB4146P1ZU
3	Chhattisgarh	22AAACB4146P1ZP
4	Gujarat	24AAACB4146P1ZL
5	Jharkhand	20AAACB4146P5ZP
6	Madhya Pradesh	23AAACB4146P1ZN
7	Maharashtra	27AAACB4146P1ZF
8	Orissa	21AAACB4146P1ZR
9	Telangana	36AAACB4146P1ZG

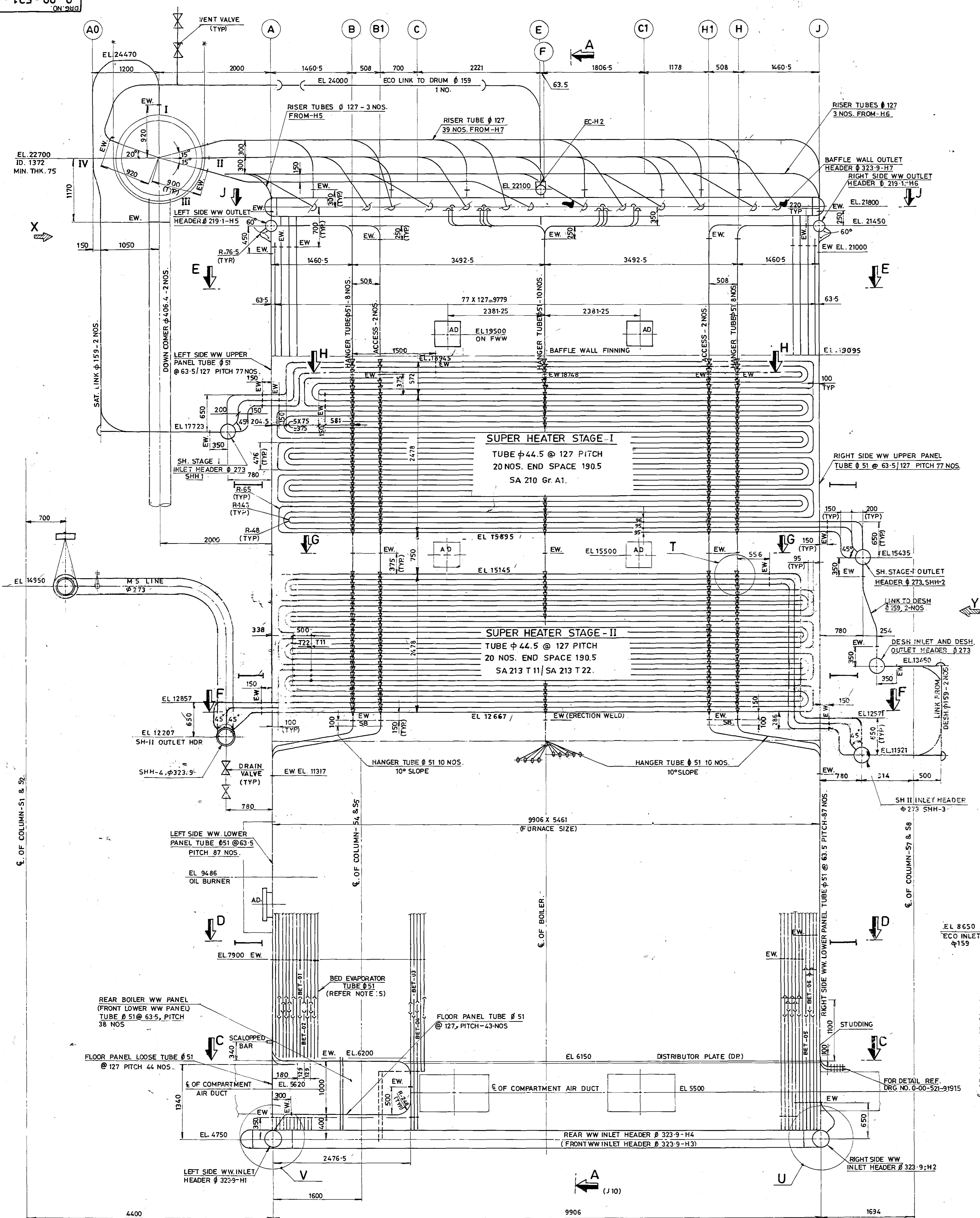
TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IX: Schedule of Rates and Quantities

Sl. No.	Description of Work	UOM	QTY	Percentage w.r.t Total price quoted by the bidder
1	WORK FOR CAPACITY ENHANCEMENT OF 100TPH AFBC BOILER UNIT # 1 AT BIRLA CELLULOSIC PLANT KHARACH, KOSAMBA GUJARAT	LS	01	50%
2	WORK FOR CAPACITY ENHANCEMENT OF 100TPH AFBC BOILER UNIT # 2 AT BIRLA CELLULOSIC PLANT KHARACH, KOSAMBA GUJARAT	LS	01	50%
	Total Percentage			100%

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter-IX: Schedule of Rates and Quantities

Annexure I- Drwg.No. 0-00-521-91910



REF. DRG. NOS.:

- | | | |
|----|----------------------|--|
| 1 | 0 - 00 - 521 - 91911 | PPA. SECTIONAL PLAN VIEWS & DETAIL. |
| 2 | 0 - 00 - 521 - 92060 | BED EVAPORATOR TUBES (REVISED) |
| 3 | 0 - 00 - 521 - 91912 | PPA. SH. & ECO. PLAN VIEWS. |
| 4 | 0 - 00 - 521 - 91913 | PPA. PANEL ARRANGEMENTS. |
| 5 | 0 - 00 - 521 - 91914 | PPA. PANEL OPENING DETAILS. |
| 6 | 0 - 00 - 521 - 91915 | PPA. FURNACE BOTTOM ARRANGEMENT & DETAIL. |
| 7 | 0 - 00 - 521 - 91916 | PPA. DOWN COMERS & SUPPLY PIPES ARRANGEMENT. |
| 8 | 0 - 00 - 521 - 91917 | PPA. RISER TUBE & ECO. LINK DETAIL. |
| 9 | 0 - 00 - 521 - 91918 | PPA. EXPANSION MOVEMENT DIAGRAM. |
| 10 | 1 - 00 - 521 - 91709 | PPA. CEILING LOADING PLAN. |
| 11 | 1 - 00 - 521 - 91714 | PPA. SAT. LINK & DESH. LINK ARRANGEMENT. |

NOTES:

1. STUDDING
- a) FURNACE FRONT LEFT AND RIGHT SIDE WATER WALLS ARE TO BE STUDDED LINED AND REFRACTORY LINED UP TO 5150 FROM DISTRIBUTOR PLATE.
- b) FURNACE REAR WATER WALL HAS TO BE STUDDED AND REFRACTORY LINED UP TO 3100 FROM DISTRIBUTOR PLATE.
- c) SED EVAPORATOR TUBES ARE TO BE STUDDED BOTTOM PORTION ONLY (NOT ALL ROUND).
2. HALF SHIELDS ARE TO BE PROVIDED ON SURFACES FACING THE GAS FLOW OF THE FOLLOWING.
- a.) BOTTOM ROW OF SUPER HEATER STAGE-II.
- b.) SUPER HEATER HANGER TUBES, ABOVE SUPER HEATER STAGE-I.
- c.) SCREEN TUBES FORMED FROM BAFFLE WALL PANEL.
- d.) ECONOMISER HANGERS AND ITS BENDS.
- e.) SCREEN TUBES BELOW THE ECONOMISER.

3. CASSETTE BAFFLES ARE TO BE PROVIDED ON ECONOMISER ASSEMBLIES.
4. TYPICAL BEDEVAPORATOR TUBES ARRANGEMENT ONLY IS SHOWN
FOR FURTHER MARK NOS. AND DETAILS REFER DRG. NO.
0-00-521-9191H, 0-00-521-9191S & 0-00-521-9206G
5. REFER DRAWING NUMBER
- a). 0-00-521-9191H : FOR SECTIONS--DD,EE,FF,JJ, VIEW - W &
0-00-521-9191Z : FOR SECTIONS--GG,HH,KK,LL,MM,NN
VIEW--P,Q,R,S AND DETAIL T.
- c). 0-00-521-9191S : FOR SECTION--CC AND DETAIL-U,V.
- d). 1-00-521-91714 : FOR VIEW--X AND Y.
6. DESIGN,MANUFACTURING AND INSPECTION AS PER IBR.

SECTION-AA
(16)

BRIEF DESCRIPTION OF BOILER

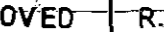
TOP SUPPORTED, SINGLE DRUM, NON REHEAT, NATURAL
ATMOSPHERIC FLUIDISED BED & SEMI OUT DOOR UNITS

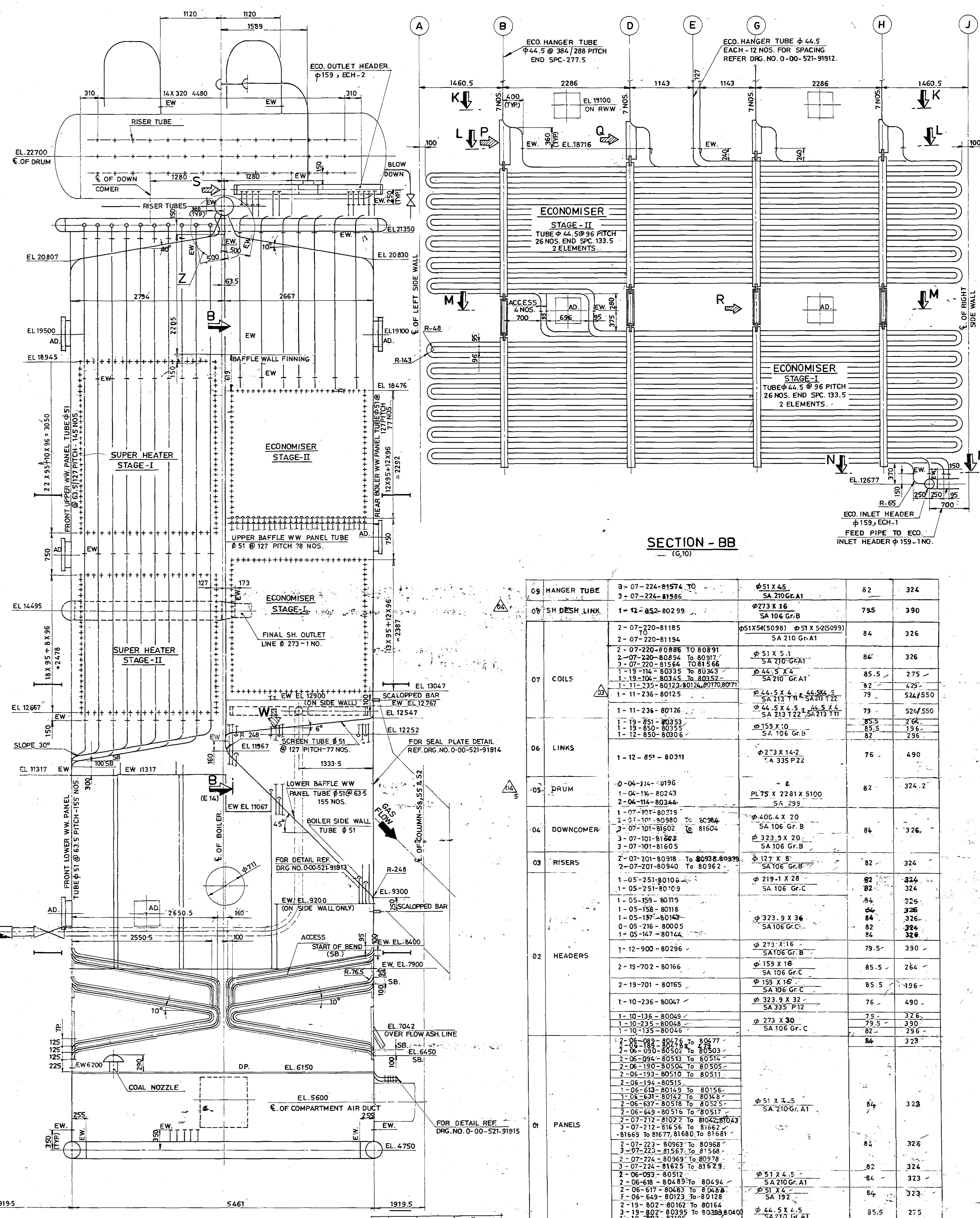
- | | | |
|----|----------------------------|----------------------------|
| 1. | BOILER DESIGN PRESSURE | 82 kg/Cm ² (G) |
| 2. | BOILER DESIGN TEMPERATURE: | 324°C (256.28) |
| 3. | SH. OUTLET PRESSURE | 65 Kg/Cm ² (G) |
| 4. | SH. OUTLET TEMPERATURE | 485°C |
| 5. | HYDRAULIC TEST PR.AT SITE | 123 Kg/Cm ² (G) |
-
- | HEATING SURFACE AREA (M ²) | | |
|--|----------------|----------|
| 1. | ECONOMISER | 1897.04 |
| 2. | WATER WALL | 1026.43 |
| 3. | BED EVAPORATOR | 311.07 |
| 4. | HANGER TUBES | 82.01 |
| 5. | SUPER HEATERS | 16.61.34 |
| TOTAL | | 4578.39 |

REV	DATE	ALTD	BY
04	6.12.96	CHD&APPD	Paul J.

DRUM DRG.NO.CORRECTED.
 PR.PARTS DRG NOS UPDATED
 SERIAL NO: 08 & 09 ADDED.

Q5	HANGER TUBE	3-07-224-81974-70 3-07-224-81986	Φ 51 X 4.5 SA 210G Gr.A1	82	324
Q6	SH DESH LINK	1-12-852-80299	Φ 273 X 16 SA 106 Gr.B	79S	390
Q7	COILS	2-07-220-81185 2-07-220-81194	Φ 51 X 5 (S089) Φ 51 X 5 (S20599) SA 210 Gr.A1	84	326
		2-07-220-80886 TO 80891 2-07-220-80894 TO 80897	Φ 51 X 5.1 SA 210G Gr.A1	84	326
		3-07-220-81564 TO 81568	Φ 51 X 5.1 SA 210G Gr.A1	84	326
		1-19-114-80326 TO 80343	Φ 44.5 X 4 SA 106 Gr.A1	85.5	275
		1-05-196-80345	Φ 44.5 X 4.5 SA 106 Gr.A1	82	249
		1-11-235-80103 TO 80104 TO 80107	Φ 44.5 X 4.5 SA 106 Gr.A1	79	524/550
		1-11-236-80125	Φ 44.5 X 4.5 SA 106 Gr.A1	79	524/550
		1-11-236-80126	Φ 44.5 X 4.5 SA 106 Gr.A1	79	524/550
		1-15-851-80393 1-15-851-80395	Φ 159 X 0 SA 106 Gr.B	85.5	276
		1-12-850-80306	Φ 159 X 0 SA 106 Gr.B	82	236
Q6	LINKS	1-12-851-80311	Φ 273 X 14-2 SA 335 PZ2	76	490
Q5	DRUM	Φ 06-314-11956 1-04-114-80243 2-06-114-80244	= PL75 X 2281 X 5100 SA 299	82	324.2
Q4	DOWNCOMER	1-07-117-80313 2-01-101-80380 TO 80386 3-07-101-81662 3-07-101-81605	Φ 406.4 X 20 SA 106 Gr.B Φ 323 X 20 SA 106 Gr.B	84	326
Q3	RISERS	2-07-201-80318 TO 80328, 80399 2-07-201-80340 TO 80362	Φ 127 X 8 SA 106 Gr.B	82	324
Q2	HEADERS	1-05-251-80106-8 1-05-251-80109	Φ 219-1 X 28 SA 106 Gr.C	82 82	324 324
		1-05-359-80119	SA 106 Gr.C	84	326
		1-05-358-80118	Φ 323.9 X 36 SA 106 Gr.C	84	326
		1-05-197-80048	SA 106 Gr.C	84	326
		0-05-216-80005	Φ 323.9 X 36 SA 106 Gr.C	82	294
		1-05-167-80142	Φ 273 X 16 SA 106 Gr.B	84	326
		1-12-900-80296	Φ 273 X 16 SA 106 Gr.B	79.5	390
		2-15-702-80166	Φ 159 X 16 SA 106 Gr.C	85.5	264
		2-15-701-80165	Φ 159 X 16 SA 106 Gr.C	85.5	196
		1-10-236-80047	Φ 323.9 X 32 SA 335 PZ2	76	490
Q1	PANELS	1-10-136-80048 1-10-135-80048 1-10-135-80045	Φ 273 X 30 SA 106 Gr.C	79 79.5	326 326
		2-06-188-80478 TO 80477 2-06-188-80478 TO 80477	Φ 51 X 4.5 SA 210G Gr.A1	84	323
		2-06-094-80513 TO 80514 2-06-190-80506 TO 80505	Φ 51 X 4.5 SA 210G Gr.A1	84	323
		2-06-190-80506 TO 80505 2-06-190-80506 TO 80505	Φ 51 X 4.5 SA 210G Gr.A1	84	323
		2-06-194-80515 2-06-194-80515	Φ 51 X 4.5 SA 210G Gr.A1	84	323
		2-06-194-80515 2-06-194-80515	Φ 51 X 4.5 SA 210G Gr.A1	84	323
		2-06-194-80515 2-06-194-80515	Φ 51 X 4.5 SA 210G Gr.A1	84	323
		2-06-194-80515 2-06-194-80515	Φ 51 X 4.5 SA 210G Gr.A1	84	323
		2-06-194-80515 2-06-194-80515	Φ 51 X 4.5 SA 210G Gr.A1	84	323
		2-06-194-80515 2-06-194-80515	Φ 51 X 4.5 SA 210G Gr.A1	84	323
		2-06-194-80515 2-06-194-80515	Φ 51 X 4.5 SA 210G Gr.A1	84	323
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO 81568	Φ 51 X 4.5 SA 210G Gr.A1	84	323		
2-07-222-81567 TO 81568 2-07-222-81567 TO					

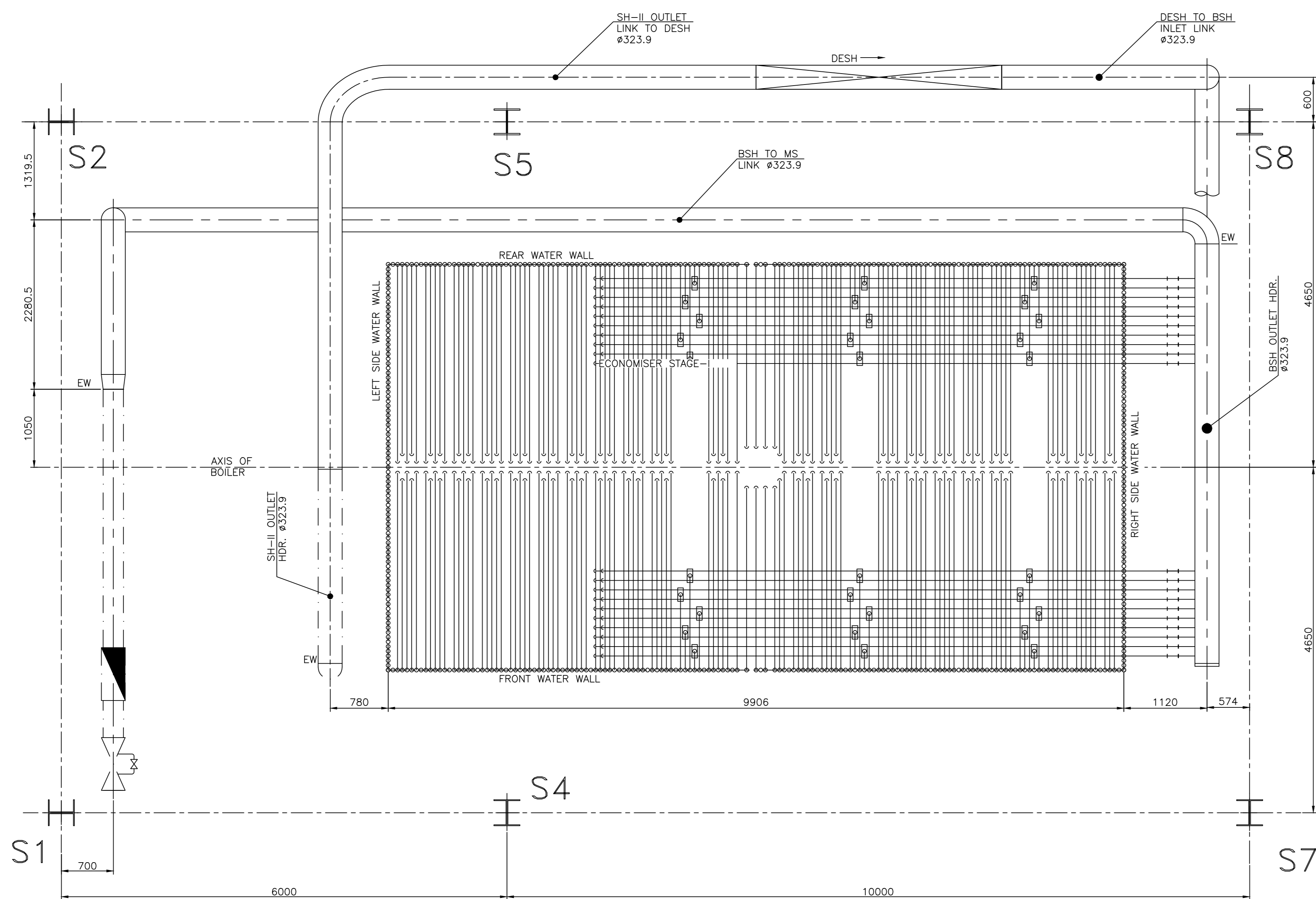
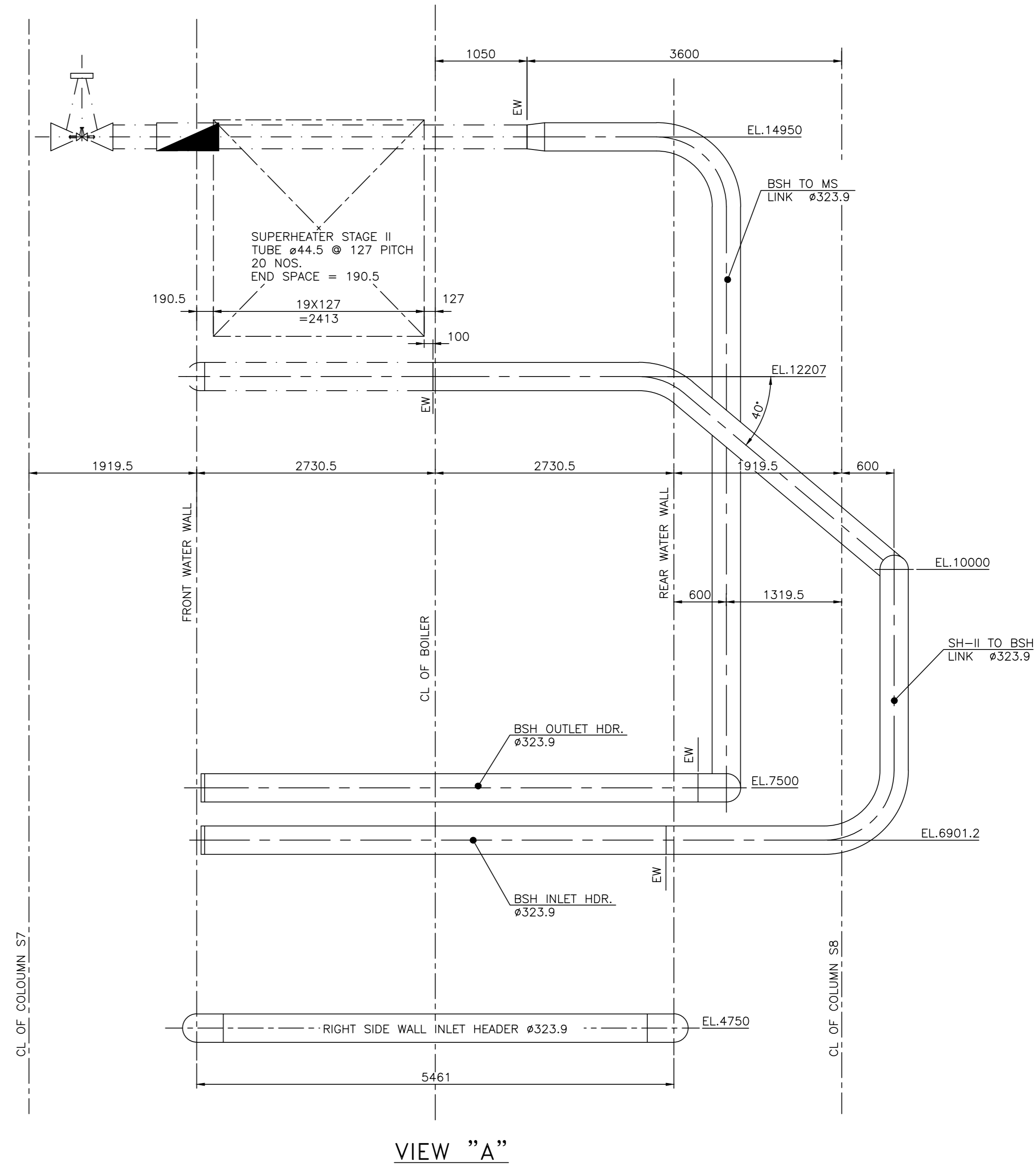
REV	DATE	ALTD	ATR	4-10-82	CUSTOMER NO. : 5098, 5099	
01	20.07.95	CHD&APPD	VP	<i>[Signature]</i>		
ADD. HEATING SURFACE AREA ADD. INSULATION FLOORS RELOCATED FOR COUNTER FLOW. MS.BFO BD.DRAIN.VENT. VALVE SHOWN. BATTLE 02% FINNING. V. S. CHANGED FROM 18.926 TO 10.19095 AD LOCATION CHANGED FROM 10.19095 TO 10.19095 ON FRONT WALL S. CHANGED FROM 10.19095 TO 10.19095					CUSTOMER M/S. BIRLA CELLULOSIC TYPE OF BOILER: WATER TUBE BOILER PROJECT BC-AFBC BOILER - KHARACH 2X100 T/H, 55 KG/C ² (G), 485°C.	
REV	DATE	ALTD	ATR	4-10-82	CUSTOMER NO. : 5098, 5099	
02	21.05.95	CHD&APPD	VP	<i>[Signature]</i>		
APPLICABLE PARTS DRAWING: ADDED					BARHAT HEAVY ELECTRICALS LIMITED BOILER PLANT UNIT, TIRUCHIRAPPALLI - 620 012.	
REV	DATE	ALTD	ATR	4-10-82	CUSTOMER NO. : 5098, 5099	
01	24.05.95	CHD&APPD	VP	<i>[Signature]</i>		
BRIEF DESCRIPTION OF THE BOILER. NOTE - 7. ADDED. TYPE OF BOILER ADDED					PPA - SPECIAL ELEVATION	
ALL DIMENSIONS IN MILLIMETRE.					DRG. NO. 0 - 00 - 521 - 91910	
SCALE  N.T.S.					REV. 0	





SECTION - BB
(G.10)

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter-IX: Schedule of Rates and Quantities

Annexure II- Drg No. 0-00-521-35211

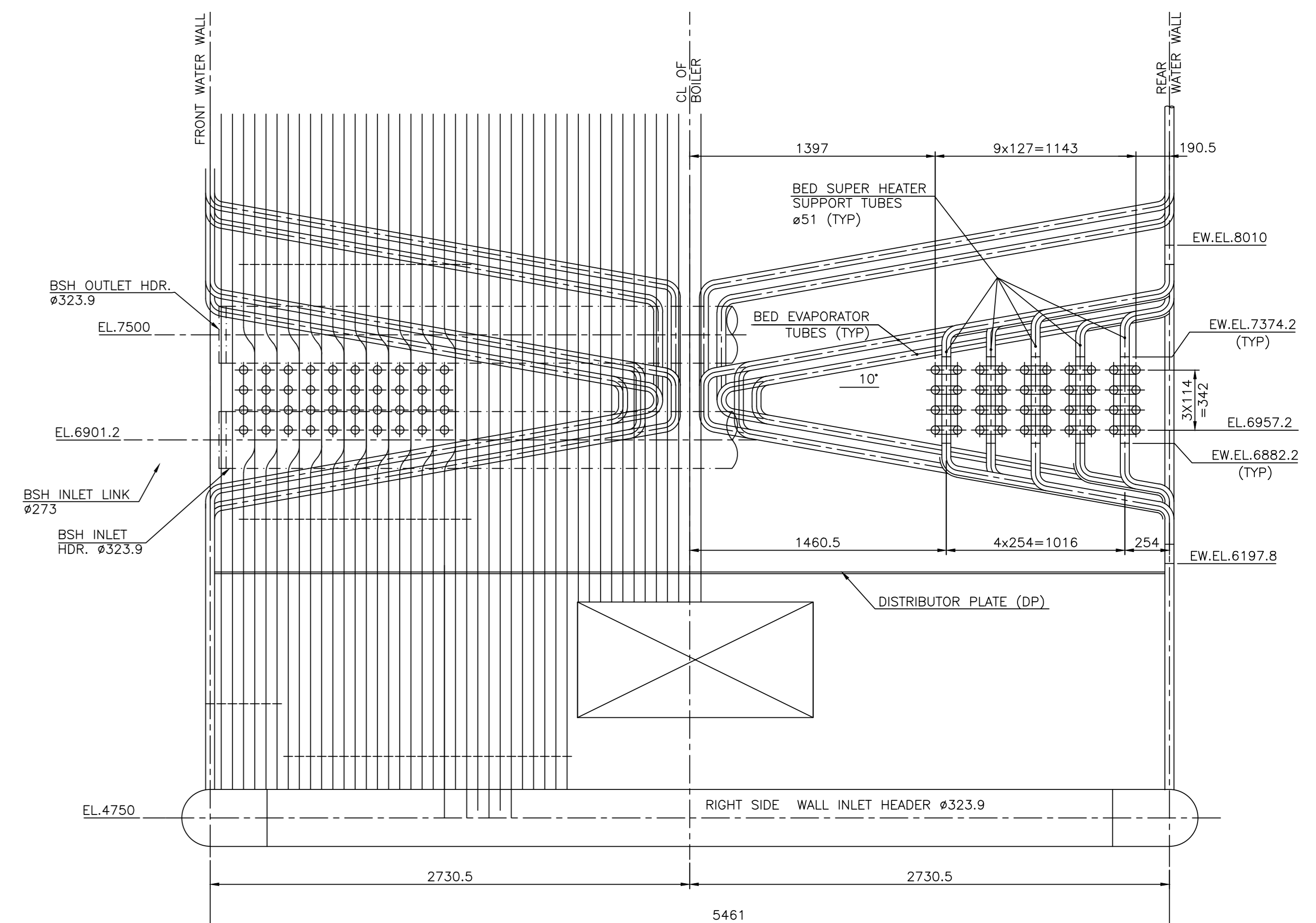


1.	PPA-SECTIONAL ELEVATION - - - - -	0-00-521-91910
2.	PPA-BED EVAPORATOR TUBES (REVISED) - - - - -	0-00-521-92060
3.	PPA-BED SUPER HEATER ARRANGEMENT- - - - -	0-00-521-35210

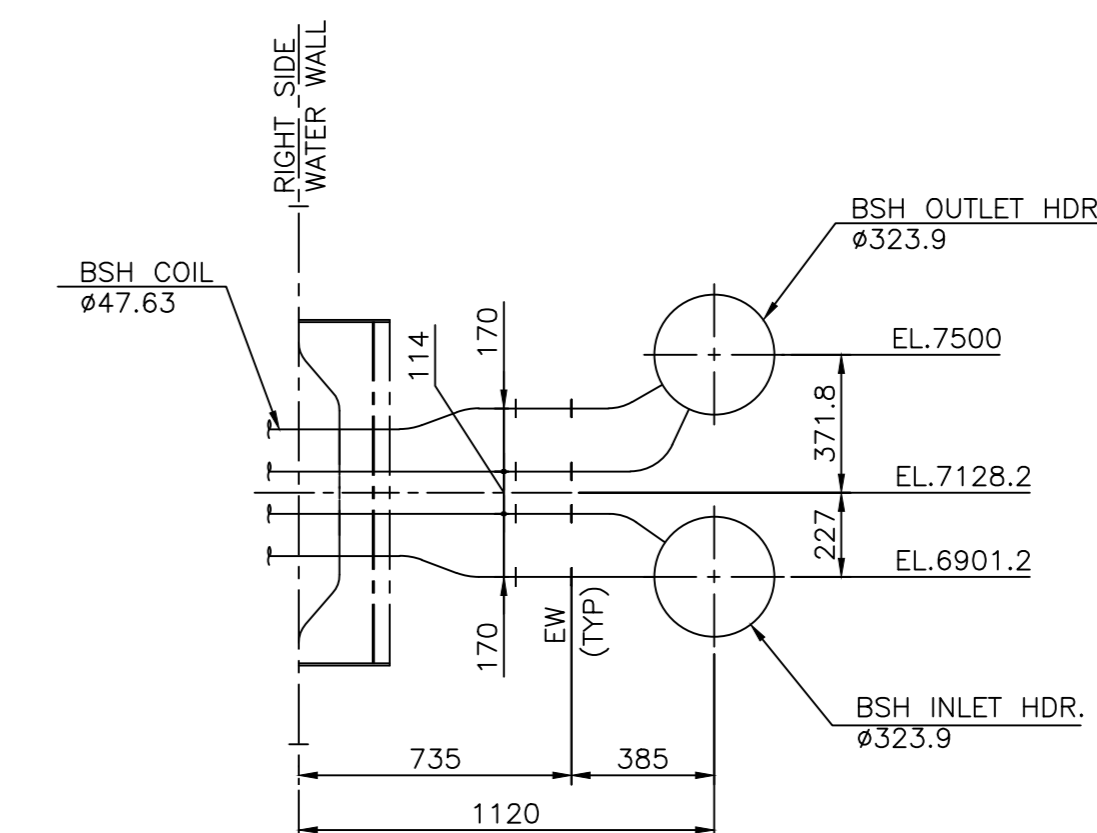
				CUSTOMER No. 4402, 4403	
CAUTION: THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEV. ELECTRICALS LIMITED. IT IS TO BE USED ONLY FOR THE PROJECT AND IN NO WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.				CUSTOMER <div style="text-align: center; font-size: 1.2em; font-weight: bold;">M/S BIRLA CELLULOSIC</div>	
				PROJECT <div style="text-align: center;"> BC- AFBC BOILER - KHARACH, 2 x 100 T/H : 65 Kg / Cm² (g): 485°C </div>	
REV 01	DATE 30.05.1985	ALT.D K.PALANIAPPAN CHD M.HARIDASAN APPROVED M.HARIDASAN		 361-245/A	
AS PER BPP TRANSMITTAL AND LAYOUT INPUT LINKS ARE REROUTED.		<div style="text-align: center; font-weight: bold; font-size: 1.1em;">BHARAT HEAVY ELECTRICALS LTD.,</div> <div style="text-align: center;">BOILER PLANT UNIT, TIRUCHIRAPALLI-620 014.</div>			
		DRAWN K.PALANIAPPAN CHECKED M.HARIDASAN APPROVED M.HARIDASAN DATE 07.05.2019	TITLE PPA-SUPER HEATER -II, BED SH. INLET AND OUTLET LINK ARRANGEMENT		
		ALL DIMENSIONS ARE IN MILLIMETRES <div style="text-align: center;">  SCALE NTS </div>		DRG No. <div style="text-align: center; font-size: 1.1em;">0-00-521-35211</div>	
4				REV. 01	

TECHNICAL CONDITIONS OF CONTRACT (TCC)
Chapter-IX: Schedule of Rates and Quantities

Annexure III- Drg No. 0-00-521-35210





SECTION "B-B"



VIEW "A"

1. STUDDING IS TO BE DONE ON BOTTOM ROW OF BED SH. TUBES. FOR DETAILS OF STUDDING DRAWING NO.: TP-3-1-000-00561 SHALL BE REFERRED.
2. MODIFIED BED EVAPORATOR TUBES ARE TO BE STUDDED BOTTOM PORTION ONLY (NOT ALL ROUND)

1.	PPA-SECTIONAL ELEVATION	- - - - -	0-00-521-91910
2.	PPA-FURNACE BOTTOM ARRANGEMENT AND DETAILS	- - - - -	0-00-521-91915
3.	PPA-BED EVAPORATOR TUBES (REVISED)	- - - - -	0-00-521-92060
4.	PPA-SUPER HEATER -II, BED SH. INLET AND OUTLET LINK ARRANGEMENT	- - - - -	0-00-521-35211

CAUTION: THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF THE COMPANY. IT IS NOT TO BE USED DIRECTLY OR INDIRECTLY IN ANY WAY BEING DETRIMENTAL TO THE INTEREST OF THE COMPANY.	CUSTOMER	
	M/S BIRLA CELLULOSIC	
	BC- AFBC BOILER - Kharach, 2 x 100 T/H : 65 Kg / Cm ² (g): 485°C	
		BHARAT HEAVY ELECTRICALS LTD., BOILER PLANT UNIT, TIRUCHIRAPALLI-620 014.
K	DRAWN	T. KALANJAPPAN
	CHECKED	M. HARIDASAN
	APPROVED	M. HARIDASAN
	DATE	07.05.2019
ALL DIMENSIONS ARE IN MILLIMETRES  SCALE: NTS		TITLE PPA-BED SUPER HEATER ARRANGEMENT
DRG No.		0-00-521-35210
		REV. 01

0 SIZE

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Annexure IV PPA Approved Drawing

SCOPE COVERED UNDER R&M BOILER							
SL. No.	DESCRIPTION	NO. OF OPENING	TUBE SIZE	MATERIAL	DESIGN PRESSURE	DESIGN TEMP.	DRG. NO.
01	BED SUPER HEATER	—	ø47.63X6.3	SA213—T91	76 Kg./sq.ccm	605°	0-00—521—33210
02	SUPER HEATER—II LAST COIL REPLACEMENT		ø44.5X4.5	SA213—T22	79 Kg./sq.ccm	550°	0-00—521—33211

PROPOSED CHANGES :

1. IN SUPER HEATER STAGE-II BOTTOM LOOP REPLACED WITH NEW COIL.
2. NEW BED SUPER HEATER COIL ARRANGEMENT PROVIDED IN BETWEEN BED EVAPORATORS.
3. TO SUPPORT THE NEW BED SUPER HEATER COIL BED EVAPORATOR TUBES ARE MODIFIED IN THE SUPPORT LOCATION.
4. NEW LINKS ARE ROUTED FROM SUPER HEATER-II OUTLET HEADER TO BED SUPER HEATER INLET HEADER WITH DESH.
5. NEW LINKS ARE ROUTED FROM BED SUPER HEATER OUTLET HEADER TO EXISTING MAIN STEAM LINE.

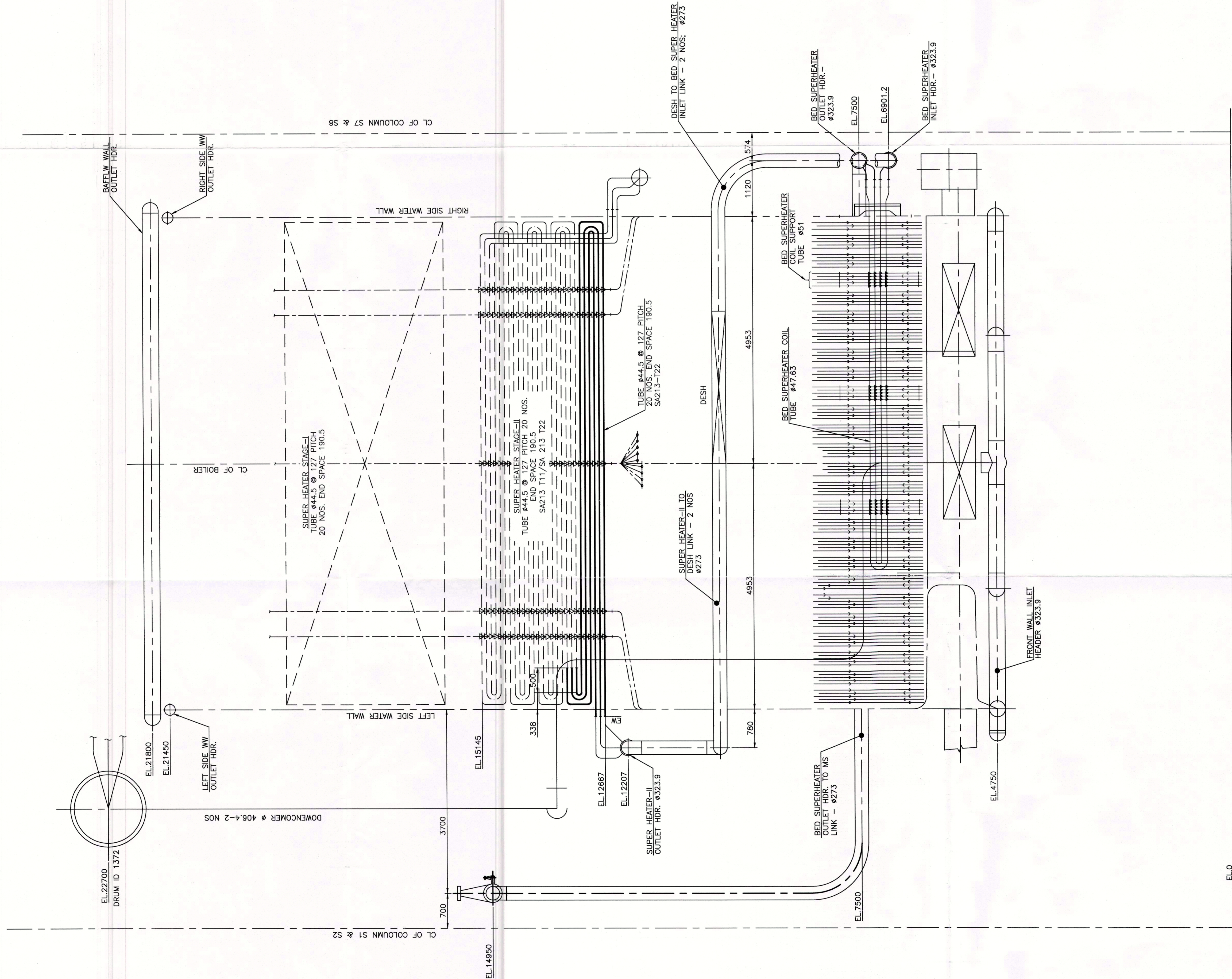
ADDITIONAL HEATING SURFACE AREA APPLICABLE
FOR BED SUPER HEATER PER BOILER

BED SUPER HEATER : 90 sq.m

BOILER DESCRIPTION:-

TOP SUPPORTED, SINGLE DRUM, NON REHEAT, NATURAL CIRCULATION
ATMOSPHERIC FLUIDISED BED & SEMI OUT DOOR UNIT.


BOILER REGISTRY NOS.	
Unit No.1	BLR-1- GT-3850
Unit No.2	BLR-2- GT-3763



SECTIONAL SIDE ELEVATION

REV	DATE	ALTD
01		CHD
		APPD

DATE	14.05.2019
APPROVED	M.HARIDASAN
CHECKED	M.HARIDASAN
DRAWN	K.PALANIAPPAN

ALL DIMENSIONS ARE IN MILLIMETRES	DRG No.	REV.
	SCALE NTS	0-00-521-35212
		00
		A0 SIZE

CUSTOMER No. 4402, 4403

M/S BIRLA CELLULOSIC

BC- AFBC BOILER - KHARACH,

2 x 100 T/H ; 65 Kg / Cm² (g); 485°C

BHARAT HEAVY ELECTRICALS
POWER PLANT UNIT TIRUCHIRAPPALLI-620 014

ANJAPPAN

RIDASAN

5.2019

E IN MILLION

SCALE 11

10

Annexure V - Penalty matrix

Penalty matrix (Annexure V)

Guideline for Penalty/ equivalent Suspension

Sn	Violation type	Sub type	Penalty	Suspension/ Termination
1	Fatal incident	Supervisor/ contractor responsible for LTI incident	Rs. 500,000	As per management decision
2	Major/ catastrophic incident (safety/ environment)	Operation/ system failure, inadequate maintenance leading to Major fire/ explosion, catastrophic incident, process up-set, force-shutdown (breakdown), bursting of plant/ pipeline/ reactor/ vessels, collapse of crane/ derrick/ hoist/ floor/ gallery/ roof/ bridge/ tunnel/ chimney/ wall/ building or any other structure	Rs. 100, 000	As per management decision
3	LTI incident	Supervisor/ contractor responsible for LTI incident	Rs. 50, 000	As per management decision
4	Non-compliance of Life Saving Rules	Violation of Life Saving Rule	Rs. 50,000	As per management decision
5	Non-reporting of incidences	Non-reporting of incidences	Rs. 20,000	2 days
6	Non-compliance of JSA/ SOP/ SMP/ PTW	Violation to safety measures defined in JSA, SOP, SMP and PTW	Rs. 20,000	As per management decision
7	Non-compliance of standard/ procedure requirement	Violation of safety standard such as non-compliance of LOTOTO, stand by persons, fire watchers, ground monitoring before excavation, non-use of secondary protection (e.g safety net), inadequate/ absence of machine guarding, use of substandard/ makeshift ladder, scaffold, Use of untested/ substandard/ damaged equipment, lifting tools & tackles, carrying load with the use of hydra, No use or substandard use of ELCB, unlicensed electrician deployment, substandard electrical equipment, bypassing	Rs. 20,000	2 days

Penalty matrix (Annexure V)

Guideline for Penalty/ equivalent Suspension

		<p>emergency- safety equipment, process interlock without authorization etc.</p> <ul style="list-style-type: none"> List is neither exhaustive for standard/ procedure violations/ unsafe acts nor limited up to as above identified 		
8	Use of substandard tools & equipment	Use, deployment of substandard/ makeshift/ damaged/ worn out tools and equipment	Rs. 10,000	1 day
9	Non-compliance of site specific rules	Violation of site specific rules for e.g. use of mobile phone at restricted areas, smoking, intoxication, sleeping, poor housekeeping, blocking access/ approach to emergency/ safety equipment, horseplay, violation of hold hand rail, shirt-in, loose clothing etc.	Rs. 10,000	1 day
10	Violation of critical/ lifesaving PPEs	Violation in use of critical/ lifesaving PPEs such as Full body harness with double lanyard with shock absorber, Arc flash suit, Fire proximity suit, Self-contained breathing apparatus, On-line air respirators, Gas cartridge mask etc.	Rs. 20,000/ per case	2 days
11	Unauthorized entry	Entry without gate pass, authorization, in restricted zone,	Rs. 10,000/ per case	1 day
12	Violation of mandatory PPEs	Violation in use of mandatory PPEs such as Safety helmet, safety shoes, safety goggles, reflective jackets/ vest etc or use of torn PPE's	Rs. 1000/ per PPE	--
13	Violation of Job/ Area specific PPEs	Violation in use of Job/ Area specific PPEs such as earplug during breaking, drilling, work near blower area, no use of face shield during grinding,	Rs. 1000/ per PPEs	--
14	Road safety violations			
(i)		Vehicle over speeding inside the plant premises	Rs. 1000/ per case	
(ii)		Vehicle not following Circulation Plan	Rs. 1000/ per case	
(iii)		Vehicle driver after consumption of Alcohol	<ul style="list-style-type: none"> Driver details will be 	

Penalty matrix (Annexure V)

Guideline for Penalty/ equivalent Suspension

			<p>recorded at the security gate</p> <ul style="list-style-type: none"> • Driver will be suspended for the next 7 days. Day 1 will start from same day • Entry to be restricted. • Penalty of 5000/-
(iv)		Vehicle parked without wheel stopper	Rs. 500/ per case
(v)		Driver violating mandatory PPEs (Safety Helmet, Safety Shoes, Reflective Jacket)	Rs. 500/ per case
(vi)		Driver/operator using mobile phone while driving	Rs. 500/ per case
(vii)		Driver/operator smoking inside the plant	Rs. 500/ per case
(viii)		Driver/operator driving with invalid license	Entry restricted 5000/- penalty
(ix)		Vehicle driving by unauthorized person	Rs. 5000/-
(x)		Driver uncovering and covering tarpaulin, closing and opening lid- at other than its designate place	Rs. 5000/ per case
(xi)		Damage to company's property	Rs.10,000/- and cost of equipment / repairing
(xii)		Rash driving / operation	Rs. 1000/ per case
(xiii)		Vehicle operation by physically challenged person	Rs. 1000/ per case
(xiv)		Seat Belt not used while driving	Rs. 1000/ per case
(xvi)		Parking of vehicle in No parking Zone / area	Rs. 1000/ per case
(xvii)		Sleeping / Napping near/around/under/ in the vehicle	Rs. 1000/ per case
(xviii)		Violation of site specific instructions / displayed norms etc.	Rs. 1000/ per case
(xix)		Performing maintenance of any vehicle inside the plant where he is not authorized	Rs. 5000/ per case

Penalty matrix (Annexure V)

Guideline for Penalty/ equivalent Suspension

(xx)		Pushing vehicle in unsafe way	Rs. 1000/ per case
Other penalty			
1		Vehicle not maintained as per OEM guidelines and record, history not maintained accordingly	5000/- per case
2		Not carrying out periodical inspection of lifting tools /tackles/ forklift by competent person and none availability of records as per Factories Act 1948.	5000/- per case
3		Tools like portable grinder , welding machine etc. are not certified and tagged as per periodicity	2000 /- per case
4		Violations other than above like any unsafe condition, unsafe act having potential severity of 3, 4, or 5 as per CSM procedure of BC.	5000/- per case

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Annexure VI - Contractor Safety plan Birla Cellulosic-Kharach

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 1/

Contractor Safety Plan

Birla Cellulosic– Kharach

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 2/

TABLE OF CONTENTS

Section No .	Description	Page No.
1	Introduction	
2	Communication plan for this document	
3	life saving rules	
4	Safety policy	
5	Health policy	
6	Site specific safety rules	
7	Gate passes for entry & safety training	
8	Medical checkup	
9	Contractor site Incharge /supervisor & general staff	
10	Contractor site safety officer/ supervisor	
11	Tool box talk meeting	
12	Personal protective equipment's (PPE's)	
13	Statutory requirements as per Factory act 1948	
14	Risk assessment & permit to work system	
15	Hand tools & Power tools	
15.1	Job made tools	
16	Hoist ,lift ,lifting M/c and lifting tools & tackles	
17	Materials handling equipment's	
18	Use of vehicles including truck /tractors/ jeeps	
19	Facility for forklift battery charging area /room	
20	Sulphur feeding & unloading through JCB	
22	Diesel drum storage & transportation system	

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 3/

23	Barricades & display signs	
24	Electrical Installation	
24.1	Fuses	
24.2	Electrical work	
25	Manual lifting & handling	
26	Excavation	
26.1	Caution & barricading for Excavation	
27	Concrete vibrators	
28	Hot work	
28.1	Welding M/c	
28.2	Welding activity	
28.3	Gas cutting	
28.4	Compressed gas Cylinders	
29	Work at height	
29.1	Fall Protection	
29.2	Ladders	
30	First aid box	
31	Scaffold general guideline	
31.1	Scaffold qualification	
31.2	Safe erection of scaffold	
31.3	Types of scaffolds	
31.3.1	Independent tied scaffold	
31.3.2	Mobile scaffold	
31.4	Scaffolding Inspection	
32	Confined space	

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 4/

33	Crane	
34	LOTOTO	
35	Construction site safety rules	
36	Incident reporting	
37	Floor Hole covering policy	
38	Fire protection	
39	Emergency Procedure	
40	Other terms & condition	
41	Plan for general inspection	
42	Housekeeping Guideline	
43	Prohibition of Photography	
44	Prohibition of mobile Phone in plant premises	
45	Penalties	
46	Audit & inspections	
	FORMS & CHECKLIST	
1	Crane Inspection checklist	
2	Certification of understanding safety requirements	
3	Accident / Incident / NMC reporting	
4	Job safety analysis & Take-2	
5	Checklist for chain pulley block inspection	
6	Checklist for rigging equipment	
7	Full body safety harness checklist	
8	Self declaration of Vehicles by contractor	
9	Commitment letter for driver	
10	Excavation safety checklist	

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 5/

1.0 INTRODUCTION :

Birla Cellulosic – Kharach , as a principle employer, Endeavour to care for the health, safety of all personnel and try to ensure minimum degradation of environment by our acts. We remain attached to our commitments and ensure that all who get associated with us follow the laid down guide lines described by us as well as the Government. As a minimum (boundary is not defined and contractor may inculcate improved acceptable methodology to achieve even further better results), we demand the compliance of following contract Safety Rules from all our contractors.

We declare this as a move to achieve “Zero Fatality, Zero Injuries & Zero Excuses” with the "Goal of Zero Harm", where we will ensure that our societal responsibility is fulfilled without any reservations.

This document intends to be part of each of our tender document so that bidders understand the safety expectation of the company. The plan outlines basic safety expectations from designers, suppliers, commissioning agent, Contractor / executer fabricators and all our consulting engineers. This document describes the minimum requirement.

Contracting partners are advised to go through the company safety expectations and should get ready for meeting the expectations. Any explanation if sought can be clarified as part of Contract Awarding Process.

2.0 COMMUNICATION PLAN FOR THIS DOCUMENT

This document intends to be part of each of our tender document so that bidders understand the safety expectation of the company. The plan outlines basic safety expectations from designers, suppliers, commissioning agent, Contractor / executer fabricators and all our consulting engineers. This document describes the minimum requirements and is supplemented with our “Contract Safety Management” which outlines our corporate level safety standards and practices. This manual does not supersedes any legal bindings / requirement which in any case needs to be complied with, as being good corporate citizen, we do not expect any violation on legal requirements. Contracting partners are advised to go through the company safety expectations and should get ready for meeting the expectations. Any explanation if sought can be clarified as part of Contract Awarding Process.

3.0 LIFE SAVING RULES

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 6/

Aditya Birla, Pulp & Fiber business has established mandatory Life Saving rules to create positive safety culture and achieve our goal of "Zero Harm". Unit shall implement appropriate recognition and consequence management process to ensure compliance.

1. All incidents shall be reported, investigated and recommendations must be acted upon in a time bound manner.
2. All operations must be carried out within Safe operational limit(s) and complying with Job Specific Personal protective equipment requirement.
3. Work with a valid work permit when required. Prior Risk assessment, Job Safety Analysis (JSA) shall be necessary for all activities covered under site's Permit to Work (PTW) system.
4. Use energy isolation process (LOTOTO) prior to commencing any maintenance or servicing work in which unexpected energization or startup of the machines or equipment, or release of stored energy may occur.
5. Obtain written authorization before entering into a Confined space.
6. Secure against a fall while ascending, descending or working at height equal to 1.8 meter or more.
7. Obtain written authorization before disabling safety critical equipment.
8. Obtain authorization on written lift plan before lifting material to ensure safety and prevention of people movement under suspended loads.
9. Wearing a seat belt (in 4 wheelers irrespective of seat position) or a crash helmet (in case of 2 wheelers) is compulsory for all; at any time a vehicle engine is running; and
10. Driving under alcoholic or intoxicated conditions, over speeding, use of mobile phone while driving is prohibited.

The above rules are mandatory. Additional rules may be framed by respective Units based on the nature and scale of the risks of their activities and services.

4.0 SAFETY POLICY

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 7/

A safety policy is a written statement by an employer stating the company's commitment for the protection of the health and safety of employees and to the public. It is an endorsed commitment by management to its employees regarding their health and safety. You need to fulfill the requirement of Safety and Health Policy in effective manner.



5.0 Health Policy

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 8/



HEALTH POLICY

Aditya Birla, Pulp & Fibre business and associated Group companies recognises that healthy and productive personnel are at the center of sustainable development and occupational health is an important means for social and economic productivity of people, companies, communities and nations. We are committed to the prevention of occupational diseases and the protection of health and well-being of our employees, contractor employees, agency staff, visitors and society at large.

We shall endeavour to:

- Maintaining positive legal compliance to applicable health regulations;
- Ensuring access to basic occupational health services and providing competent and adequate resources including personal protective equipment;
- Identifying process exposure & other occupational health hazards and assessing & managing occupational health risks to as low as practicable at all facilities;
- Proactively addressing occupational and community health issues during the planning phase of acquisitions, mergers and new projects;
- Pursuing excellence through continual improvement of infrastructure and business processes, promoting best work practices and innovations to minimize exposure hazards to health;
- Ensuring adequate emergency response capability in case of medical emergency;
- Measuring, monitoring and benchmarking of health surveillance, sickness, absenteeism, rehabilitation & recovery programmes as required;
- Safeguarding medical confidentiality; and
- Fostering awareness through health education & training and health promotional activities.


Managing Director
Pulp & Fibre Business

6.0 SITE SPECIFIC SAFETY RULES

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 9/

A site-specific safety rule is designed by keeping the specific hazards that are most common in the work place in mind. As with the changing work place, the nature of hazards also changes.

Site specific safety Rules

Life of our employees and business associates are of paramount importance for us .in line with our safety principles, safety policy, we have our site specific safety rules .it must be adhered by all .These are as follows .

1. To take adequate training on related safety standards before starting any work.
2. To comply with all relevant standard in totality while performing any work.
3. Do not enter in plant premises without valid gate pass.
4. To obtain permit, and understand HIRA/JSA before starting work.
5. To use all required PPEs (Mandatory as well as job specific) while carrying out any work & to use all minimum PPE's while in the factory area.
6. To report any unsafe act / condition /near miss/ Incidents immediately.
7. Putting hard barrication on excavation & other working area.
8. Do not enter into any barricaded area without authorization.
9. Do not climb on any ladder which is not properly secured.
10. Use fall arresting and fall restraint devices whenever there is potential of fall especially above 1.8 M height.
11. Restrict use of Red Tag/Unapproved / Incomplete scaffolding for any other purpose except scaffolding erection.
12. Ensure all electrical outputs are separately connected with 30 mA ELCB.
13. Shifting of any materials by using any kind of hydra, crane is strictly prohibited.
14. Do not walk under a suspended a load.
15. Wear your seat belt for while driving or sitting in a motor vehicle .
16. While driving do not use your phone and do not exceed speed limits
17. Obtain authorization before entering a confined space.
18. Do not touch any moving parts of machinery.
19. Not to work any kind of maintenance /jamming removal work on any energized equipment.
20. To use right tools in work &work in correct way .

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 10/

21. Obtain authorization before overriding or disabling safety critical equipment .
22. No alcohol or drug while working .
23. Wearing of crash helmet for both while riding
24. Speed limit inside the plant premises for vehicles is 20 Km/H

Note : Breach of any of the SSSR (Site specific safety Rules) lead to strict disciplinary action .

7.0 GATE PASSES FOR ENTRY & SAFETY TRAINING

1. Contractor must go in sequence like- Approval of respective HOD, Respective Section Head for trade/skill test ----Personnel dept ----security dept for temporary entry in the plant, Medical examination ----- then attend the Site Safety Orientation training, for entry gate pass process.
2. A Gate Pass with individual photograph, Name with other required information will be issued to all Contractor employees assigned to work on BC site by personnel and IR department.
3. Training passport and training record of individual shall be maintained by contractor and will produce as and when demand by BC officials.
4. Contractor shall ensure that his workmen are getting job specific training before deploying their workmen for the job and records are maintained for each individual.
5. Contractor shall ensure that all other training/ Safety training organized by BC time to time shall be attended by site crew.
6. Contractor shall ensure that specific training like defensive driving and skill assessment of operators of fork lift / other vehicles from competent agency are taken before deploying them on the job at site and records are submitted to concern department. No new entry shall be allowed prior approval of user department.

8.0 MEDICAL CHECK-UP:

Contractor shall arrange for medical check-up of all his employees before employment and should be medically fit as per our guideline.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

<p style="text-align: center;">Birla Cellulosic - Kharach Grasim Industries Limited</p>			
<p style="text-align: center;">Contractor Safety Plan</p>			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 11/

Eye sight of the employees in the following category shall be examined every six months if age is more than 40 years and shall be examined in every twelve months if age is within 40 years.

- Crane operators
- LMV/HMV drivers (Includes fork lift, jcb , tractors, truck , dumper etc)
- Heavy earthmoving equipment operators
- Other (as decided by BC management)

You shall ensure that your employees have undergone the required initial (before issuing the entry gate pass) and periodical medical check up as per requirement of BC. You have to ensure that periodical Medical check up is completed before renewal of gate entry pass.

All the drivers / operators engaged for vehicle operation shall undergo eye testing and examination and vision test by qualified ophthalmologist once in 6 month. Report of such medical examination shall be submitted to personnel and IR department and hospital for record. Contractor shall also maintained records of medical examinations.

9.0 CONTRACTORS SITE INCHARGE/ SUPERVISIORS & GENERAL STAFF

Contractor or his site incharge and supervisors, general staff, in charge of job at our site are responsible for the safe performance of the work of those they supervise. They must set an example for their fellow employees by being familiar with applicable sections of the Site / Project safety , health and environment Program and ensuring that all site activities are performed with safety as the primary objective. Each Supervisor or job incharge is responsible and will be held accountable

Contractor Site incharge is responsible, and will be held accountable, for the safety of their work crews and for ensuring that all equipment, materials, tools and procedures remain in compliance with job site requirements, including:

Holding supervisors accountable for safety and actively promote safe work performance on the part of all employees.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 12/

Participate in and cooperate with all safety program requirements to be implemented in order to meet safety objectives of BC.

Provide timely reporting of safety performance and incidents

Maintain information regarding training and education in safety required by such programs. Stopping unsafe work (acts and/or conditions) immediately until corrective action can be taken.

Each supervisor will proactively participate in the safety program by observing, correcting unsafe acts, and recording these observations.

10.0 CONTRACTOR SITE SAFETY OFFICER /SUPERVISOR

You shall provide one competent full time qualified safety Officer at site, Safety officers & safety steward minimum qualification and experienced as per below mention criteria .

Deployment of Safety Officer & Safety Stewards	
Sr.No	Description
1	Deployment of safety officer at site for the manpower strength up to 100 nos. One for every 100 numbers. Educational Qualification: B.Sc./Diploma in any discipline + 2 years of experience in safety and 1 year full time diploma in industrial safety from recognized institute.
2	Deployment of safety steward at site for One for every 40 numbers. Educational Qualification: ITI + 2 years of experience or (10+2) + 3 years of experience in safety and Part time or full time diploma in industrial safety from recognized institute.

However In case, work is carried out in all three shifts with a work force of 40 or more in each shift, contractor must provide one safety supervisor in each shift.

The BC safety team will carry out the selection procedure based on above criteria before deploying.

Contractor/Subcontractor safety steward / Officer will work with BC safety team on matters related to Safety and take participation all safety related programs and aspects.

11.0. TOOL BOX MEETING

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

<p style="text-align: center;">Birla Cellulosic - Kharach Grasim Industries Limited</p>			
<p style="text-align: center;">Contractor Safety Plan</p>			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 13/

Contractor shall ensure Daily Tool Box Talk with workmen first thing in the morning, prior to start of work. It is also intended that the contractor supervisor/foremen / site Incharge include safety planning / JSA as the first topic of discussion during daily work planning meetings with their crews. Any near miss, incidents, accident case happened at site or happened in similar nature of job should be discussed in the meeting. Contractor shall ensure that all the recommendation arises out of learning from any incidents are implemented at his ownership area also within reasonable time.

12.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

This procedure outlines the guidelines pertaining to the issue and use of personal protective equipment (PPE), including safety shoes, Safety helmet, gloves, hearing protection, eye protection and other job required safety appliances.

No workman shall be allowed inside the plant/ factory premises without mandatory PPE's.

At the entire plant site, following is the list of mandatory PPEs,

- a. Safety helmet
- b. Safety Shoe
- c. Reflective Jacket.
- d. Safety goggle

Contractor shall provide and ensure following PPE are always kept by work crew at site for use as and when required.

- a. Hand gloves
- b. Ear Plugs
- c. Dust mask

Contractor will provide all required personal protective equipment (PPE), free of charge, to all of their employees including but not limited to the following – Eye/face protection, safety footwear, proper gloves, full body double lanyard safety harnesses, hearing protection and safety helmets etc. Birla Cellulosic –Kharach reserves the right to levy a penalty on the contractor for non- compliances as per penalty matrix. However in case

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 14/
-------------------------------------	---------------	-----------------	-----------

the contractor cannot provide the PPE, it will be provided by BC-Kharach and back charge the contractor 1.20 times the cost of the same. Other job specific PPE's shall be ensure and enforced the use as per job requirement.

Note : All PPE shall conform to applicable BIS/DGMS/DIN/CE specification and maintained in good condition.

S.No.	Types of PPE's	To be provided to	PPE Description / Specification
1	Safety helmet Blue colour	All Workmen in plant and colony	Safety Helmet,-Yellow, Karam / concord / Honey well Make,Model- confirm To Bis Specn No.is 2925-1984, EN 397, CLI, DGMS Having Ratchet Adjustment Head Bend ,Well balanced light weight Shell with new eight - point connecting head attachment, Material: High Density Polyethylene (HDPE) shell or fiber
2	Safety helmet with attached welding shield	Welders	Safety Helmet, Attachable Welding Shield With Glass Make Karam Model No. ES 71 ,Confirm To En175, 166 And ANSI Z87.1. With blue Colour Helmet Should Confirm To Bis Specn No.is 2925-1984, EN 397, CLI, DGMS Having Ratchet Adjustment Head Bend
3	Safety helmet with face shield	All workmen who are engaged in Grinder/ Gas Cutter	Safety Helmet, Attachable Shield With visor Make Karam Model No. ES 51 .With Yellow Colour Helmet Should Confirm To Bis Specn No.is 2925-1984, EN 397, CLI, DGMS Having Ratchet Adjustment Head Bend
4	Full body safety harness	To all workmen deputed Above 1.8 Mtr. Height	Safety harness Full Body With Two Front Textile Loops And Broad Chest Strap Retainer .designed Buckles With Better Rounded Contours Which Ensure 100% Safe Locking.attached With Karabiner & Double Polyamide Rope Lanyard 12mm Dia With 2hook Bond Pn-131.i.e Steel Scaffold Hook,self Closing Auto Locking (50mm opening)make-karam Pn-22 K With double Pn-206."ce" Marked Confirming To En: 361:2002,.en-362:2004,en:354:2002.with Certificate Of Test , Exam And Inspection By Competent Person Under Factory Act 1948 It should be fitted with energy absorber.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 15/
-------------------------------------	---------------	-----------------	-----------

5	Dust mask	Welding/ Gas Cutting/ Grinding/ House Keeping & Dusty Area.	Dust Mask Vinus Make Model- 410slv With Exhalation Valve Grey / White Color.en149:2001, Grade -ffp1.
6	Ear plug	For all workmen engaged in Grinding, Breaker Operator & Noisy Area	Ear Plug, ANSI / EN approved , IS 9167 - 1079 for 31 DB, Make- M/s Karam, Corded Reusable Ear Plug, Model No. EP-04
7	Safety glass for general use	For all workmen	Safety Glasses, Clear glass, EN 166 , ANSI Z87.1 - 2003 for high impact, Make- Karam, Model No. ES-005(Clear)
	Safety splash goggle	For Chemical handling	Safety glass
8	Gas cutting goggle	Gas Cutter	Glass Safety, Karam Make Es-003 Eye Wear, For Gas Cutters Goggles M/s P.n.safetech
9	PVS apron for chemical	For Chemical Handling	PVC Apron for Chemical Handling, EN 14605 (Type 3 & 4) , IS 4501 - 1981, Make-Micr chem/ KARAM
10	Rope grab fall arrestors with rope	Work Above 1.8 Mtr.	Fall Arrester With Hook Pn 112 (c),for Rope. "ce" Marked Conforming To En-353-2:2002 Make Karam Pn-2000a
11	Retractable fall arrestors	Work Above 1.8 Mtr.	Retractable Type Fall Arrester, CE CERTIFIED, Confirms to EN 360, Make- Karam/ Unicare
12	Safety net	For the safety of workmen working at height	Safety Net, Make- Unicare, Karam, IS approved, IS 11057 - 1984, Double Twine safety net of 1 mm polypropelene rope with a mesh of size 20 mm x 20 mm and border rope of 12 mm polypropelene rope and at the intervals of 1.5 mtrs with tying arrangements.
13	Cotton hand gloves	For all workmen engaged in handling of material	Hand Gloves, Kilimanjaro Pd Kgb-001-r-xl, Code-461815042452, Seamless Knitted Esteron. Glove,cotton Plating And Pvc Dots On The Palm Side.a Length Of 25.4cm,minimum Weight Of 80 Gm/pair,certified As Per European Council Directive 89/686/eec And Have "ce" Marking, Make- Atlas
14	Leather welding hand	For all welders	Welding Handgloves, Leather, CE Approved to EN 388 (3,2,4,3) EN 407 (4,1,3,X,4,X) make- Ansell Atlas/ Honeywell/ midas

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 16/

	gloves sleeves full		
15	Cut resistance hand gloves	For workmen handling the metal and sharp edge material	Hand Gloves, Ruby Nitrile Ghe- 001-r-l, Code- 461815042455, Seamless Knitted 13g Nylon Or Synthetic Glove Dipped With Acrylonitrile-butadiene Rubber Which Provides Excellent Dexterity, En388, "ce" Mark, make- Ansell Atlas/ Honeywell/ midas
16	Fluorescent Jacket	FOR ALL	Reflective Safety Vaste (Flouroscent Orange) , Make- M/s Leslico, M/s Karam/, Reflectosafe
17	Heat resistance hand gloves	For workmen enh\gged in hot material handling	Kevlar Handgloves Approving Agency – Ce Approved To En 388 (2,5,4,x), En 407 (4,2,4,x,1,x) Make – Joseph Leslie & Co
18	Welders Dangari	Dangri for welders	As per BC standard
19	Chemical Splash Goggle	During Chemical handling	Safety Glasses, Clear glass, EN 166 , ANSI Z87.1 - 2003 for high impact, Make- Karam, Model No. ES-005(Clear)
20	Gum boot	For workmen engaged in dust / concreet/ raw material handling, loading and unloading/ working in wet condition	PVC - Gum boot with steel toe ISI marked IS : 12254:1993 & DGMS approved, Make- Karam/ Armour /liberty or equivalent
21	Safety Helmet (blue)	For electricians	Safety Helmet,-blue, Karam / Honey well Make,Model- PN-521, confirm To Bis Specn No.is 2925-1984, EN 397, CLI, DGMS Having Ratchet Adjustment Head Bend ,Well balanced light weight Shell with new eight - point connecting head attachment, Material: High Density Polyethylene (HDPE) shell or equivalent. Test certification for min 22 kv is must.
22	Electrical Hand gloves	For electricians	Electrical Hand gloves - up tp 500 V - Class - 00 , (Class - 04 - 40 KVA), Model- EN 60903, Make- Atlas
23	Safety Shoes	For all workmen entering inside the plant and colony	Safety Shoes, ISI marked , , IS: 15298 : 2002 & DGMS approved , EN 345, PU sole made with PUF technology, Oil, Heat resistance , Excellent chemical oil resistance, Anti skid sole , with ISI marked steel toe, Make- / Liberty / Armour/ Karam, High ankle safety shoes.

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 17/
-------------------------------------	---------------	-----------------	-----------

24	Electrical resistance safety shoes	For workmen Electrical	Electrical Safety Shoes, ISI marked , IS: 15298 : 2002 & DGMS approved , EN 345, For prevention against Electrical shock proof - 31 KVA resistance proof, Make- Armour/ Karam/ Liberty
25	Gas mask / Escape mask	While chemical handling	Venus / Honeywell make for relevant hazards

Note : Sikh community must wear the turban (more than 5 feet) or else safety helmet is mandatory.

13.0 STATUTORY REQUIRMENT As Per Factory Act 1948 .

1. All the lifting equipment's, lifting tools & tackles i.e Chain blocks, wire rope , D-shackles ,crane & hydra, forklift ,etc shall be load tested by competent person once in a year.
2. All the lifts & hoists, EOT crane etc shall be inspected by competent person in every six months and after every alteration.

Note : Testing certificate of the lifting tools &tackles shall be submit to owner department before first use at site and then periodically needs to be submitted.

14.0 RISK ASSESSMENT & PERMIT TO WORK SYSTEM

- Risk assessment shall be carried out by your team before commencing the job / activity.
- You shall communicate the assessed risk and its remedial measures to your workmen before engaging on the job and provide a copy to concern department.
- Accordingly to the outcome of the risk assessment and suggested control measures are to be strictly followed & bound by you and your workmen for its successful implementation.
- Role, responsibility and accountability shall be fixed before commencing the job / activity.
- All routine & non-routine contract jobs shall be carried out in full compliance with the **BC Work permit system**.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 18/

- Contractor supervisor/ in charge shall be equally responsible for ensuring compliance of clauses of Work Permit system, single point lesson, SOPs, and signage / warnings displayed at appropriate locations.
- Exclusions from the WORK PERMIT system are limited only to routine jobs like canteen, gardening, security, street sweeping, and manual loading / unloading into vehicle and any other which has been identified by the concerned department.
- Before commencing the job, the contractor shall ensure that all SOP's are developed and communicated to site crew in case of routine jobs and for non routines job PTW and JSA shall be followed and implemented as per BC work permit system.
- All contract employees shall use personal protective equipment (PPE) according to the risk assessment.
- Contractor's supervisor shall review safety aspect for the on going job/ activity on daily basis.

15.0 HAND TOOLS & POWER TOOLS

Inspection of tools and equipment used by contractors is required, whether the tool or equipment is contractor-owned or rented. For most tools, such as wrenches, hammers and powered-hand tools, a "before use" inspection by a 3rd party and inspection of certificate submit to respective HOD/SH and safety department after which it will be validated by our internal team by pasting the sticker. This includes electrically-powered hand-tools and electrical cords when used in conjunction with ELCB. Some of following condition to be ensure that use of the portable hand tools at site.

1. It is the responsibility of the person using the tool or equipment to ensure that it is safe to use and has been inspected.
2. Electric power-operated tools shall be of the approved double insulated type, or grounded in accordance with good electrical practice
2. Hand and power tools must be maintained in a safe condition, whether furnished by the contractor or by the employee.
3. When power-operated tools i.e portable hand grinder are designed to accommodate guards, they must be equipped with appropriate guards when in use. Belts, gears, shafts,

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 19/

pulleys, sprockets, spindles, drums, flywheels, chains and other moving parts of equipment must be guarded if the parts are exposed to contact by employees.

4. Hand –held powered tools shall be equipped with a momentary contact “ON-OFF” control switch.

5. Safety guards shall never be removed when a tool is being used.

7. Hand tools shall be replaced or repaired when found defective.

8. All electrical installations should be connected with ELCB of sensitivity rating of 30 mA as safety measure.

For more details the ABG guide note on Portable hand and Power Tools (ABG/SUST/ GN/ 35) is applicable and need to be followed at BC.

Note : All electrical equipment including hand tools, portable electrical tools, welding machine must be inspected and by 3rd party and certificate of all portable hand tools submit to Department and safety before first use at site.

15.1 JOB MADE TOOLS

Tools made on the job are strictly forbidden. Contractors must provide their employees with tools that are manufactured to meet standard product safety commission requirements. In the unlikely event a special tool must be used, the reason will be identified in written and agreed to by BC- Kharach owner department prior to use. Agreements will be based on a design presented by the contractor. Only fiber handle hammers are allowed to use at site.

16.0 HOIST, LIFT,LIFTING MACHINE,LIFTING TOOLS&TACKLES AND OTHER

It is the responsibility of contractor to ensure that:

- All lifting machines, tools and tackles, wire ropes, slings, chains, shackles, cranes, pulley blocks, shall be of good condition and shall be tested by Local Government Approved Competent Person (Govt. Approved Competent Person).
- Test certificates shall be maintained by the Contractor.
- All such equipment's shall be provided with identification plate and safe working load. Inspection, examination and certification (from the Govt. Approved Competent Person) is must once in a year.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 20/

- Copy of all test certificates should be submitted to executing department BC-Kharach as early as possible after test is over. One copy should be available with the equipment as ready reference.
- BC-Kharach reserves the right to accept / reject the test certificate with valid justification. No tools & tackles, equipment, which require the test certificate as per statutory requirement, shall not be allowed to use unless obtain prior approval from BC-Kharach in writing.
- Attempt of any modification or tampering of any component of lifting machines, tools and tackles, wire ropes, slings, chains, shackles, cranes, pulley blocks, etc. may affect the internality of the said lifting appliances and hence the safe working limit may be limited. Use of such lifting appliances is prohibited unless certified by Govt. Approved Competent Person in such condition and / obtain prior approval from BC-Kharach in written.
- Contractor has to ensure the maintenance of all such lifting tools and tackles by OEM and records of all maintenance of individual equipment's shall be maintained.
- All such records shall be produced as and when demand by BC officials.

Note : Contractor shall ensure that all the lifting tools and tackles ,machineries, electrical portable tools prior to taking at the site must be inspected and approved by BC- Kharach electrical / workshop team and shall provide identification no. and tag on the inspected materials.

17.0 MATERIALS HANDLING EQUIPMENT

Contractor shall ensure that all mobile lifting equipment like cranes, hydra used by them at site has valid documents- registration, insurance , test certificates by competent person , PUC, and Fitness certificate obtained from competent person. The SWL, Date of Testing & Due Date for Testing clearly marked on the body. The crane operator shall have valid driving license. The requirements are given in **Material lifting operation (Crane & Hoists) ABG/SUST/TS/32 is applicable which need to be followed. The vehicles roadworthiness checklist attached for Hydra / crane will be applicable before allowing any crane / hydra , tractor , truck etc inside the plant.**

18.0 MATERIALS SHIFTING THROUGH FORKLIFT

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 21/

Contractor shall ensure that materials shifting equipment like Forklift used by them at site has valid documents- registration , insurance , test certificates by competent person , PUC, and Fitness certificate obtained from competent person. The SWL, and other information clearly marked on the body. The Forklift operator shall have valid driving license. All the requirements given in Forklift safe operation in mention in **Forklift Safety Standard – ABG/P & FB/ SHE/FS/2013** is applicable and to be followed .Forklift must be inspected on monthly basis ,as per given Annexure –D (Forklift Inspection checklist) and maintain record of inspection.

Contractor shall ensure maintenance of all vehicles as per OEM guidelines / checklist and maintained the records of the same. Contractor shall get all these check, inspected and validated by OEM periodically.

Contractor shall also ensure road worthiness inspection and validation by OEM and obtained certificate every six month. The copy of certificate shall be submitted to user department.

Contractor shall ensure display of drivers/operators authorization certificate with necessary details like photo, driving license details, vehicle, contractor name and authorized by etc. with each type of vehicles.

Contractor shall also ensure following if required by management

- 1) Fork-lift Rear View Camera Monitor System.
- 2) Forklifts installed with Fluorescence lights to warn pedestrian of safe distance during its operation. photograph attached.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

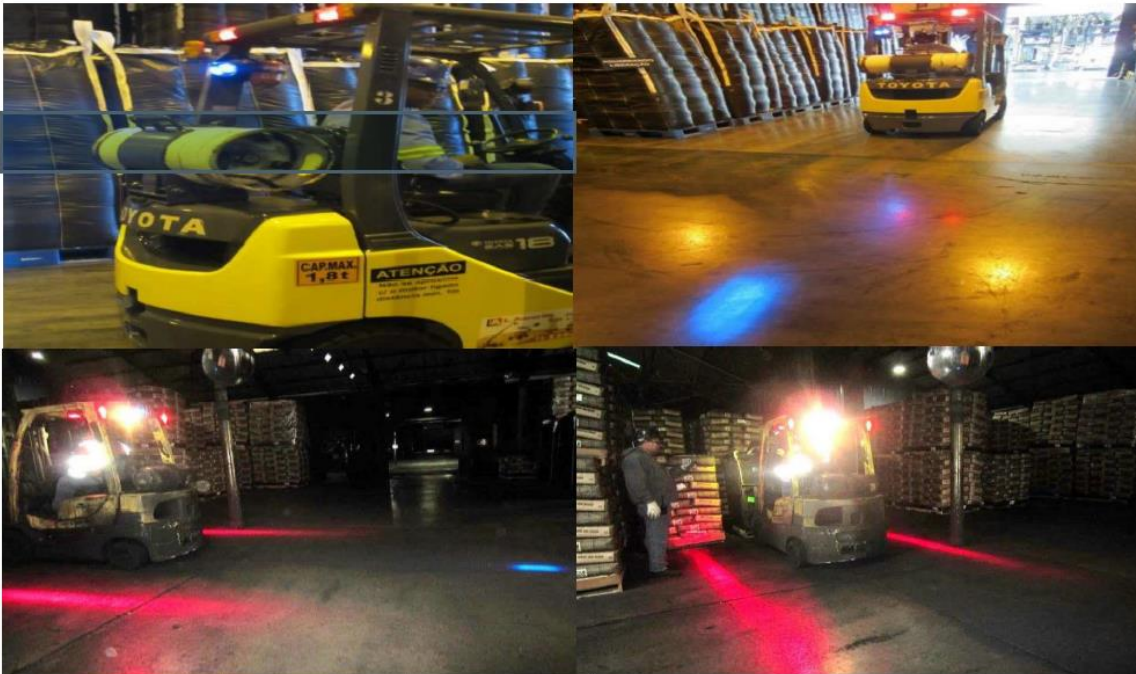
Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 22/



19.0 USE OF VEHICLES INCLUDING TRUCKS/ TRACTOR / JEEPS ETC

Any motor vehicle without a valid license issued by the Regional Transport Office (RTO), insurance and adequate road worthiness will not be allowed into the site. In general term, road worthiness means vehicles less than 10 years old, good tyre, engine condition, working front and back lights, horn and reverse horn, both side mirrors, registration number clearly visible, good condition of Dallah, First aid box, good brake system etc.

The drivers must have valid driving license. Personnel are forbidden to ride on tractor, Hydra, Mobile crane, fork lift etc.

Drivers must wear their seat belts. No mobile equipment shall back up without the assistance of a spotter/flagman wearing orange colour fluorescent jacket, helmet and safety shoes.

Vehicular traffic shall not exceed the posted speed limit. The speed limit in the site is max. 20 km/h. You shall comply the other requirement of safety if required by respective HOD or Safety Department.

Separate vehicles roadworthiness safety checklist of each type of vehicle is given for monthly inspection which is to be ensure before deploying any vehicles.

Annexure –A (Road worthiness Checklist of vehicles)

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 23/

The detailed road safety standard / Procedure (GIL/P&F/TSSC) of BC shall be complied.

20.0 FACILITY FOR CHARGING BATTERY

It is the responsibility of contractor to ensure that:

- There must be adequate ventilation to keep explosive atmospheres less than 5 % of the Lower Explosive Limit (LEL) in the charging area.
- Facilities for quick drenching or flushing of the eyes and body must be provided at or near (within 10 seconds) the charging area (approved emergency eyewash and safety shower).
- Flame Proof light to be provided and ensure integrity of light.
- To be Ensure that following tools in good condition which is take use for check battery charging condition.
 - a) Hygrometer
 - b) Temperature meter
 - c) Gas Explosive meter for measure Hydrogen gas and ensure timely calibration of explosive meter by 3rd party as per manufacture recommendation. Contractor shall ensure and maintain the record of gas test in twice a shift. If atmosphere is more than 5% of LEL , immediate corrective actions like ventilation and suspension of any hot work will have to be ensure.
- Battery Charging plug , socket and cable as per manufacture guide line and maintain in good condition .
- Appropriate PPE's to be provided employees for safe charging operation
- Safe system to be placed there for shifting charging / discharging battery from charging point to forklift or forklift to charging station .
- Smoking and other ignition sources must be prohibited in the charging area. "No Smoking" signs must be posted.
- Any additional safety requirements or operating procedures specified by the manufacturer of the forklift, battery or charging system must be followed.
- Battery systems shall be isolated by elevation, barriers, or enclosures to preclude accidental contact with energized terminals, conductors, cases, or support structures;

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 24/

- Battery systems shall be provided with overcurrent protection devices;
- A means of partitioning or 'sectionalizing' battery systems shall be provided to allow multiple or single batteries to be disconnected;
- Safety devices shall be designed to withstand the mechanical forces caused by the large currents;
- Suitable grounding shall be provided;
- Provisions shall be made to contain possible spills of electrolyte;
- Battery room shall be properly ventilated to maintain the room temperature as per Original Equipment Manufacturer (OEM) recommendations;
- Battery room shall be well kept, free from explosive and shall have explosion proof lighting, exhaust fan and acid resistant floors;
- Battery terminals shall be protected against corrosion & insulate to avoid short circuit; and
- Ensure battery charging as per OEM recommendations.
- Ensure all the crew engaged for handling of battery or its operation are skilled, trained and experienced.

21.0 SULPHUR FEEDING & UNLOADING THROUGH JCB

Contractor shall ensure that sulphur feeding and unloading by JCB used by them at site has valid documents- registration , insurance , , PUC, and Fitness certificate obtained from competent person.. The JCB operator shall have valid driving license. JCB must be inspected monthly basis, as per given **Annexure-E (JCB Inspection checklist)** and maintain recorded of inspection.

Contractor shall ensure maintenance of all vehicles as per OEM guidelines / checklist and maintained the records of the same. Contractor shall get all these check, inspected and validated by OEM periodically.

Contractor shall also ensure road worthiness inspection and validation by OEM and obtained certificate every six month. The copy of certificate shall be submitted to user department.

However the detailed requirements for Heavy vehicle) in mention in **Transport and Road Safety standard – GIL/ P&F/ TSSC** is applicable which need to be followed.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 25/

22.0 DIESEL DRUM STORAGE AND TRANSPORTATION

- Contractor shall ensure that filled diesel drum not transported in JCB Bucket use proper trolley or vehicle for safe transportation of diesel drum .
- No storage of fuel is permitted inside the campus.
- Contractor shall ensure that no spillage of fuel or oil which can be reason of caught fire.

23.0 BARRICADES & DISPLAY OF SIGNS

You shall ensure that all the barricades used for different purpose of barricading the site during various work like lowering or lifting the material, height work , excavation activities, hot work etc. shall be of as per the BC standard and procedure. The warning signs for the hazards shall be displayed at site to warn the workmen or other department employees. You shall consult our departmental engineers/ authorities before selecting the type of barricading use in plant and colony

Indicative barricade: Barricading tape must be at two levels i.e. 21 inches and 42 inches height from the ground. These barricades shall be installed in such a way to prevent sagging of the rope in between the vertical members.

If barricades or portions of barricades are removed for work, they shall be replaced as soon as practicable. A person shall be deployed to warn the people until barricades are replaced

24.0 ELECTRICAL INSTALLATIONS

It is the responsibility of contractor to ensure that:

- Electrical appliances and outlets should be marked clearly to indicate their purpose and voltage and must be approved by Electrical department.
- All electrical appliances should be only heavy-duty industrial type only.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 26/

- Bare conductors or other bare current carrying parts of equipment should not be permitted unless adequate precautions are taken to prevent direct or indirect contact e.g., fencing, screening or positioning.
- All cables running should be done overhead & minimum clearance is above 3 meters.
- Lamps and lamps fittings or general lighting should be installed not less than 3 meters above the ground or floor wherever practicable. • Since electrical fittings are easily damaged by the rough work and severe conditions prevailing on sites, fittings should be of weatherproof type.
- Flexible cable used for portable apparatus should have an earthing conductor.
- All wiring should be supported on proper insulated supports and not looped / twisted over nails etc.
- Overhead lines should be carried out on support of adequate strength and at a height that prevents contact with persons or equipment passing underneath.
- Flexible cables should not be used to lift a portable tool.
- Motors, switchgears and distribution apparatus should be protected against dripping and splashing water, particularly in pump rooms.
- Hand lamp should be equipped with a strong cover.
- Portable hand lamps holders should have all current carrying parts enclosed with an insulated handle.
- All electrical equipment should be inspected before it is used to ensure that it is suitable for its proposed use.
- All conductors and equipment should be considered to be live unless there is certain proof to the contrary.
- Temporary connections are to be given as per standard practice and should be disconnected after completing the work for which it is laid.
- Hand lamps for use in confined space should be energized by 24 Volts supply.
- All electrical installations should be connected with ELCB of sensitivity rating of 30 mA as safety measure.
- All extension boards being used by contractor should have rated capacity as per use and fitted with ELCB.

24.1 FUSES

For proper safety, connect HRC fuses to the live conductor of the circuit. The heating effect of an electric current can melt the fuse and thus open the circuit. The fuse rating

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 27/

should not exceed twice the normal load current of the tool as indicated in the rating plate. Most of the fault that occurs in plugs and fuses are due to overloading, short circuiting and faulty earthing.

24.2 ELECTRICAL WORKS

All works connected with electricity operated equipment and a licensed electrician only should do electric operated equipment and electric power supply.

- All electric work, installation, power distribution, etc., should be as per approved code and statutory regulations.
- Motors, gears, transmission electric wiring and other dangerous part of electrically operated equipment should have safe guards for preventing free access of workers to such parts.
- No worker should be allowed to work near any part of electric power circuit that may be contacted in the course of his work by the worker or by his tool, inadvertently.
- Workers employed on or near energized electrical installations should use insulating mats and tools and wear non-conductive shoes, gloves, etc.
- All electrical supply should be considered live and precautions should be taken unless it is checked.
- Proper warning signs should be displayed wherever live circuits exist near work area.
- Temporary electrical connections should be taken only after getting written permission from GIL Elect. Dept. A single line diagram mentioning the location of electrical installations should be submitted for approval purpose.
- All electrical equipment should be earthed properly.
- All the temporary electrical connection cables should be routed properly and should not cause tripping hazard.
- All temporary connections should be removed and power switched off when the day's work is over and also when no operating personnel is present near the equipment.
- Working spaces, walkways and similar areas should be kept clear of wires and cables.
- No joints in the cable line should be used normally. In case of absolute necessary, joints kits should be used & it must be approved by GIL.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 28/

25.0 MANUAL LIFTING AND HANDLING:



Figure: Manual handling

Correct manual lifting and handling can do a lot to prevent the strains and backache, which account for a very high proportion of all industrial injuries. Following instruction should be kept in mind during manual material handling and should be informed to the workers through training:

- Assess the weight of the load and get help if it is beyond one's capacity. Where appropriate, use the mechanical aid providers.
- Size up the job – remove any obstructions; note any snags and make sure there is a clear space where the load has to be set down. Ensure the load is seen over when carrying it.
- Lock out for any splinters, projecting nails or sharp edges or wire. Wear gloves where appropriate.
- Stand to close the object and with the feet 8 to 12 inches apart, one foot in advance of the other, pointing in the direction intended to move
- Put the chin in – avoid moving the heads backwards or forwards.
- Bend the knees to a crouch position, keeping the back straight (not necessarily vertical). Get a firm grip at opposite corners of the load with the palm of the hand and the roots of the fingers, arms as close to the body as possible
- Lift with the thigh muscles by looking up and straightening the legs.

Apply the above principles to any movement of the loads such as pushing, digging, shoveling and so on.

- Use the reverse procedures when setting down the legs.

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 29/

Following things should be avoided during manual material handling and it should be intimated to the workers through training:

- Change of grip while carrying.
- Twist the back while working.
- Carry on if strained. Stop work and report to supervisor.

26.0 EXCAVATION



Ground disturbances can be defined as activities which are carried out to disturb the ground (e.g. excavating, digging and clearing, etc.), whilst excavations can be defined as any man-made cut, cavity, trench or depression in the Earth's surface formed by earth removal. Excavations are needed for construction of buildings, plant structures, underground establishments, trenches for the laying of pipelines, etc. There are many potential hazards which can be encountered while undertaking excavations, such as caving-in, falling loads and hazardous atmospheres. There are many examples of multiple fatalities due to poor management control over such activities

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 30/

Contractor involved in excavation activities shall comply with all applicable requirements contained in this **GUIDE NOTE (ABG/SUST/GN/30)** and with the site permit to work.

General Requirements for Excavation Activity: Contractor shall ensure that:

- No ground disturbance or excavation work is started without obtaining a valid permit to work from the concerned responsible person.
- All excavations are carried out based on the type of soil, topography, and consideration of other site conditions near the work site .
- All surface obstructions located around the excavation area shall be cleared to ensure the absence of any unsafe conditions
- The estimated location of utility installations such as sewer, telephone, fuel, electric, water lines or any other underground installations that reasonably may be expected to be encountered during excavation work shall be determined prior to commencement of an excavation
- The sides of an excavation shall be periodically inspected during the course of the excavation, especially after every rain, storm or other hazard-increasing occurrence; if necessary, protection against slides and cave-ins shall be increased.
- No person shall work in any excavation, shaft or earthwork, unless all timbering and plant used therein has been inspected by a competent person before the work is started.
- Workmen's shall not work in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by that water accumulation

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 31/

- A lone worker shall not be permitted in trenches unless there is at least one worker on the ground on duty close by
- Open sides of excavations where a person may fall shall be guarded by adequate barricades, and suitable warning signs shall be put up at conspicuous position .
- Areas around the swing radius of digging equipment shall be cordoned off and barriers moved with the progress of the work
- Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least 1 meter (3.3 feet) from the edge of excavations
- The excavated materials should be kept minimum 1 meter away from the trench. A provision of clearance of a width not less than one third of the final depth of excavations is advised. It is always better to provide substantial toe board to prevent 'roll back' into the trench.
- Re-route traffic and allow only the heavy construction equipment required near the excavation; the movement of a vehicle should be 1 metres (3.3 feet) away from the edge or 1.5 times the depth of the excavation, whichever is greater
- Use benching for the excavation; however all excavations >1.5 metres (5 feet) shall require shoring or sloping
- All loose stones, projecting lumps or earth should be removed from the trenches
- Ladder or pathway should be provided in every 15m length of excavated area for easy access of the workmen. Care should be taken to keep free from the accumulation of mud, sand, and gravels on the

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 32/

steps of ladder. Ladders should be strong enough to withstand the load.

- Adequate warning signs should be displayed in local language and English at all sides of excavated pit. Adequate illumination should be provided at site irrespective of construction activities being carried out day and night.
- No workers should be allowed to take rest in the shade or undercut of the trench
- The excavation work should be inspected by a qualified engineer once a week and after every spell of rain or storm
- Barricade should be provided for any excavation / depression. All the excavations more than 1-meter depth should be provided with hard barricade made of pipe.
- If the excavation is 1.2 metres (4 feet) or more deep, it shall be provided with a standard ladder to facilitate safe entry and exit .The height of the ladder shall extend up to 1 metre (3.3 feet) from the top of the ground surface. The ladder must be secured .
- Trenches 1.2 metres (4 feet) or more in depth must have ladders spaced so that an employee's lateral travel to a ladder does not exceed 7.62 metres (25 feet).
- Ensure proper passage over the excavation for by-passers to move from one bank side to the other with a minimum 2 MS gratings placed on horizontal members with a guard rail.

26.1 CAUTION & BARRICADING FOR EXCAVATION

Contractor shall ensure that appropriate caution and barricading is provided in the excavation area to prevent people falling in, depending upon the

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

<p style="text-align: center;">Birla Cellulosic - Kharach Grasim Industries Limited</p>			
<p style="text-align: center;">Contractor Safety Plan</p>			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 33/

duration of work and the site conditions. Barricading (a self-supporting physical structure) is an important safety barrier for a work area where excavation work is taking place.

- No trench, ditch or other excavation shall be left overnight without barricades. Suitable warning signs, such as fluorescent warning tape, flashing RED lights, shall be provided to warn the persons at night.
- Indicative Barricades (for depth of less than 1.0 metre) : These barricades must be 6 feet away from the edge of the excavation (plastic tape & sign board). Barricading tape must be at two levels i.e. 21 inches and 42 inches height from the ground. These barricades shall be installed in such a way to prevent sagging of the rope in between the vertical members.
- Protective Barricades (for depth in excess of 1.0 metre) : These barricades, which may be installed closer than 1.8 metre (6 feet) from the edge of the excavation, must be a hard barricade which can withstand 100 kg load/thrust. A hard barricade shall have horizontal members at 21 inches and 42 inches respectively from the ground with adequate vertical supports.
- If barricades or portions of barricades are removed for work, they shall be replaced as soon as practicable. A person shall be deployed to warn the people until barricades are replaced

Note : *For detailed procedure refer doc: Guide Note – Ground Disturbance & excavation ABG/SUST/GN/30*

27.0 CONCRETE VIBRATORS :

The vibration frequency of the vibrator is likely to strain mussels of the operator if handled for a long period. Shock absorbing handle should be

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 34/

fitted to the vibrators. The poker should be completely inside the concrete when the vibrator is started. Excessive bending of the flexible hose should be avoided. Electrically operated vibrators should be protected against overloads by a suitable overload relay and it should be effectively earthed. Low voltage vibrator with step down transformer is preferable

28.0 HOT WORK

“Hot Work” is a general term referring to grinding, welding, thermal or oxygen cutting or heating, and other related heat-producing or spark-producing operations. This standard specifies precautions to be taken prior to and during hot work at P&FB unit (including welding and cutting) to prevent the possibility of fire or explosion, which may result in harm to persons or the property

Hot work permits shall be required for carrying out such job in non-designated areas & prohibited areas (in exceptional cases).

The detailed guidelines as per Hot work standard **(ABG/P&FB/SHE/HW/2010.00)** is applicable and shall be followed.

28.1 WELDING MACHINE

As far as possible D.C. Generator sets / Rectifiers should be used in preference to A.C. Transformer sets.

- The contractor shall get welding sets certified by the Owner’s Elec. Engineer before start of work and shall obtain a certificate valid for a period of Six months renewable after every Six months.
- A copy of the certificate shall be displayed on respective welding sets.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 35/

- The length of supply cable to welding set shall not exceed 8 Meters and the body of the welding set shall be properly earthed.
- Fire extinguisher shall always be carried with each welding set, preferably a dry chemical powder type

28.2 WELDING ACTIVITIES

Contractor shall ensure that:

- Do not begin work in any operating area without first obtaining work permits authorized by the area owner
- Installed and inspect all electrically connected welding machine power sources at each new installation to ensure that the integrity of the conductor and their terminations are sufficient. The electrical connection taken for the welding machine is through ELCB of 30 ma or less.
- Ensure that each electric welding machine is supplied from a properly sized industrial switch with properly sized over current protection and cable. Double earthing to be ensured.
- Where power is supplied by a plug and receptacle, the supply side of the connection is a female connector interlocked to make it impossible to disconnect the plug when the main disconnect is on (energized).
- Make sure welding lead connection points on the welding machine have guards to avoid accidental contact with exposed terminals.
- Install two leads to the work location. Do not use building steel or pipelines as the return path for the welding current. When welding to building steel

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 36/

or pipelines, connect the return lead to the same steel part where welding is to proceed.

- All the welding machine cables / lead should be properly lugged and good condition. The machine should be earthed properly.
- Keep the welding cables, holder in good conditions. Power supply cable shall not be more than 8 M in length, and should be without joints.
- Transformer type welding machine is not permitted. You must use only welding rectifier.
- Double earthing on welding machine fitted with ELCB is must.
- When not in use, power supply to the holder and electrode must be turned off.
- The helper engaged with the welding activity should also have proper eye protection. Holding a piece of broken colored glass is not permitted.
- The welder shall wear good quality insulated leather hand gloves and use proper welding shields/ for eye protection.
- Prevent flames, sparks, molten slag, and hot metal from coming in contact with combustible materials and debris. Move all combustible materials within the area to a safe distance. If, because of excessive weight or bulk, the material cannot be moved, protect it with a fire-retardant material or wet it down.
- After completing the job or before leaving the area, check the immediate work area for signs of fire

28.3 GAS CUTTING :

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 37/

Safety procedures for Gas cutting have been elaborated below:

Gas cylinders used in Gas cutting shall follow all safety procedures mentioned for oxygen / acetylene gas cylinders.

- You shall ensure that all the cylinders shall be handled in trolley with properly tied arrangement with cylinder cap while use and handle. The hose of gas cutting set shall be blue (For oxygen) and Red (for DA) colour and approved as per the Indian standard IS 447.
- Other accessories like regulator, pressure gauge, torch shall be as approved by respective department. No joints shall be permitted on gas hose. Flash back arrestor of approved quality shall be provided at cylinder and torch side.
- When handling cylinders, ensure hands, clothes, gloves, etc. are free from oil, dirt, grit and grease. Under no circumstances oil shall be allowed to contaminate a cylinder containing oxygen.
- All gas and oxygen regulators shall be fitted with flashback arresters, being non-return valves designed to prevent an explosive mix developing in either cylinder, they are must before use.
- Prior to use, all equipment shall be thoroughly checked to ensure tight connections, condition of hoses and gauge.
- The Cutter shall wear good quality insulated leather hand gloves and use proper cutting shields/ cutting goggle for eye protection.
- The helper engaged with the gas cutting should also have proper eye protection. Holding a piece of broken colored glass is not permitted.
- Contain sparks or hot slag produced from overhead work by using fire blankets, metal catch pans, or other appropriate means.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 38/

- Contractor shall ensure that each gas cutting set is equipped with one approved DCP type fire extinguisher of 5 kg capacity. This extinguisher must be inspected on monthly basis and records shall be maintained.
- Contractor shall carry out periodical inspection of all gas cutting accessories like torch, flash back arrestor, gas tube, regulator etc. on quarterly basis and records shall be maintained.
- After completing the job or before leaving the area, check the immediate work area for signs of fire

Note: For detailed procedure refer doc: ABG /P&FB/SHE/HW/2010.00 (Hot Work Standard)

28.4 COMPRESSED GAS CYLINDERS

Contractor shall ensure that necessary arrangement is made and proper precautions are taken while transporting, handling and using the compressed gas cylinders- Cylinders are transported with their cap ON and over proper trucks/ trolleys, Cylinders are not dropped but lowered down from transport with its head top, Cylinders are moved, properly secured to carts or trolleys designed to carry the cylinders. Cylinders are connected through regulator, Non Return Valve (flash back arrestor), pressure gauges and not used directly, Color code for each type hose pipe to be followed i.e. Blue for Oxygen & Red for D.A gas. Empty or full compressed gas cylinders.

1. All compressed gas cylinders stacked under shed but with proper ventilations. Keeping compressed gas cylinders under direct sunlight is prohibited; All gas cylinders must be stored vertically, tied or chained in a

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 39/

stable fashion. All gas cylinders must have caps or suitable protection for the cylinder valves.

2. Empty & full cylinders shall be stacked separately at least 7 mtrs. apart with displaying suitable board indicating “Empty” & “Full”
3. Provide boards “Use no oil and grease” at full Oxygen cylinder storage place and “No Fire” at “Acetylene” or LPG cylinder storage,
4. All corrosive chemical/ oxidizing substances/ radioactive material and other hazardous chemicals stored by contractors require “Material safety data Sheet” (MSDS) to be displayed near storage and proper care shall be taken to store those substances as per the MSDS.
5. A fire watcher, trained in firefighting is must for all hot work.

Contractor shall maintain the records of inspection of all gas cutting accessories on monthly basis including but not limited to torch, hose pipe, clamps, regulator, flash back arrestor, trolley etc.

For more details Hot work standard of BC shall be applicable.

29.0 WORK AT HEIGHT

All contractors will follow the fall Protection procedure that requires 100% fall protection when working 1.8 meter or above. Pre-task planning shall be used to identify proper methods to comply with the 100% fall protection (e.g. double lanyards, Fall arrestor, safety netting etc.). Contractor shall inspect safety harness fortnightly and maintain the records.

Damaged Safety harnesses shall be discarded once noticed. Contractor shall follow inspection format as per standard of BC.

The detailed requirement is given in **WORK AT HEIGHT STANDARD –ABG /P&FB/SHE/WH/2005.00 which is applicable and followed.**

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 40/

29.1 FALL PROTECTION

All contractors will follow the Fall Protection Policy that requires 100% fall protection when working 6 feet or more above the next work level. Pre-task planning shall be used to identify proper methods to comply with the 100% fall protection policy (e.g. double lanyards, Fall arrestor, safety netting etc.). Contractor shall inspect safety harness fortnightly and maintain the records.



29.2 LADDERS

The following are general requirements for ladders:

1. Only commercially available manufactured approved ladders of metal / aluminum / fiber glass are allowed to be used in BC site. Do not use metal ladders around electrical services or welding.
2. The user shall inspect every ladder before using it. Remove from service any ladder found defective.
3. Painted ladders are not permitted.
4. If it is necessary to place a ladder in or behind a doorway, barricade the work area and post warning signs on both sides of the door.
5. While ascending and descending a ladder, hold on with both hands. Use a hand line to raise or lower materials.
6. Ladders must either support 136 kgs or meet local requirements, whichever is more stringent.

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 41/

7. Keep both feet on the ladder steps or rungs. Do not reach out too far; keep your belt-buckle area inside the side rails of the ladder. Do not place one foot on a line or piece of equipment and the other on a ladder step or rung. Change the position of the ladder as often as necessary to keep within reach of the work.
8. Face a ladder when working from it. When it is not possible to work facing a ladder or when performing some tasks requiring both hands, fall protection should be worn and properly anchored.
9. More than one person on a ladder is not allowed unless the ladder is designed to support more than one person. Never exceed the rated capacity of the ladder.
10. Metal ladders shall not be used by persons performing electric welding or working near energized electric lines or services.
11. If it is necessary to use a ladder on top of a scaffold or close to the edge of an elevated platform, roof, or floor opening, tie off the ladder and utilize fall protection.
12. Extend at least 1m above any landing place beyond the highest rung from which a person may be working or have a nearby handhold of equivalent height.
13. Under no circumstances should chairs or other furniture be used as ladders.
14. All ladders shall be inspected by a qualified person.

Types of Ladders:

Standing ladders: Single stage ladders up to 5 meters or 6 meters in length.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

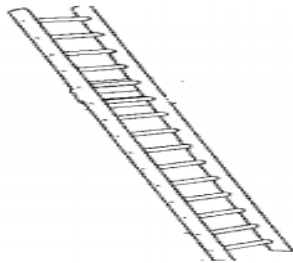
Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

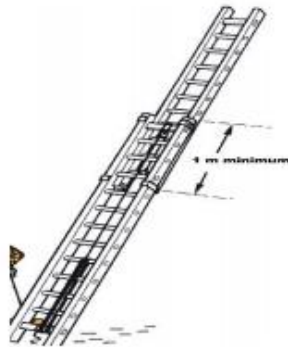
Revision No.:

Effective Date:

Page: 42/



Extension ladders: Consist of two or three sections coupled together and extended by sliding over or inside each other. Longer multistage ladders are extended by means of a rope and pulley. A three-section ladder, fully extended, may reach over 16 meters.



Step ladders: These are of various types, have flat rectangular treads and are usually free standing.



30.0 FIRST AID BOXES :

Prepared by:

Reviewed by :

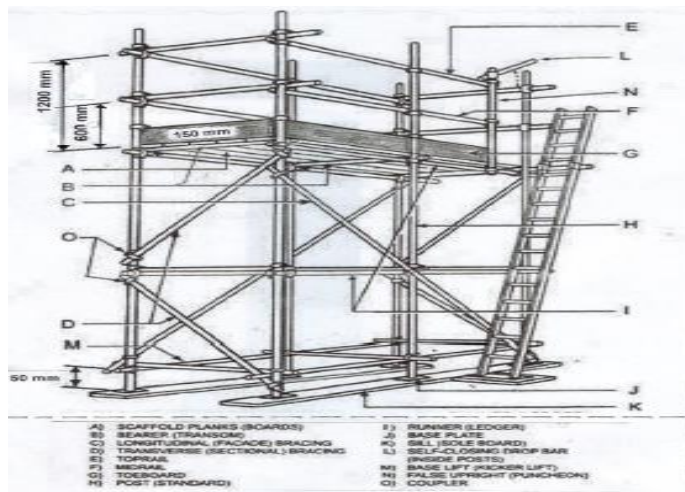
Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 43/
-------------------------------------	---------------	-----------------	-----------

You shall ensure a first aid boxes in your office clearly identified and contains suitable first-aid materials as per factories act 1948 and rules made thereunder and nothing else. First Aid Box should be checked weekly once to ensure they are fully stocked and all items are in a usable condition. Sufficient quantities of each item should always be available in first aid box. The contents shall be kept in consultation with our medical officer and maintained record of First aid box and inspection.



31.0 SCAFFOLDING GENERAL GUIDELINE

- Scaffolds are intended to provide safe working positions at elevations. To eliminate fall exposures, scaffolds must have complete handrails, mid-rails, and platform. Do not use fall arrest equipment as a substitute for handrails, mid-rails, or a complete platform
- To be ensure that Scaffold shall be erected as per Scaffolding Management –**ABG/SUST/TS/31** . Every scaffold and every part thereof including supports shall be of good construction, suitable and sound

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 44/

material and having adequate strength for the purpose for which it shall be is used.

- A Safe and convenient means of access should be provided to all platform level of scaffolds
- Bamboo/bally components are not permitted on BC-KHARACH site.
- Railings and toe boards should be provided on the platform. The mid rail and Top rail shall be at height 525mm and 1050mm respectively and toe boards (150mm) should be securely attached to the platform.
- Scaffolds shall be designed to support at least 4 times the anticipated weight of men and material.
- Landing platform should be provided at every 9 meter of height.
- Minimum height of first horizontal member (Ledger) of scaffolds from the Ground/Kicker lift member shall be 2.2 meters refer table no. When scaffold is more than 6 meter height or carrying heavy load, kicker lift should be provided at 150 mm from the ground level.
- Sole plates must be provided below the base plates where uneven place.
- Scaffold boards and masonry blocks are not use in place of base plate.
- When the height of a scaffold exceeds three times the smallest width of the base, secure it to the building or structure at every other lift and every 9 meters horizontally. The scaffold should be secured by both ties and braces to prevent movement Equip scaffold working platforms with handrails approximately one meter high, mid rails, and toe boards, all secured rigidly. Working platforms should be Complete in all respects, such as toe guards, railings, etc.
- Scaffold Inspection Tag, Boards, identifying that the scaffold is “Safe for Use” (in GREEN) or “Scaffolds under Construction” (in RED) must be attached to all scaffolds. Scaffold tags must be signed and dated. Scaffolds to be approved by authorized Scaffolders before use .

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 45/

- Begin the dismantling of the scaffold at the top of the scaffold. Remove the guardrail and posts first using the necessary tools. Lower dismantled components in an orderly manner. Do not throw off of scaffold. Pass the components down from person to person in a daisy chain formation.

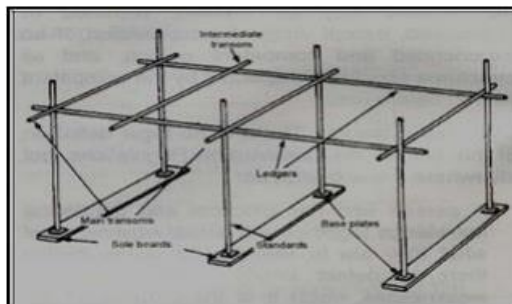
Note: Scaffold erection & dismantling work shall be carried out with appropriate permit

31.1 SCAFFOLDERS QUALIFICATION

All scaffolders are to be qualified to erect any scaffolding/false work and hold where applicable recognized certification. Copies of all scaffolder's certificates/cards shall be maintained at the site office for monitoring purposes.

31.2 SAFE ERECTION OF SCAFFOLDS

The foundations must be of adequate strength to support and disperse the load. On hard surfaces, such as steel and concrete of sufficient strength and thickness, standards may be placed directly onto the surface, although it is generally preferable to use a base plate, which conforms to the relevant IS and is 150mm by 150mm.



On other surfaces, the load should be spread by using base plates and sole plates. The soil or ground beneath the sole plate should be level and compacted.

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 46/

When a sole plate is used on hard ground, the area beneath any one standard should be at least 1000 cm², with a minimum dimension of 220cm. If a timber sole plate is used, it must be not less than 35mm thick. On soft or disturbed ground, the sole plate area should not be less than 1700cm².

Sole plate dimensions should be as follows On hard ground – 450mm x 225mm x 35mm

On soft ground – 760mm x 225 x 35mm

Bricks, thermal blocks and scraps of odd timber must not be used as sole plates.

On sloping ground, steps should be cut into the ground to accept base plates or sole plates. If the slope exceeds 1:10, an engineer should check that the ground has sufficient stability.

31.3 TYPES OF SCAFFOLD:

31.3.1 Independent Tied Scaffold

This type of scaffold is not completely independent of the building. The scaffold structure carries its own weight and all applied loads – men, materials and wind loads – are transferred down to the ground, but it shall be tied to the building to obtain stability and to prevent any possible movement of the scaffold towards or away from the building. The Independent tied scaffold has two vertical rows of standards: an inner row about 325mm from the building, to allow the use of one 225mm wide board and give working clearance near the wall, and an outer row, in line with the inner standards. Joints in adjacent standards should not occur in the same lift.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

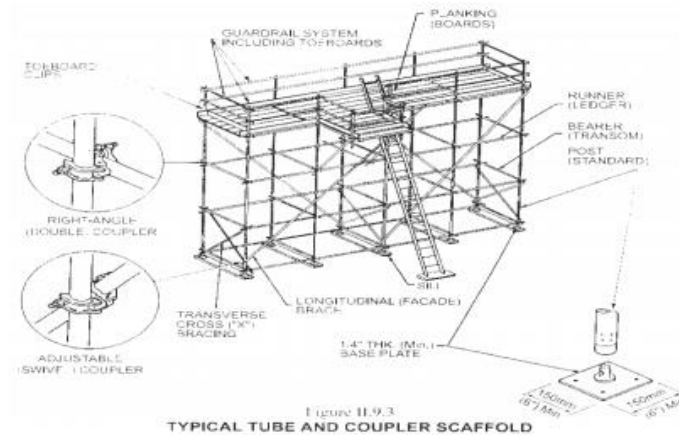
Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

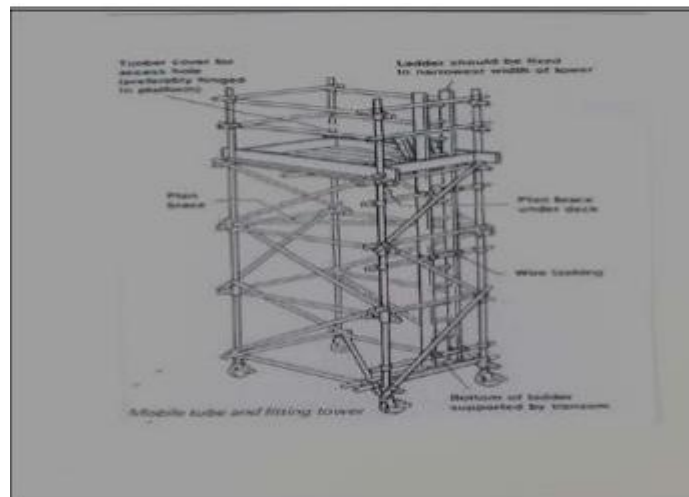
Effective Date:

Page: 47/



31.3.2 Mobile Scaffold

Only qualified persons are permitted to erect and inspect aluminum tower scaffolds. Before using a tower, all components should be checked to see that they are in good condition and are for the same model of tower. Check that the ground is firm and leveled and take any necessary precautions against collision of persons or vehicles i.e., barriers and/or signage.



Castors should be checked to see that in each case the castor housing and wheel/tyre is not damaged, that the wheel rotates effectively, that the castor swivel rotates effectively and that the brake functions properly.

Prepared by:

Reviewed by :

Approved by:

<p style="text-align: center;">Birla Cellulosic - Kharach Grasim Industries Limited</p>			
<p style="text-align: center;">Contractor Safety Plan</p>			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 48/

Adjustable legs should be checked to see that they are not bent, or the threads damaged. All threads should be clean and free from debris. The device fitted to stop the leg falling out of the frame should be checked to see if it working correctly.

Adjustable legs should be checked to see that they are not bent, or the threads damaged. All threads should be clean and free from debris. The device fitted to stop the leg falling out of the frame should be checked to see if it working correctly.

Frames should be checked to see that the members are straight and undamaged. They should be free of extraneous material such as concrete. Spigots should be straight and parallel with the axis of the column tube and the device for locking frames together should be checked to see that it is functioning correctly. Platforms should be checked to see that they are undamaged and that the frames are square and true. Plywood decks should not be split or warped and should be firmly fixed to the frames. Where toe boards incorporate clips or fittings these should be undamaged and firmly fixed to the toe board. Ancillary parts, such as outriggers and stabilisers, should be checked for damage and effective functioning of hooks and couplers/

31.4 SCAFFOLD INSPECTION: Periodic inspections must be carried out and recorded by a competent person. All scaffolds and ladder access must be inspected and recorded.

Before being taken into use for the first time; and

- After any substantial addition, dismantling or other alteration; and
- After any event likely to have affected its strength or stability; and
- At regular intervals not exceeding 7 days since the last inspection.
- All scaffolding material shall be offered for inspection to GIL or agency deployed by GIL prior to taken into use.
- Scaffolding standards shall be provided with color band once approved to use by GIL or deployed agency.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 49/

• Colour band shall be provided on scaffolding standard for each year (Blue for 2017-18) & Red for 2018-19.

- Rejected scaffold material shall be provided with Yellow color band.
- Contractor shall maintain different storage racks/yards for scaffolding materials as below:
 - Receipt: Material received for project
 - Issue: Material inspected and permitted to issue
 - Reject: Material rejected during inspection/site

Note : Use of suspended type platform is forbidden unless obtain written approval from BC – FH (T). The design needs to be submitted to BC –FH(T), in well in advance, and certification may be required.

32.0 CONFINED SPACE

Working inside the confined space without any precautions may result in serious consequences

Confined Space Permit is required. Contractors shall strictly adhere to the following-

1. Prepare safe entry procedure and obtain work permits,
2. Ensure proper ventilation
3. Carry out checks of oxygen levels & presence of toxic/ flammable gasses,
4. Carry out atmosphere tests shall be consistent with the hazards identified in the risk assessment and ensure the following prior to entry:
 - Oxygen reading: ≥ 19.5 % Vol. to ≤ 23.5 % Vol.
 - Flammable gases and vapors reading: $\leq 5\%$ LEL
 - Toxic gases and vapors reading: \leq PEL values .

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 50/

- Airborne combustible dust at a concentration that meets or exceeds its LFL.

5. While using illumination, ensure use of only 24 volt electric supply.

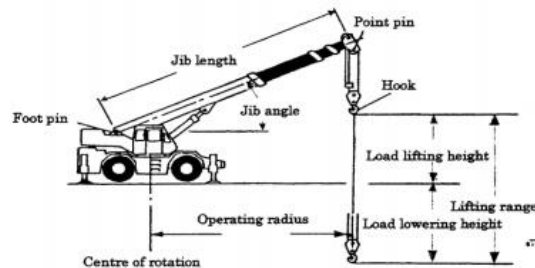
6. Check and monitor the oxygen contents in confined space,

7. Use all relevant PPE.

After completion of confined space work, ensure all persons are out from the confined space. To ensure this head count of the men entering should be maintained in a register (duly signed by the site supervisor) and shall be verified while they come out at the end of the job.

All requirements for Confined Space in details is mentioned in Confined Space Entry Standard – ABG/P&FB/SHE/CSE/2009 Which need to be followed.

33.0 CRANE



Manufacturer's recommendations on operating conditions shall be followed by the CONTRACTOR. Rated load capacities and recommended operating speeds and special hazard warnings or instructions must be conspicuously posted on all equipment visible to the operator while he is at his control station. A boom angle indicator and a load - indicating device in good working order must be provided for cranes and derricks. Hand signals to crane and derrick operators shall be those prescribed by the applicable ANSI standards for the type of crane in use. Accessible areas within the swing radius of the rear of the rotating superstructure of a crane must be barricaded to prevent any person from being struck or crushed by the crane. In operating boom equipment, safe clearance shall be maintained at all times to electrical distribution and transmission lines. For lines rated 50kV or below, minimum clearance is 10ft, whereas for loads rated 50kV, minimum

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 51/

clearance shall be 10ft. + 0.4 in per each kV over 50- or use twice the length of the line insulator, but never less than 10ft.

Operator shall carry out daily inspection of crane and shall follow inspection format Doc No: GL/19 – Crane operator's daily inspection checklist.

Contractor to maintain daily inspection checklist.

Following points with respect to crane handling shall be followed by Contractor:

- No tandem lifting is allowed, if required concerned FH Tech has to approve the lift plan.
- Old version hydra is not allowed, only K / F series Hydra cranes is allowed.
- Shifting of load with K / F series Hydra cranes is not allowed.
 - All cranes must be fitted with SLI, anti to blocking device and other safety device and must be in working condition. Crane being used by Contractor shall not have age more than 10 years.
 - Before deputed crane / Hydra at site to be ensure that Crane must be comply **Crane road worthiness Checklist**. (crane checklist) also given for your reference .

► Wheel mounted



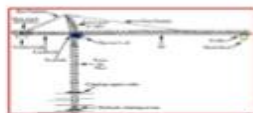
► Truck mounted



► Crawler mounted



► Tower Crane



34.0 LOTOTO (Lock Out /Tag Out & Try out) Procedure :

Contractors must have a lockout / tag-out procedure in place. All lockouts / tag-outs will be accomplished under a Permit to Work System except those required for servicing and maintaining construction equipment under control of the contractor. Equipment that

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 52/

could present a hazard to personnel by inadvertently activating during installation, repair, alteration, cleaning, or inspection work must be made inoperable and free of stored energy and materials prior to the start of work. Such equipment includes circuit breakers, compressors, conveyors, elevators, machine tools, pipelines, pumps, valves, and similar equipment. The equipment must be secured by locking and tagging

All lockouts/tagouts conducted as part of commissioning and start-up activities must be approved by the Project Management team/HOD on-site. Contractor shall use the TAG design is approved by GIL project management team, and ensure that tags are displayed in place till it is required. Tag identification number should be noted in permit.

All requirements for LOTOTO in details is mentioned in LOTOTO –Which need to be followed.

35.0 CONSTRUCTION SITE SAFETY RULES :

The following Basis Rules summaries those items that are to be obeyed by anyone entering and working operating on site.

- All worker should be deployed at job site after completion of safety induction training and provide of mandatory PPEs.
- Photo ID Cards must be issued to all level of Site Personnel employed by Contractor.
- Deployment of Child Labor is strictly prohibited.
- Night shift workers must be new gang and day shift workers must not continue beyond 12 (twelve) hours a day.
- All works shall be carried out under strict supervision, No supervision- No work.
- Good task lighting must be provided by the respective Contractor.
- It is forbidden to bring onsite firearms or unauthorized explosives.
- It is forbidden to possess or consume alcohol, drugs or other intoxicants on site, or to be under the influence such that safety at work is jeopardy.

Safety devices must not be interfered with and can only be attended to or bypassed with proper authorization.

- It is prohibited to indulge in horseplay, fighting or malicious damage.
- In addition to normal emergency procedures, all incidents, injuries, etc. must be notified to line manager and the site office contact, as necessary. Potential serious occurrences, i.e., near misses, must also be reported to the line management representative as per specified format.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 53/

- Approved safety helmets, safety goggles and foot protection must be worn at all times. Footwear with exposed steel studs or toecaps must not be worn.
- Shoulder pads to be provided to reduce the contact stresses with material carrying & also provide construction safety helmet.
 - The rules applying to the wearing of breathing apparatus must be strictly complied with the equipment worn only trained personnel.
- Drivers of all vehicles must obey the road signs and traffic rules. Seat belts must be worn where fitted.
- Permit conditions and other written work instructions must be followed.
- Road closure and barricade notices must be obeyed.
- Except operator no person shall be allowed inside the operator's cabin while movement of the vehicle i.e. hydra, crane, excavator etc.
 - Road blockage permit shall be taken from area in charge before blocking the road and during marching the crane on the road. The road blockage shall be informed to medical, fire and security department.
- The respective Contractors must provide eating place and separate resting place. Bar cap to be ensured on all exposed bars at site. All the excavated pit must have safe access with hand railing both side with a step type arrangement free from vehicle movement.
- Contractor shall submit self-certification of vehicles to Grasim on a Quarterly basis for every vehicle. Copy of checklist should be available with the vehicle.

35.1 Winch machine

➤ Following practices are recommended

- Winch break in working condition
- People not to stand under the weights when they are lifted and cardon off the area
- Oil level in winch is up to the level
- Emergency stop button available with trained operator.
- Sufficient signaling people availability.
- Minimum 3 bull dog clips for rope connections

Stairs

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 54/

- During construction, provide temporary stairs on structures that are two or more floors or more than 20 feet high until permanent stairways are in place.
- Keep stairways free of hazardous objects. Do not allow debris and loose material to accumulate on stairways. Storage of combustibles under stairways is NOT allowed.

Repairs / Painting at Roof / Removing AC sheet roofing

- Before attempting the actual removal, assess weather condition (strong heavy winds), accessibility & strength of the sheets. In any case workmen should not be allowed to walk or stand on the AC sheet.
- A firm ladder or access should be provided to climb to the roof. Provision of guide rope should also be there to anchor safety belts.
- A crawling ladder specifically designed for such jobs (supported from the ridge) should be used on the AC roof for the workmen to stand and remove the sheets.
- Only experienced workmen should be engaged. They should never step on unsupported portion of the sheets. The workmen should use safety belt with double rope system. The other end should be tied to a firm support. At times it may be necessary to use two ropes for tying at support. While changing the position the workmen should ensure his stability (at least by one rope)
- It is advisable to use a safety net below the workmen's position whenever possible.
- Area below work space to be cordoned off with a caution board to prevent movement of other workmen.

Rigging

- Rigging includes but is not limited to: wire rope, chain sling, polyester, kevlar and nylon slings as well as come-a longs, chain falls, shackles, hooks, spreader bars, coupling, socket, clamp, shackle swivel and other load bearing hoisting attachments. Components of cranes and hoists are not included.
- Rigging operation shall be carried out in the presence of one or more skilled riggers under close supervision. Experienced Rigger & signaller with reflecting Safety vest is necessary .
- The safe working loads of rigging shall be based on a 5 to 1 safety factor. Any rigging components used for hoisting personnel shall be based on a 10 to 1 safety factor.
- Working loads on rigging shall not exceed the safe limits established by the manufacturer. Any rigging fabricated by an employer such as spreader bars, links, lifting beams must be designed and certified by a professional engineer.

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 55/

- Wire ropes / Synthetic fiber slings shall be inspected regularly. Those found damaged or not meeting standards shall be considered unserviceable and shall be permanently removed from service. Should have a valid test certificate, to be revived every year by the competent person.

All the lifting machines & tackles are to be periodically examined & tested by the competent person once in every year. The test certificates must be submitted to relevant Site/Project In charge/Safety Officer.

PERMIT TO WORK FOR WINCH MACHINE

JOB SUPERVISOR OF CONTRACTOR OR DEPARTMENT
 CONTROLLING DEPT.
 WORK AREA EQUIPMENT STARTING TIME & DT
WORK DETAILS

.....

EXPECTED DATE OF JOB COMPETION:.....

POINT TO CHECK BEFORE STARTING THE JOB

1. Persons engaged for operating are experienced and suitable for the job?
2. Necessary instructions for safe job execution given?
3. Work platform/scaffold of sound construction provided at top for unloading the material from bucket?
4. Safe arrangement for hooking the safety belt is ensured at unloading point ?
5. Area around the bucket traveling structure is fenced and shaded to safe guard the workmen from falling material?
6. Electrical connections and starter etc. provided for winch machine are safe?
7. The bucket traveling structure is adequately braced with strong fasteners?
8. Area supervisor should available at all time when winch m/c run.

36.0 INCIDENT REPORTING:

All incidents must be reported promptly (within a shift) so that an appropriate response can be made. Initial reports should be brief and limited to a brief outline of the known facts (date, time, place, what happened, and immediate actions taken). From these initial reports, the unit can identify incidents that require comprehensive investigation. Unit that follow the procedures and promote an atmosphere of learning, openness and trust in reporting incidents can probably expect an increase in the number of such reports..

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 56/

Incident Investigation Flow Chart

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

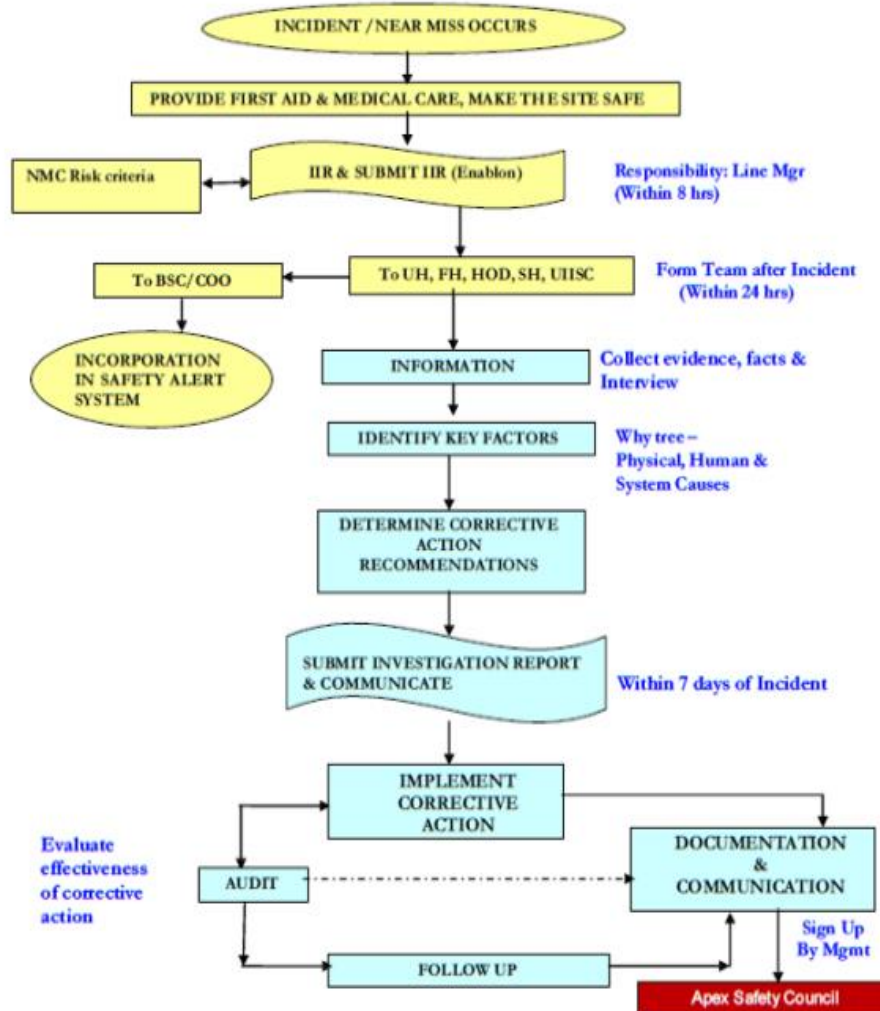
Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 57/



37.0 FLOOR HOLE COVER POLICY

The floor holes are bound to generate due to openings left for ducts, chutes, cyclones cable routing etc during the construction of multi-floor structure, hence these holes are to be temporarily closed with required strengthened plate to prevent the fall of persons, tools & tackles, materials etc. This plate is to be fixed rigidly to avoid the movement of plate by wind, push by person etc. Hence, separate procedures are to defined for different size/dimension of the openings. The purpose of guarding & covering floor holes / openings is to establish system to ensure availability of safe work condition for employees and supervisors working around floor or roof openings / holes. Floor openings

Prepared by:

Reviewed by :

Approved by:

<p style="text-align: center;">Birla Cellulosic - Kharach Grasim Industries Limited</p>			
<p style="text-align: center;">Contractor Safety Plan</p>			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 58/

and floor holes must be safely protected. For more details , height work standard to be referred.

Types of Protection

a) Stairway floor openings must be protected with a railing that protects all open sides except the stairway entrance side. They can be protected with a hinged cover and movable railing. However, where movement across is frequently used and stairway floor opening prevents installation of a fixed railing, this removable railing must protect all open sides except the stairway entrance side.

b) Temporary floor openings must be protected by chequered plate of size 5mm with the angle/channel welded at the bottom to prevent from slide. However, specific cover specification shall vary based on hole sizes as outlined below, examples are as below:

- Conveyor discharge
- HT cable riser
- Utility pipe opening

C) Ladder way floor openings or platforms shall be guarded by standard railings with standard toe boards (Top rail at 1050 mm, mid rail at 525 mm and toe board minimum 150mm) on all exposed sides, except at the entrance to the opening, with the passage through the railing either provided by a swinging gate or so offset that a person cannot walk directly into the opening.

d) Hatchways and chute floor openings shall be protected by a hinged cover of standard strength and construction and a standard railing with only one exposed side. When the opening is not in use, the cover shall be closed or the exposed side shall be guarded at both top and intermediate positions by removable standard railings; or a removable standard railing with toe board on not more than two sides of the opening and fixed standard railings with toe boards on all other exposed sides. DOC NO. : HSE/GIL/01 REV NO : 00 DATE : 22.03.2018 Page 61 of 128 The removable railing shall be kept in place when the opening is not in use and shall be hinged or otherwise mounted so as to be conveniently replaceable.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 59/

e) Pits and trap door floor openings shall be protected by floor opening covers of standard strength and construction.

f) Manhole floor openings shall be protected by standard covers which need not be hinged in place.

g) Tools and material must be prevented from falling through a floor hole with a cover that leaves an opening no more than 25mm wide and is securely held in place.

h) Holes at the wall - During the construction of the architectural building, holes at the side of opening at wall are to temporarily closed by fixing handrails approximately 1-meter high, mid rails, and toe boards, all secured rigidly by the civil agency.

i) In case of unprotected holes, open sided floors, open side wall hole, either temporary barricading of the area or posting of guards shall be done to prevent any unauthorized entry into the area. All concerned personnel shall be notified to proceed into the area with the required PPE's as per the SHE manual.

Floor Hole Cover Protocol

Hole Cover Specification		
Type	Size	Specification for cover
Round	25mm – 200mm	Round MS plate 5mm thick dia minimum 100 mm more than hole size, vertical angle => floor size welded at bottom side.
Round	200mm – 2mt	Round MS plate 5mm thick dia minimum 250 mm more than hole size, 15-50 mm angle frame welded at bottom side.
Round	2mt and above	Round MS plate 6mm thick dia minimum 300-500 mm more than hole size, 300 mm angle / beam frame welded at bottom side.
Square	Upto 100 mm	MS plate 5mm thick and plates should be minimum 100mm more than actual size of the hole vertical angle => floor size welded at bottom side.
Square	100mm – 2mt	MS plate 5mm thick and plates should be minimum 250mm more than actual size of the hole vertical angle => floor size welded at bottom side.
Square	2mt and above	MS plate 6mm thick & plates should be minimum 300 to 500mm more than actual size of the hole vertical angle => floor size welded at bottom side.
Note: On top of the cover plate, "Hole Cover – Do Not Remove"		

38.0 FIRE PROTECTION/FIRST-AID FIRE FIGHTING

The contractors shall plan and chalk out the measures for the elimination of possible conditions, which may lead to fire. The contractors shall provide adequate number of well-maintained fire extinguishers, at each work area and with all hot works in progress.

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 60/

The contractor shall ensure that workmen are trained in the use of fire extinguishers, understands the basics of Fire-fighting and train the workmen to become familiar with such Fire Fighting Procedures. A qualified person shall periodically inspect all fire extinguishers. Fire extinguishers should be located in easily approachable designated areas and clearly identified.

Containers of flammable materials, oily rags, waste etc. must not be left lying around or allowed to accumulate. Covered metal skips should be used for disposal of flammable waste. If welding / cutting operations are to be carried out, non-flammable screens and blankets shall be used to confine sparks hot metal or slag. A fire extinguisher should also be readily available. Chemicals and other such goods should be stored in stable racks properly labeled. Mutually reactive chemicals should be kept away from each other. Storage place should have proper ventilation.

39.0 EMERGENCY PROCEDURES

The following will be considered to establish emergency procedures.

- Make a list of available emergency services and confirm their communication channels.
- Ensure that supervisors clearly understand their responsibility and role in the site emergency procedures.
- Designate first aid and provide medical supplies and other material and equipment that may be required for emergency use.
 - Set up emergency response teams.
- Determine emergency evacuation routes for work areas and construction site.
- Make sure that all personnel clearly understand emergency warning siren signals or other warning signals used by owner or other authorities.
- Designate a supervisor to conduct a head count and give instructions to evacuees as necessary.
- Post-emergency information for each work area on the site.
- Conduct emergency response mock drill periodically once at least in three months.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 61/

40.0 Other Terms and Conditions

General terms & conditions regarding health, safety & environment are given in this document. In addition to this Contractor has to follow the provisions of following Acts / Rules:

- a) The Contract Labor (Regulation-Abolition) Act, 1970.
- b) The Indian Electricity Act, 1910 & Rules
- c) The Employees State Insurance Act, 1948 & Rules
- d) The Indian Explosives Act 1884 amended 1985& Rules
- e) The Motor Vehicle Act, 1988
- f) The Workmen Compensation Act, 1923 & Rules
- g) The Factories Act -1948 and Gujarat Factories Rule, 1963.
- h) The Industrial Dispute Act, 1947
- i) The Child Labor (Prohibition & Regulation) Act, 1986
- j) The Gas Cylinder Rules, 1981.
- k) The Static & Mobile Pressure Vessels (unfired) Rules, 1981
- l) The Building and other Construction worker (Regulation of Employment and conditions of service) Act, 1996 and Model rule frame there under, 1998

41.0 PLAN FOR GENERAL INSPECTION (To be carried out Daily/Weekly/monthly/Quarterly)

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 62/

Sl. No.	Type of Inspection	Frequency	Scope Inspected By [Contractor]
1	PPE	Weekly	100%
2	Excavation	Weekly	100%
3	Lifting Tools & Tackles	Weekly	100%
4	Hoists	Weekly	100%
5	Electrical installation & connection	Weekly/new connection & modification	100%
6	Ladder	Weekly	100%
7	Hot Work	Daily	100%
8	Gas cutting sets	Weekly	100%
9	Housekeeping	Daily	100%
10	Plant & Equipment	Weekly	100%
11	Construction Equipment	Fortnightly and / prior to first use	100%
12	Fire Protection Equipment & Safety Harness	Fortnightly	100%
12	Scaffolding material	Weekly/new	100%
13	Scaffolding, Staging & Formwork	Weekly and / for all new erection & modification	100%
14	Man basket	Weekly	100%
15	Storage of Material	Weekly	100%

Contractor must submit the schedule of each inspection mentioning the date and time for each month, to the GIL for approval, within first 3 days of each calendar month. First priority must be given to attend the shortfalls (if, find out during inspection) within the specified time. The above table is just for example which can be expanded depend on the nature of job and equipment used at site. GIL team will carry out inspection and audit on random basis.

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 63/

42.0 House-keeping guidelines

General guidelines

- Aisle ways, clearly defined Walkways, and Stairways
- Keep clean, unobstructed pathway free of tripping hazards.
- Do not permit storage of materials, equipment in aisle ways, under stairways.
- Post signs or barricades to warn tripping or slipping hazards.
- Maintain adequate lighting.
- Pathways marked /First Aid/ FE points
- No loose material at height – keep it in cage /box

Storage Areas

- Clearly identify purpose of area and define boundary by barricades.
- Provide area of adequate size. Do not store excess materials or equipment.
- Store in a neat, safe, orderly fashion with proper labeling.

Trash removal plan All Contractor Employees must do their part on a daily basis to keep job sites clean

. The debris from the site shall be accumulated and dumped at the designated disposal area on a daily basis. Collection bins shall be cleared once a week to identify dump area.

Note: To be ensure that outside sweeping through wooden handle broom only .

43.0 Prohibition of Photography Taking:

Photograph taking on the BC-KHARACH site is not permitted unless prior approval is given by the respective FH.

44.0 Prohibition Of Mobile Phone In Side Plant Premises:

Mobile phone on the BC-KHARACH site is not permitted unless prior approval is given by the site management.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 64/

45.0 PENALTIES

In case of Safety violations with any of the above terms and conditions or violations in the safety instruction or safety requirement as informed to you time to time by BC management, your contract shall be liable for termination or penalty as per penalty matrix (Annexure G) append to this document. Amount of penalty will be decided by the BC Management based on significance/severity of the offence/safety violation if not listed in penalty clauses.



annexure G penalty
matrix.docx

46.0 AUDITS & INSPECTIONS:

At a minimum,

Contractor shall implement the following core audit inspection programs:

- Safety Management by Walking around Contractor project management will participate in the Employer Safety Management by Walking Around Program, which includes EHS performance reviews conducted by all project supervisors (non-EHS) a minimum of once (1) per work.
- **CFSA** – Contractor Field Safety Audit Contractor will be required to conduct CFSA – (Contractor Field Safety Audit) that meet Project Manager/Employer leading indicator requirements. Contractor shall conduct periodic compliance audits (and any applicable subcontractors) to ensure core compliance with all applicable laws and defined Employer performance requirements. **Contractor shall follow checklist Doc No. GIL/29 – Contractor Field Safety Audit format.**

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

<p style="text-align: center;">Birla Cellulosic - Kharach Grasim Industries Limited</p>			
<p style="text-align: center;">Contractor Safety Plan</p>			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 65/

• **Weekly Contractor Field Audits :**

The Weekly Contractor Field Audit Observations shall be documented and their severity rated, based on severity on 0 to 5 scale:

- ‘0’ is best: No Violation –
- Severity 1: Untidy, doesn’t meet standards. –
 - Severity 2: Untidy, blocks access. Sets a bad example.
 - Severity 3: Rules and Procedure violation.
 - Severity 4: Serious hazard can cause serious injury if not corrected.
 - Severity 5: Imminent Danger, stop work and correct immediately, will cause serious injury or fatality. (the worst severity)

Hence, Severity varies from 0 to 5

- Severity Index = (Numbers of Violations * Severity) / Total number of violations
- Severity based audit must be done weekly and reported in weekly meeting indicating average
- Severity and number of violation in severity 4s and 5s.

This methodology is to provide status of safety violation in terms of management terms and methodology encourages participation between BC- Project and the Contractors Line Supervisor.

The BC Project Construction Manager will schedule and lead the audit weekly. Safety department shall conduct independent CFSA for an area and prepare the weekly report. All deviations shall be rectified within the agreed period. Reports will be completed by the contractor’s representative and submitted to the Project Head/Construction Manager and BC- safety department. The BC Safety Manager, Contractor Safety Managers/Supervisors and CSM leader will review the Weekly Contractor Field Audit trends during the Meeting of the Contractor Safety Committee to determine corrective actions to be taken to prevent further occurrence and provide continuous improvement initiatives for contractor safety performance.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach Grasim Industries Limited			
Contractor Safety Plan			
Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 66/

Annexure

(Contractor and his representative need to sign this certificate if contract is awarded)

Certification of Understanding Safety Requirements

Reference:

1. Contractor Award Meeting / Discussions on dated.....
2. Contractor Safety Plan - Document No: P&F/CSM/01/2018
3. Tender Enquiry - Document No:
4. Attached documents in mail:

With reference to above, we hereby certify that we have fully understood Birla cellulosic, Kharach Safety expectations for the contract. Whereby certify that we will work to ensure complete compliance to Safety requirement as per plan, conduct audit and verify adherence to the Safety requirements and referred documents.

We have also understood consequences for violation to requirement and we will take care so that such violation does not occur at all.

Contracting Partner/s

(1)Name:

(2) Name:

Signature.....

Signature.....

Date

Date

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 67/

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic – Kharach

Name of	Department: Grasim Industries Limited				
Crane Reg No:	Contractor Safety Plan				
Crane Inspection Date:	Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 68/	
Name of	Agency / Contractor :				

Sr. No	Vehicle Identification Number	OK	NOT OK	NA	REMARKS
--------	-------------------------------	----	--------	----	---------

SAFETY DEPT CHECKS

1	Crane manufacturing year (Not more than 10 years)				
2	Head lights / rear lights / break light condition				
3	Tyre condition (Crack , cut , air pressure etc)				
4	Condition of Battery and self start (5-7 seconds)				
5	Front / Reverse horn & Rear view mirrors				
6	Warning sign / SWL/ Operating instruction display				
7	Operators Fitness - Certificate of eye sight from ophthalmologist)				
8	Fire Extinguisher in operators cabin (DCP Type)				
9	Form No.10 (For hydra / crane /sling/ lifting tools etc)				
10	PUC				
11	RTO Registration				
12	RTO fitness				
13	Insurance				
14	Spark arrestors properly fixed				
15	Operators valid liscence (Heavy duty / HMV)				
16	Age of the operator should be not less than 24 Years				

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 69/

17 Out riggers pads are proper

18 Hook should be in one plane(Not twisted)

19 Wear on hook throat should not be more than 10%

USER DEPT CHECKS

20 Out riggers fully extendible / condition

21 Guards on other moving and rotating parts

22 Provision of Load chart for Hydra & SLI for crane

23 Hook and Hook Latch condition

24 Over-Hoist Limit Switch

25 Boom-Limit Switch

26 Boom Angle indicator

27 Boom-Limit cut-off switch

28 Over load limit switch

29 Condition of boom & Ropes

30 Size and condition of the sling(s) / Other tools & Tackles

31 Swing, Hoist & boom Brake & Lock condition

32 Is operator knowledgeable on operation?

33 Is level gauge installed? Only for crane

34 Leakage in hydraulic cylinder /hose

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 70/

35 The wire rope keepers are in good condition

36 Check hydraulic oil level of tank

37 Dead end of the wire rope is secured properly

**Safety
Representative
Name and
Signature**

Department Representative Name and Signature

Note:

1) Safety Dept will check the adherence of Point no:1 to 19 & User dept will check the adherence of Point no: 21 to 37

2) After safety check at Gate:01 as per checklist, the safety dept will handover the check sheet to user dept for further check.

3) After check user dept to send this checklist to safety dept for record keeping.

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 71/

ACCIDENT / INCIDENT / NEAR MISS REPORT

Title : Incident Investigation Procedure	Document Number: ABG/ P&FB/ SHE/ IIP/3002.00 Issue Date: 31.03.2015
--	---

Annexure - 1: Initial Incident Report Form

Form # ABG/P&FB/SHE 4002.00

Effective Date: 31.03.2015

INITIAL INCIDENT REPORT			
Unit :		Department :	
Date :		Time :	
Description of Incident : What happened: (Provide a short summary of incident facts known at present (eg. status of personnel or equipment, name of material and approximate quantity involved, and the potential severity of outcomes) including Off- Unit and/or On-Unit impacts:			
People	No. of injuries	No. of fatalities	Description / Details
Employee			
Contractor			
Third Party			
Immediate action taken :			
What assistance has been requested :			
External agencies involved (e.g., Fire brigade, Local Police etc.,) :			
News media coverage :			
Reported By : (Name & Designation)		Date & Time of reporting :	

Note: In case of any Distribution related incident same Form should be used.

Prepared by:

Reviewed by :

Approved by:

<p align="center">Birla Cellulosic - Kharach Grasim Industries Limited</p>			
<p align="center">Contractor Safety Plan</p>			
<p>Document Number: P&F/CSP/01/2018</p>	<p>Revision No.:</p>	<p>Effective Date:</p>	<p>Page: 72/</p>

JOB SAFETY ANALYSIS

BACK PAGE

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 73/

CHECKLIST FOR CHAIN PULLEY BLOCK INSPECTION

SL. NO.: GL / 11

DATE -----

Parameters of Inspection	Yes	No
Is the load test certificate available for the particular equipment?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the Tag with the SWL and SI No. imprinted fixed on the Chain Pulley block?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
External Features:		
Physical condition of the outer shell, whether corroded, rusted, cracked etc. ok?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Condition of the Load chain ok? (check each link of the chain)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are they free from rust?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the device free from cracks, depression, signs of weakening, kinks, distortion? (The chain is rejected even a single link is damaged.)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Check the gears:	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Condition of the operating chain ok?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Condition of the lifting hook ok?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are securing means of the hook in ok condition?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the Throat Opening ok? (Reject if distortion causing an increase in throat opening exceed 15 %)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Free from any signs of Wear or rusting? (Reject if any wear exceeding 10 percent of the original section dimension of the hook or its load pin.)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Free from any Deformation. (Reject if any bending or twisting exceed 10 degrees from the plane of the unbent hook.)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Free from cracks, depression, signs of weakening?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the hook Safety latch available and is in operating condition?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the suspension hook / lug in good condition?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are all the split pins for all locking pin / nut bolt in place?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Internal Features: (Remove the outer cover but do not dismantle the components inside)		
Physical condition of the inner shell, free from corrosion, rust, crack etc.?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Check the gears:		
Are they placed well in their original position?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the gears physically in good condition?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the Bearings, Pins, and Rollers in good repair?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the Operation chain wheel ok?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Load sproket, idler sproket, in acceptable condition?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the CAM / Ratchet in good repair? (Do not dismantle the same).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the nuts, bolts are properly placed and fits well in place?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Inspected By:

Sign

Date

Prepared by:

Reviewed by :

Approved by:

Contractor Safety Plan

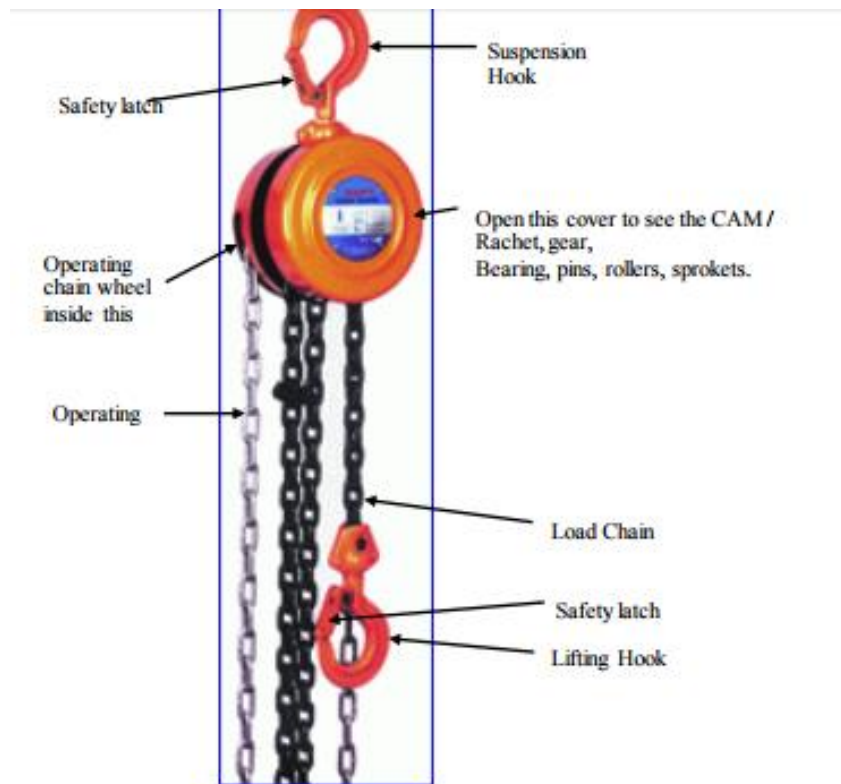
Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 74/

Chain Pulley Block



Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 75/

CHECKLIST FOR RIGGING EQUIPMENT

SL. NO.: GL / 16

DATE -----

Does the contractor have an inspection program for rigging equipment?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is there documentation by contractors for all rigging equipment?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is defective-rigging equipment tagged and removed from service?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is rigging equipment protected from mud, dirt and chemical exposures?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are rigging and lifting devices properly designed and installed for the task?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are softeners used to protect from damage?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are chain-falls and maxpullers prevented from being used as slings?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are employees prevented from walking under loads?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are containers covered and spillage prevented?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is a competent person assigned to all rigging activities?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are lifting beams stamped with the capacity of the beam?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<u>Wire Rope Slings</u>		
Are SWL marked and Test Certificate available?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the sling stored properly?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is it free from rusting, abrasion, cut marks, pressing, denting, bird caging, twist, kinks or core protrusion?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the sling free from wires broken or number of broken wires less than acceptable standard (i.e. <6 wires in a lay or 3 wires in a strand)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the sling dia. uniform throughout the length? (Reject for >10% or more reduction).	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the sling mechanically spliced? (hand spliced or wire rope clamps not allowed)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<u>Belt Sling</u>		
Is the belt sling tested and certified and SWL marked conspicuously?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is it free from exposure to corrosive, cuts, burn, and abrasion?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Free from any scratch, cut up to 1/10 th of the belt width at any place?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
All sewn joints intact and no where it is separated?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<u>Dee or Bow Shackle</u>		
Is the tackle tested and certified and SWL marked on its body?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Free from any crack, dent, distortion or weld mark, wear / tear?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the pin in good shape and not distorted. Not replaced with any other materials like Nut Bolt etc.?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are the eyes in a straight alignment and the threads in good condition?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

The checklist has been completed in respect of the work identified
Checked By [Contractor]

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 76/

FULL BODY HARNESS INSPECTION CHECKLIST
(Fortnightly Inspection)

SL. NO.: GL / 18

DATE -----

Instructions:

1. All parts of the body harness and its attachments must be inspected for wear and damage.
2. This ☐ symbol is for YES or OK. This x symbol is for NO or REPLACE.
3. Inspect and document monthly
4. Maintain the completed inspection report so that it is readily available for review.

Month	Harness Sr. No.	Harness Webbing	All Stitching	Rivets & Eyelets	D-Ring(s) & Buckle(s)	Lanyard & Decelerati on Device	Hook Safety Latch	Inspection & certificatio n tag
Jan								
Feb								
Mar								
Apr								
May								
June								
July								
Aug								
Sept								
Oct								
Nov								
Dec								

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 77/

SELF DECLARATION OF VEHICLES BY CONTRACTOR

SL. NO.: GL / 22

DATE

Self-Certification of Vehicle

(One copy to be submitted to Grasim on a Quarterly basis for every vehicle. Copy of this checklist should be available with the vehicle)

Lubrication	
1	Engine Oil replacement – every 5000 KM
2	Replace Air Cleaner Oil
3	Replace transmission oil level
4	Replace differential oil level
5	Check power steering oil level
6	Replace brake fluid
7	Lubricate propeller shaft U-joints
8	Lubricate steering linkages
9	Lubricate Front & rear spring pins
10	Lubricate kingpins
11	Lubricate steering shaft lubrication
12	Lubricate accelerator cable ball end
13	Lubricate gearshift level pin
14	Lubricate parking brake ratchet bar
Inspection & Maintenance	
1	Replace Oil filter element & bypass filter
2	Check & Adjust V-belt tension
3	Check fuel feed pump gauze filter
4	Check Engine operating condition
5	Check & adjust valve clearance
6	Discharge water from water separator
7	Check radiator cap condition
8	Check tightness of radiator hoses
9	Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger inter cooler etc)
10	Check & tighten starter motor mounting
11	Check & tighten engine & radiator mountings. Radiator hose connections, fuel filter mounting bolts
12	Check & adjust front wheel alignment
13	Check steering system
14	Check Front & rear suspension "U" bolt
15	Check master vacuum valve function
16	Tighten propeller shaft bolts
17	Check clutch pedal play
18	Check service brake operation
19	Check parking brake operation
20	Check front & rear wheel nuts
21	Check wheels & tyres
22	Check front & rear wheel bearing play & damage
23	Carry out tyre rotation
24	Check battery electrolyte level
25	Check switch function
26	Check lamp & instrument function
27	Check water, oil & fuel leaks

lifting

Signature of Authorized Supervisor
Name :

Signature of project In charge(contractor)
Name :

Designation :
Date :

Designation :
Date :

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 78/

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number: P&F/CSP/01/2018	Revision No.:	Effective Date:	Page: 79/
-------------------------------------	---------------	-----------------	-----------

COMMITMENT LETTER FOR DRIVER

SL. NO.: GL / 23

DATE -----

I hereby assure you that I have neither consumed alcohol nor I am carrying it. I am also declaring that I am not carrying any explosive materials, flammable materials like kerosene, petroleum products. I will follow all the factory rules and regulations as defined and also the written and verbal instructions given. I will pledge to follow them without fail.

- ❖ I will drive the vehicle as per permissible speed limits in the factory.
- ❖ I will not cook the food in the factory.
- ❖ I will follow all the road safety signage's and instructions on the road.
- ❖ I will not do over taking inside the factory.
- ❖ I will provide the stopper to the vehicle, once it is parked.
- ❖ I will not allow the cleaner to peep / get down / get into from the running vehicle.
- ❖ I will not park the vehicle on the slope/down.
- ❖ I will not take rest below or near by the vehicle and ensure the same for the helper
- ❖ I will not park the vehicle at any "No Parking" area.
- ❖ I will use the reverse horn while reversing.
- ❖ I will enter the factory with safety shoes high visibility reflective jacket and helmet.
- ❖ I will not leave the vehicle while inside the factory area.
- ❖ I will use the parking lights in the night inside the factory.
- ❖ I will not repair my vehicle or do maintenance at site.
- ❖ I will immediately go out after loading or unloading of vehicle.
- ❖ I will keep all my documents such as driving license, registration certificate, pollution control certificate etc., ready and will produce on demand.
- ❖ I will not do or involve in any fight etc.,
- ❖ I will ensure my safety, safety of vehicle and safety of others in the factory.
- ❖ I will drive the vehicles with headlights on during night and poor visibility.

I Driving License No.will follow all the instructions. I will pledge to follow all the above instructions, in case if I do not follow any rules and regulations you may initiate appropriate actions on me/my Transporter.

Date:
Time

Driver's Signature:

This will be taken every 6 months from all drivers in local languages or Hindi.

Prepared by:	Reviewed by :	Approved by:
--------------	---------------	--------------

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 80/

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 81/

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 82/

EXCAVATION SAFETY CHECK LIST-SLOPED & BENCHED

LOCATION OF EXCAVATION:		AREA:	EXCAVATION NO.
COMPANY/DEPARTMENT:		ACTIVITY:	
COMPETENT PERSON:		ID Badge #	

Sr. No.	Items	Yes	No	N/A	REMARKS / ACTION
1.	Whether soil stability is checked?				
2.	Whether proper shoring for the excavation is provided to prevent cave-in?				
3.	Whether proper precautions have been taken if the excavation is adjoining to heavy structure like building, street and roadways?				
4.	Whether barricading of 1m height with glowing caution board is provided for excavation beyond 1.5m depth?				
5.	Whether excavating earth is placed beyond 1m of the edge of the trench?				
6.	Whether heavy vehicle movement is restricted to come too close to the excavating area?				
7.	Whether necessary precaution is taken for underground pipes, sewers, cables by contractors?				
8.	Whether excavation work permit is taken?				
9.	Whether extra precaution is taken for bailing out water properly while excavating?				
10.	During rains whether the excavation is done with extra precaution to prevent caving in?				
11.	Whether two separate entry/ exit points with necessary ladders / steps, as per requirement, have been provided?				
12.	Whether one person is available at all the time to communicate any hazards noticed with workers working in deep trenches or excavation?				

Prepared by:

Reviewed by :

Approved by:

Birla Cellulosic - Kharach
Grasim Industries Limited

Contractor Safety Plan

Document Number:
P&F/CSP/01/2018

Revision No.:

Effective Date:

Page: 83/

13.	Whether necessary precautions like regular gas testing are being taken in areas having hydrocarbons and LPG so that no gas accumulation takes place in the trenches.				
14.	Whether adequate precautions for storage, handling & carrying of explosive material and execution of blasting operation is followed?				
15.	Whether in case of mechanised excavation, caution board is provided for do's and don'ts like 'Nobody to enter' within one meter of the extreme reach?				
16.	Whether the following are inspected during excavation work: - a) Boulder formation encountered b) Collapsing / development of cracks of sides c) Marked damage to support d) Unexpected fall of ground e) Inspection of site after each blast.				
17.	Whether specific protection for workers after rain storms or other adverse environmental conditions considered?				
18.	Whether machinery correctly positioned, not a danger to himself or others in the excavation?				
19.	Whether adequate and appropriate PPEs have been provided to all the employees engaged in Excavation work.				
20.	Others				

Prepared by:

Reviewed by :

Approved by:

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Annexure VII - Gate pass process- Birla Cellulosic-Kharach

Annexure VII

CSM Procedure for 3 Gate process

Please find below details of the process followed for entry of Contract labor into system till gate pass is issued:

1. IR Control: Entry of workman at IR office for IR compliance.
2. Medical Control: Medical Checkup
3. Safety Control: General Safety plus job specific Training, with issue of Safety card

DAY-1

1.0 The contractor has to submit the following:

- a. Work Order Copy
- b. Labour License (if total labour with the contractor is more than 19, on any day in last 12 months)
- c. ESIC Code Copy
- d. PF Code Copy
- e. GST Number
- f. Inter-State Migrant Labour License
- g. PAN Number/ Identity Card
- h. Half-yearly and Annual Returns

(A) Application for new gate pass with following documents attached for each labor:

- a. Worker detail form
- b. Letter of Permission for Labor on the letterhead of Contractor / Firm in whose name the Work Order has been issued.
- c. Appointment letter of CL* (Form No. 14), Letter of termination (Form No. 18) as per CLRA
- d. Date of Birth proof & Aadhar Card (mandatory) / Voter ID/ PAN proof for each contract labor
- e. Copy of bank passbook for each contract labor.
- f. Copy of ESIC no. with family photo attached.
- g. UAN Number
- h. GPA Policy (Group Insurance Policy where sum insured is Rs. 10 lacs)
- i. Medical Test report attested by OHC doctor

(B) Application for employment from CL addressed to contractor with name and signature.

Annexures /Formats for each of the above is prepared

*The Appointment Letter mentioned – Should have

- a) Name of labor
- b) Signature of Labor
- c) PF/Bonus %
- d) Contractor Seal/Sign

2.0 The medical reports involve the following check – ups:

Every contractor shall get a medical examination done each of worker employed by him. A list of medical tests needed is given below:

Health Check (Contractor Employee and Supervisor)

A. For Non Hazardous Area:

- Sugar
- Blood Pressure
- Blood Group
- Audiometric Test
- Colour Blindness
- X-ray
- ECG, if required in case of age more than 50 years
- Acrophobia Test (to be conducted for all at OHC)

B. For Fume / Gas Area:

- Tests under Non Hazardous
- Lipid Profile, if required
- Lungs Function Test
- CNS (Central Nervous System) Examination
- Ophthalmic Examination

Please note: For contract workers coming from Outside BC, the contractor has to ensure that the above mentioned tests are previously done from a registered hospital, and get the reports attested by the doctor at OHC (Occupational Health Centre), Grasim Industries Limited, BC.

For contract workers coming from within BC, the contractor has to ensure that the above mentioned tests are done from Jan Seva Hospital, Grasim Industries Limited, BC and get the reports attested by the doctor at OHC (Occupational Health Centre).

(This provision has been added to effectively reduce the time taken at this gate, while maintaining the robust medical examination standards followed in BC)

DAY-2

3.0 General Safety plus job specific Training, with the issue of Safety training card

Safety training is conducted by Safety department as per Safety Training Protocol for both contract workman and Supervisor. A Safety Card is to be issued to each contract workmen by safety department.

After completing all 3 gates, the IR will put its stamp on the Employee Card, followed by Safety stamp/seal by safety department.

Security role & responsibility: -

Security will check attendance card of all contract labours before gate entry: -

- Check Photo matching.
- Check validity of attendance card, IR and Safety Stamp
- Check security signature
- Check Safety Card and training conducted

Surprise check of attendance card in side plant area.

Defaulters will be suspended & contractor will be penalised.

Purchase Department role & responsibility: -

Every work order mentions:

“YOU WILL HAVE KICK OFF MEETING WITH IR TEAM BEFORE STARTING THE JOB IN THE PLANT. THIS IS MANDATORY AND HAS TO BE STRICTLY FOLLOWED”

Purchase/MMD has to ensure that this kick-off meeting of every new contractor takes place with the IR department at the time when Work Order is released.

This will ensure that the Contractor understands all documents that need to be submitted for compliance, as well as Medical tests can be completed well in advance of actual deployment date. This will enable efficient and effective compliance of each of 3 gates with minimum time consumption.

****Kindly read the Responsibility table on next page, for greater clarity and smooth process flow.**

Responsibility Matrix**

	Process	Actions	Responsibility
Gate 1: IR Control	<ul style="list-style-type: none"> - IR kick-off meeting - Check Contractor documents - Check individual worker documents - Issue Employee cards and biometric cards - IR Induction (after medical test and safety induction is complete) 	<ul style="list-style-type: none"> - Requirement of IR Kick-off meeting to be communicated to contractor at time of issue of work order - IR Kick-off meeting to be held at least 2 weeks before date of deployment - Every type of work order to include the number of manpower requirement commensurate with the work order amount. 	<ul style="list-style-type: none"> • Purchase/ MMD Department
		<ul style="list-style-type: none"> - All documents compliances - IR Induction 	<ul style="list-style-type: none"> • IR Department • All document compliances to be documented in Purchase Order by MMD. • List of IR compliances to be provided by IR department
		<ul style="list-style-type: none"> - Issue Employee Cards 	<ul style="list-style-type: none"> • IR Department, Safety Department
Gate 2: Medical Control	<ul style="list-style-type: none"> - Medical examination - Certification by OHC doctor 	<ul style="list-style-type: none"> - Contract workers from outside "BC" to get medical tests done from recognized tests from outside and get certified from OHC 	<ul style="list-style-type: none"> • Documented by MMD in Purchase Order • List of Medical Tests provided by IR • Re-iterated in IR Kick off meeting by IR department
		<ul style="list-style-type: none"> - Availability of OHC doctor at OHC for: (8:30 a.m - 9:30 a.m. and 2:30 p.m.- 3:30 p.m.) <ul style="list-style-type: none"> ○ Medical test certification ○ Acrophobia test 	Safety Department
Gate 3: Safety Control	<ul style="list-style-type: none"> - Safety Training - Safety Card issue - Safety stamp on employee card 	<ul style="list-style-type: none"> - Daily schedule and conducting Safety Training between 10 am – 11 am everyday - Issue of Safety Card - Safety Stamp on Employee Card (immediately after Safety training session) 	Safety Department

Kindly note: All emergency requirements, not following the above schedule to be communicated by concerned Functional Heads, duly approved by Unit Head.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Annexure VIII - Guidelines for inspection control of portable equipments tools

ANNEXURE-VIII

SOP / SAFETY / Tools / 12.06.2018

GUIDELINES FOR INSPECTION CONTROL OF PORTABLE EQUIPMENTS TOOLS

1. OBJECTIVE -

The main purpose of this document is to ensure a healthy and safe working while using Portable electrical equipments.

Portable electrical equipments are being used for maintenance and operation. Safety with each and every machine is equally important and to be strictly adhered to. Many more accidents have occurred around the world due to improper handling

2. SCOPE -

This procedure is applicable for all portable electrical equipments which are being used at Birla Cellulosic.

3.0 PROCEDURE

3.1 Testing/inspection of Portable Electrical equipments,

In Birla Cellulosic various departments & contract owners owned or manage to bring portable Electrical equipment's as list below. All such equipment's are required to be inspected before taking them in use first time and also periodically as given in this procedure.

1. Welding machine.
2. Grinding machine
3. Drilling machine
4. Air blower
5. Hand lamp
6. Extension board
7. Vacuum cleaner.
8. Hydro jetting machine
9. Transformer oil filtration machine, bearing heater, battery testing kit, etc.
10. Vibrator machine
11. Jack hammer
12. Other portable equipment operated by electrical power.

(A) Portable Electrical Work Equipments owned by Birla Cellulosic or Contractors:

- a. Whenever any portable electrical equipment is brought inside the company premises user department has to ensure its inspection and tagging by the inspection team.
- b. Periodic inspection of all such equipments to be carried out at every 6 months by inspection team.

- c. User/Owner department shall arrange to send the equipment centrally at workshop. Workshop team will arrange to call the inspection team for inspection and tagging.
- d. User/Owner dept should intimate the inspection team well in advance if any new equipment is to be inspected.
- e. After inspection, stickers/ Tag to be pasted dully signed with date of inspection and its next due date / validity by inspection team.
- f. Record to be maintained of inspected tools by inspection team.
- g. The permit acceptor shall ensure that all the portable electrical equipments are having valid inspection sticker certified by inspected team before allotting any job.
- h. For work orders given to the contractor where Owner dept is not directly coordinating. Purchase dept. to ensure that any equipment brought by concerned contractor is inspected by the inspection team prior to start use at site. This shall be incorporated in purchase order itself.
- i. For all existing portable electrical tools (Contractor as well as company owned) those are pending for inspection can be brought to work shop on every Saturday between 10.00 to 12.00 hours.
- j. In case of tools which is not found inspected / tagged during any point of time ,will be subjected to progressive consequence management.

For Hand hold tools (Not operated by electrical power)

- k. Other hand hold tools (**Not operated by electrical power**) like chisel , hammer , screw driver, bari, plier, wrench & ring spanner, pan etc. shall be checked by maintenance team of owner department for their correctness and use on quarterly basis. Records of such inspection (found ok V/s Reject) shall be maintained by maintenance team for such inspection for each tool. However all such hand tools are subjected to inspection before each use.
- l. The tools those are owned by contractor needs to be inspected for their correctness and use by permit acceptor / use department before deploying and allowing them on job every time.

Inspection Team:

- 1) **Sandeep Pareek / Shivshankar Sharma- Engg / Workshop**
- 2) **Manish Patel – Safety**
- 3) **Umesh Dubey- Electrical**

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Annexure IX - Erection Welding Schedule



ERECTION WELDING SCHEDULE

PG NO : 12

CUST No : 4402,4403

PG NAME : Superheater System

PROJECT : Grasim Kharach Unit 1

SYSTEM DESCRIPTION : Superheater System

WELDING CODE : IBR / ASME

PRESSURE PARTS/~~NON-PRESSURE PARTS~~

CUST DOC NO : -

CUST DOC REV : -

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
6	0-00-521-35210	WW BENT TUBE + TUBE	SA210GRA1 + SA210GRA1	51	5.2	GTAW + SMAW	5.2 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift				
							80	997	532	-	-								
7	0-00-521-35211	BSH TUBE + TUBE	SA213T22 + SA213T22	47.63	6.3	GTAW + SMAW	6.3 ▽	ER90S-B3	E9018-B3			1013/02	150	Nil	20% RT subject to min 2 weld/ welder/ shift				
							80	859	695	-	-								
8	0-00-521-35211	HPSH-II TUBE + TUBE	SA213T22 + SA213T22	44.5	4.5	GTAW + SMAW	4.5 ▽	ER90S-B3	E9018-B3			1013/02	150	Nil	20% RT subject to min 2 weld/ welder/ shift				
							120	1306	545	-	-								
9	0-00-521-35211	HPSH-II HANGER TUBE + TUBE	SA210GRA1 + SA210GRA1	51	5.2	GTAW + SMAW	5.2 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift				
							60	748	399	-	-								

PREPARED

CHECKED (W.T.C)

APPROVED

DATE _____

DOC NO.

REV NO :	
----------	--

PAGE NO.

RUDRABHATLA SAIKUMAR

LAKAVATH PRAVEEN KUMAR

NIRMAL RAJ N

28-12-2020

4402-12-SH-EWS

0

2/2

CAUTION :

THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.

* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98
* ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV.