



BHARAT HEAVY ELECTRICALS LIMITED
HPEP, RAMACHANDRAPURAM, HYDERABAD-32
(T & C ENGINEERING Department)
TELEPHONE NO. 040-23184953 & 040-23184016

TENDER NOTICE

Name of the Department: T & C ENGINEERING

TENDER NOTICE REF NO.: HY/TCENGG/ SYSTEM/PID-OFFLOAD/NIT/2022-23/001, Date: 09-09-2022

Bharat Heavy Electricals Limited, a Government of India Public Sector undertaking, having its Registered Office at Siri Fort, New Delhi. BHEL Ramachandrapuram, one of its manufacturing Units, invites sealed tenders **in two-part bid** from eligible Contractor, who fulfil qualification criteria as stipulated in NIT, for the work, **“P&IDs Drafting (using SmartPlant P&ID version 09.00.00.1405 (2019)) offloading for Numaligarh Refinery Limited (3 Projects)”**.

1. Sealed quotations in single cover consisting of two inner sealed covers (containing Technical bid as Part A and Price bid as Part B super scribing the Name of work, Part Number and Tender reference shall be deposited in the Vendor Complex, BHEL-RC Puram, Hyd-32 addressed to Sr.DGM/SDC & CMM Vendor Complex, BHEL-HPEP, RC PURAM, HYDERABAD-32 so as to reach on or before **11.00 AM on Date: 03.10.2022**.

Bidder can also submit offer through email. Technical offer to be submitted to mail ID **technicalbid_hyd@bhel.in**, and price bid to be submitted to mail ID **pricebid_hyd@bhel.in** only as an attachment. Technical bid will be opened at **13:30 Hrs.** on the same date and further information if any, may be obtained from the office.

2. The tender documents are available in the Web Site of BHEL www.bhel.com. While submitting the tender documents, a demand draft/RTGS/NEFT/Bankers cheque for Rs.1000/- paid against downloading the tender document should be enclosed to the Techno-commercial bid (part-A). The submitted tender documents downloaded from the website without demand draft/ RTGS/NEFT/ Bankers cheque for the value mentioned will be summarily rejected. Corrigendum if any will be published in BHEL web site only. Bidders should regularly visit website(s) to keep themselves updated. The brief scope of the work and information are provided below:

3. The salient features of the tender documents are as follows:

S.No	Description
1.0	Notice Inviting Tender
2.0	Prequalification Requirements
3.0	EMD & Security deposit
2.1	Instruction to bidder
3.0	Special conditions of contract
4.0	Pre-Qualification Criteria -Technical
5.0	Technical specifications
6.0	Schemes

4. In case, tender documents are submitted by post, BHEL-HPEP shall not be responsible for any delay due to any reasons (including postal delay) either in receiving the Agency's request nor receipt of tender documents by the Agency.

(Signature & Designation of Official)

SIGNATURE OF TENDERER

ACCEPTING AUTHORITY

1.0 NOTICE INVITING TENDER

TENDER NOTICE REF NO.: HY/TCENGG/ SYSTEM/PID-OFFLOAD/NIT/2022-23/001, Date: 09-09-2022

Name of work : **“P&IDs Drafting (using SmartPlant P&ID version 09.00.00.1405(2019)) offloading for Numaligarh Refinery Limited (3 Projects)”**

Earnest Money Deposit : **Rs. 5,200/-**

Approximate Estimated value of work : **Rs. 2,60, 000/-**

Cost of Tender documents : **Rs.1000/- (through Web)**

Last date for sale of tender documents : **Date: 03-10-2022 at 14:00 hrs.**
(Mention date and time)

Last date of receipt of tenders : **Date: 04-10-2022 at 11:00 hrs**
(Mention date and time)

Date, time and place of tender opening : **Date: 04-10-2022 at 13:30 hrs**
(Mention date, place and time) **at Vendor Complex near Admn. Building, BHEL, RC Puram, HYD**

Period of Completion : **6 Months.**
(Mention duration of the Contract)

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2. PREQUALIFICATION REQUIREMENTS:

The following conditions have to be satisfied by the tenderer, with documentary proof to be enclosed with tender bid (Technical):

- (i) Average annual financial turnover during the last 3 years, ending 31st March 2022 of the previous financial year (should submit balance sheet & P&L account for last 3 years –certified by Chartered Accountant), should be at least 30% of the max. allocation (30% of Rs. 2.6 lakhs = Rs 0.78 lakhs). Further, if the tenderer fails to submit the figure (s) for 3 years, non-submitted year will be considered as “0” (Zero) for averaging the turnover.
- (ii) Particulars of experience / credentials for the works executed of similar nature during not older than 7 years, (Completion and experience certificate of the works executed are to be enclosed) ending last day of month, previous to the one in which applications are invited should be either of the following:
 - a. Three similar completed works each costing not less than the amount equal to 40% of the estimated cost (40% of Rs. 2.6 lakhs = Rs. 1.04 lakhs).
OR
 - b. Two similar completed works each costing not less than the amount equal to 50% of the estimated cost (50% of Rs. 2.6 lakhs = Rs. 1.3 lakhs).
OR
 - c. One similar completed work costing not less than the amount equal to 80 % of the estimated cost (80% of Rs. 2.6 lakhs = Rs.2.08 lakhs).
 - d. Experience certificate issued by BHEL, RC Puram in case any work executed in BHEL, RC Puram for past three years, any adverse remarks in the experience certificate will be a disqualification factor.

Similar Work Means: Agency Shall have experience in carrying out P&ID Preparation in Smart plant PID software.

**(Copy of satisfactory completion certificate of contract of similar work shall be attached)
(If the completion certificates is from private organization the same shall be supported with TDS certificate/payment transaction details along with form 26AS).**

- (iii) “The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firm shall be rejected. The list of banned firms is available on BHEL website www.bhel.com”.
- (iv) Valid ESICode Number and P.F. Code Number
- (v) Valid GST registration number.
- (vi) PAN card. (In case not available, proof of having applied with acknowledgement from concerned authority).

GST: All the terms & conditions of the contract with respect to Taxes & Duties are subject to the latest taxation laws introduced from time to time (e.g., GST). The terms & conditions will be modified in accordance with the provisions of latest laws (e.g., GST).

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3. EARNEST MONEY DEPOSIT:

- i. An amount of **Rs.5,200/-** towards EMD shall be paid by Demand Draft/RTGS/NEFT/ Banker's cheque drawn on any nationalized bank / scheduled bank in the name of "Bharat Heavy Electricals Limited" payable at Hyderabad and shall be enclosed to the tender bid. No other means of payment shall be accepted. EMD / any money due to the tender by BHEL shall not carry any interest. (RTGS/NEFT details mentioned in Clause No. 4(xi))
- ii. Tenders received without EMD as specified above shall be rejected. If EMD accompanies price bid, such bids shall not be considered and will be rejected. No adjustment of EMD shall be made with EMD submitted earlier with other tenders of BHEL or any outstanding amount. If EMD is not in line with amount called for, the EMD as well as the quotations will be returned in unopened condition to the tenderers.
- iii. EMD of unsuccessful bidders shall be returned upon award of Contract and request by unsuccessful bidder. EMD of successful bidder shall be converted and adjusted towards the required amount of Security Deposit.
- iv. EMD may be forfeited if after opening of tenders, a tenderer revokes his tender or increases his earlier quoted rates or after acceptance of his tender does not commence the work in accordance with the instructions of BHEL.
- v. The EMD will be forfeited if the accepted tender is withdrawn. If only a part of the work included in the tender had been awarded to the tenderer, proportionate amount of EMD will be retained.

4. SECURITY DEPOSIT

- i. Upon acceptance of his tender bid, the successful tenderer must deposit Security Deposit within the time specified in the letter of intent. Security Deposit shall be collected from the successful tenderer. The rate of Security Deposit will be as below:

Total amount of Security Deposit will be 5% of the Contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.

- ii. The successful tenderer on receipt of letter of intent can convey his acceptance in writing for conversion of EMD into security deposit.
- iii. If the work is awarded, the agency has to pay 50% of SD in advance on contract value before commencement of work after adjusting of EMD amount.
- iv. Security Deposit may be furnished in any one of the following forms.
 1. Demand Draft in favour of BHEL.
 2. Local cheques of scheduled banks, subject to realization.
 3. Securities available from India Post such as National savings Certificates, Kisan Vikas Patras etc.
 4. Bank Guarantee from scheduled Banks / Public Financial Institutions as defined in the Companies Act subject to a maximum of 50% of the total security deposit value. The balance 50% has to be remitted either by cash or in the other form of security. The Bank Guarantee format should have the approval of BHEL.
 5. Fixed Deposit Receipt issued by scheduled Banks / Public Financial Institutions as defined in the companies Act. The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.
 6. Security Deposit can also be recovered at the rate 10% from the running bills. However, in such cases at least 50% of the Security Deposit should be deposited before start of the work and the balance 50% will be recovered from the running bills.

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Note: Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be adjusted to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith

- v. Failure by the successful tenderer/bidder to deposit the security deposit amount as mentioned above within the stipulated time, which will include any extension that may be granted by the authorities, will render his earnest money deposit liable to forfeiture and his tender shall be consider as withdrawn. Security Deposit shall not be refundable to the contractor except in accordance with the terms of the contract.
- vi. Failure by the successful tenderer/bidder to deposit the security deposit amount as mentioned above within the stipulated time, which will include any extension that may be granted by the authorities, will render his earnest money deposit liable to forfeiture and his tender shall be consider as withdrawn. Security Deposit shall not be refundable to the contractor except in accordance with the terms of the contract.
- vii. The Security Deposit will be released along with the final bill or after completion of work/maintenance period for the work if applicable, whichever will be later, subject to the condition that nothing is outstanding against the Contractor.
- viii. No interest shall be payable by BHEL on EMD or SD or any money due to the contractor by BHEL.
- ix. The Bank account details of BHEL for payment of tender document cost, EMD and Security Deposit through RTGS/NEFT mode is as reflected below.

BANK ACCOUNT DATA FOR RTGS/NEFT MODE OF PAYMENT

1. Party Code

2. Option : RTGS/NEFT

3. Beneficiary Details:

A) Name of Beneficiary	: BHARAT HEAVY ELECTRICALS LIMITED
B) Address	: RAMACHANDRAPURAM, HYDERABAD- 502032.
C) Bank Name	: STATE BANK OF INDIA
D) BRANCH NAME	: BHELTOWNSHIP, HYDERABAD- 502032.
E) Account No.	: 62048154115
F) Account type	: Current A/c
G) Bank IFSC Code	: SBIN0020075
H) Bank MICR Code	: 500002370

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- x. The contractor's/ Firms who are entering first time in BHEL, Ramachandrapuram are requested to provide the following NEFT details (Bank official Signature) along with cancelled cheque. This information is required for transactions between BHEL and the Contractor's/Firm's.

(Vendors to furnish this mandate on their Letter Head.)	
To Dy. Manager/Finance-CM Bharat Heavy Electricals Limited Ramachandrapuram Hyderabad 502 032 Dear Sir, Sub: Details for National Electronic Fund Transfer We request and authorize you to effect payment through NEFT to our Bank account, subject to RBI Guidelines, as per the details given below A. Sup code (As per PO/SCO) / Staffno : B. (Name as per PO/SCO) : (Retd Employee to indicate address here) C. PAN of Beneficiary : D. TIN of Beneficiary : E. e-mail address of Beneficiary : F. City (of Beneficiary) : G. Bank Name : H. Branch (of Bank) : I. A/c Number : J. A/c type (Savings or Current) : K. MICR Code of the branch (9 digit) : L. IFSC for NEFT (11 char) : M. IFSC for RTGS (If different from L) : Thanking you,	Ref No: _____ Date: _____ Ref No. _____ (Signature with Seal) _____ Authorised Signatory Name _____ Name _____ Designation _____ Designation _____
Certified that the particulars furnished above are correct as per our records Date _____ (Signature of authorized official of bank) Bank Stamp _____	

SIGNATURE OF TENDERER

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	 HYDERABAD	Engineering Services of P&ID Drafting using SMART PLANT (SPPID) VERSION 2019 software			SCP-67602																																																				
		(Numaligarh Refinery Expansion Project)			Rev No. 00																																																				
					Page 1 of 5																																																				
I. SCOPE: The purpose of this document is to provide project specific information to be used as input by Engineering Sub Contractor (ESC) for preparation of offer for subject enquiry. The ESC shall use only SMART Plant P&ID(SPPID) version 09.00.00.1405 (2019) software to do the P&ID drafting and generate deliverables like Line list, Valve schedule from SPPID. II. INTRODUCTION: 1. BHEL is executing following Gas Compressor projects for M/s Numaligarh Refinery Limited. The project name and consultant details are as follows: <table border="1"> <thead> <tr> <th>Sl. No</th> <th>Project Name</th> <th>Consultant</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>NRL-RPTU-SGC (MCA1071)</td> <td>Technip India Limited, Mumbai</td> </tr> <tr> <td>2</td> <td>NRL-RPTU-RGC (MCA1072)</td> <td>Technip India Limited, Mumbai</td> </tr> <tr> <td>3</td> <td>NRL-CCR-RGC (MCA1073)</td> <td>thyssenkrupp Industrial Solutions (India) Private Limited, Mumbai</td> </tr> </tbody> </table> III. REFERENCE DRAWINGS FOR ESC: <table border="1"> <thead> <tr> <th>A</th> <th colspan="2">NRL-RPTU-SGC (MCA1071)</th> </tr> <tr> <th>S. No.</th> <th>Drawing Description</th> <th>NRL-RPTU-SGC (Drawings no.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>P&ID for Process Gas</td> <td>HY-DG-1-336-00-44901</td> </tr> <tr> <td>2</td> <td>P&ID for Lube Oil System</td> <td>HY-DG-0-336-00-44902</td> </tr> <tr> <td>3</td> <td>P&ID for Seal Gas</td> <td>HY-DG-1-336-00-44904</td> </tr> <tr> <td>4</td> <td>P&ID for Cooling water system</td> <td>HY-DG-3-336-00-44905</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>B</th> <th colspan="2">NRL-RPTU-RGC (MCA1072)</th> </tr> <tr> <th>S. No.</th> <th>Drawing Description</th> <th>NRL-RPTU-RGC (Drawings no.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>P&ID for Process Gas</td> <td>HY-DG-1-336-00-44801</td> </tr> <tr> <td>2</td> <td>P&ID for Lube Oil System</td> <td>HY-DG-0-336-00-44802</td> </tr> <tr> <td>3</td> <td>P&ID for Seal Gas</td> <td>HY-DG-1-336-00-44802</td> </tr> <tr> <td>4</td> <td>P&ID for Cooling water system</td> <td>HY-DG-3-336-00-44805</td> </tr> <tr> <td>5</td> <td>Steam and drain P&ID</td> <td>HY-DG-3-336-00-44804</td> </tr> </tbody> </table>							Sl. No	Project Name	Consultant	1	NRL-RPTU-SGC (MCA1071)	Technip India Limited, Mumbai	2	NRL-RPTU-RGC (MCA1072)	Technip India Limited, Mumbai	3	NRL-CCR-RGC (MCA1073)	thyssenkrupp Industrial Solutions (India) Private Limited, Mumbai	A	NRL-RPTU-SGC (MCA1071)		S. No.	Drawing Description	NRL-RPTU-SGC (Drawings no.)	1	P&ID for Process Gas	HY-DG-1-336-00-44901	2	P&ID for Lube Oil System	HY-DG-0-336-00-44902	3	P&ID for Seal Gas	HY-DG-1-336-00-44904	4	P&ID for Cooling water system	HY-DG-3-336-00-44905	B	NRL-RPTU-RGC (MCA1072)		S. No.	Drawing Description	NRL-RPTU-RGC (Drawings no.)	1	P&ID for Process Gas	HY-DG-1-336-00-44801	2	P&ID for Lube Oil System	HY-DG-0-336-00-44802	3	P&ID for Seal Gas	HY-DG-1-336-00-44802	4	P&ID for Cooling water system	HY-DG-3-336-00-44805	5	Steam and drain P&ID	HY-DG-3-336-00-44804
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Ref. Doc	Revisions :		Prepared:	Checked:	Approved:	Date:																																																			
	Refer to record of revisions :		Kanhaiya	Deepak Jha	P D Mahulikar	04.08.2022																																																			

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C	NRL-CCR-RGC (MCA1073)	
S. No.	Drawing Description	NRL-CCR-RGC (Drawings no.)
1	P&ID for Process Gas	HY-DG-1-336-00-44701
2	P&ID for Lube Oil System	HY-DG-0-336-00-44702
3	P&ID for Seal Gas	HY-DG-0-336-00-44704
4	P&ID for Cooling water system	HY-DG-1-336-00-44704

IV. SCOPE OF WORK OF BIDDER IN THE PROJECT

All items as mentioned in Scope doc- SPC 67602 in conformance with the enclosed spec TC-67602.

Also refer NRL's specification **"SMART PLANT P&ID SPECIFICATION, document no.: NR-0ZZZZ-PR-SPE-0001-Rev A2"**.

V. MILESTONES FOR PAYMENTS

1. First Submission of Smart Plant P&IDs in SPPID along with deliverables to End Customer: 40%
2. Upon receipt of Customer's acceptance and final approval of the P&IDs along with deliverables: 50%
3. 10% balance amount of order value will be paid 9 months after submission of documentation of completion of P&IDs or after completion of site erection whichever is earlier.

Ref. Doc	
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**PRICE FORMAT
(TYPICAL)**

Enquiry No/Tender Ref no: HY/TCENGG/ SYSTEM/PID-OFFLOAD/NIT/2022-23/001

Date:

Job: Offloading of P&ID Drafting Services for **(PROJECT NAME)** using SMART Plant P&ID Version 2019.

1. Project Name: NRL RPTU SGC ref: III A (PR no- 1600027438)

Name of the ESC:

PR. No	Item	Basic Price (Rs)	Service Tax (Rs)	Other Tax (Rs)	Total (Rs)
01	Lump sum Price for Engineering Services of P&ID Drafting using SMART Plant P&ID Version 2019 Software				

S. No	Item	Draughtsman	Design Assistant	Engineer	Total
01	No. Of Man Hours Considered				
02	Rate in Rs per Man-hour				

2. Project Name: NRL RPTU RGC ref: III B (PR no- 1600027467)

Name of the ESC:

S. No	Item	Basic Price (Rs)	Service Tax (Rs)	Other Tax (Rs)	Total (Rs)
01	Lump sum Price for Engineering Services of P&ID Drafting using SMART Plant P&ID Version 2019 Software				

S. No	Item	Draughtsman	Design Assistant	Engineer	Total
01	No. Of Man Hours Considered				
02	Rate in Rs per Man-hour				

3. Project Name: NRL CCR RGC ref: III C (PR no- 1600027468)

Name of the ESC:

S. No	Item	Basic Price (Rs)	Service Tax (Rs)	Other Tax (Rs)	Total (Rs)
01	Lump sum Price for Engineering Services of P&ID Drafting using SMART Plant P&ID Version 2019 Software				

S. No	Item	Draughtsman	Design Assistant	Engineer	Total
01	No. Of Man Hours Considered				
02	Rate in Rs per Man-hour				

Ref. Doc

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Notes: 1. No other charges other than specified above will be payable to ESC. 2. Bidder to submit Price for each project. All 3 quotations to be filled in against each PR, one for each project. 3. Offers which are incomplete or where separate prices are not indicated are liable for rejection. 4. Percentage of taxes & duties considered may also be indicated. 5. Bidder to fill up the above prices manually, put his seal & signature, and submit the same in a separate sealed envelope along with technical offer. 6. Bidder to fill as 'Quoted' in all above fields and submit the same along with technical offer. 7. The price format should be strictly as per above. No other prices/assumptions written separately in the above format are acceptable. 8. Offers shall be evaluated on project wise basis/PR wise basis and order shall be placed separately against each PR on techno commercially qualified L1 bidder for each project/each PR. (Authorized Signatory) Seal of the Company			
Ref. Doc			

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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company.		RECORD OF REVISIONS					
		Rev. No.	Date	Revision Details	Revised By	Approved By	
		00	09.09.22	First issue	Deepak Jha	P D Mahulikar	
		Ref. Doc.					

TD-201 Rev No. 00 Form No.	 HYDERABAD	PRODUCT STANDARD TURBINES AND COMPRESSORS ENGINEERING		TC-67602		
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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company.		Technical Specification For Engineering Services of P&ID Drafting using SMART PLANT (SPPID) VERSION 2019 software I.INTRODUCTION The purpose of this specification is to specify requirements of P&ID Drafting in SPPID/deliverables being offloaded to Engineering Sub Contractor (ESC) by Turbines & Compressors Engineering of BHEL. II. SCOPE OF SUPPLY The ESC shall use only SMART Plant P&ID Version 09.00.00.1405 (2019) software packages to do the P&ID drafting and generate deliverables like Line list, Valve schedule from SPPID. For more details, refer to enclosed document SCP-67602. III. REFERENCE DRAWINGS For reference drgs/docs, refer to enclosed scope document SCP-67602 as mentioned in the enquiry. IV. SCOPE OF WORK OF ESC IN THE PROJECT ESC shall do the P&ID drafting in SPPID VERSION 2019 software and deliver the following deliverables. ESC to confirm the requirement the of M/s NRL specification "SMART PLANT P&ID SPECIFICATION, document no.: NR-0ZZZZ-PR-SPE-0001-Rev A2". A. P&IDs: Final Approved P&IDs (pdf copy) drawing shall be provided by BHEL to ESC as an input. The same P&IDs are to be drafted in SPPID using Smart Plant P&ID software. All P&IDs shall be drafted in A1 size. However, any update/comments after submission of SPPID to customer need to be taken care in the SPPID. B. List of Deliverables Line list, Valve schedule, SPPID data base & file system and all other associated files.				
Ref. Doc		Revisions : 00	Prepared: KANHAIYA	Checked: DEEPAK	Approved: PRAFULL	Date: 08.09.2022

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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED . It must not be used directly or indirectly in any way detrimental to the interest of the company.	V. DOCUMENTATION: - Initial submission as check print for BHEL : Through email - Submission to BHEL for submitting to customer : Through email Notes: - Engineering charges shall include charges for the above documents - During detail engineering stage, BHEL may like to exchange technical documents and drawings through electronic media (Internet), E-mail. ESC should ensure that he has compatible workstation at his engineering office for this purpose. - ESC may have to furnish the files of the drawings of the project by E-Mail or in the form of a CD, as and when requested by BHEL during the engineering work. VI. GENERAL INSTRUCTIONS - All specifications drawings and documents shall be prepared in the formats as directed by BHEL. - Since speedy delivery of documents is essential for a tight project schedule, it shall be responsibility of ESC to ensure timely delivery of all documents. - BHEL shall have the right to remove from work (in the engineering work) or at project site any of the employees of ESC who in the opinion of BHEL is not suitable to perform work assigned to him or on account of improper conduct or negligence in duty. - ESC shall include revision/modification cost of drawings/documents that can be anticipated for completion of the project of such a nature based on his experience. - ESC shall familiarize fully with the standard/ procedures/ practice/ quality requirements of BHEL / Customer and also the site conditions, to avoid any dispute at later date and after order placement. - BHEL shall not pay any amount, other than the fee specifically agreed, towards any cost incurred by ESC by way of salaries to his employees (income and taxes) insurance of any nature, benefits/bonus to the employees, etc. BHEL's liability is limited to the amount contracted for the services to be rendered under the scope of work defined. - ESC shall not commit any expenditure on behalf of BHEL without BHEL's consent in writing, during the execution of the work defined in the scope. - ESC shall bear all expenses/fee penalties if it infringes on patents/licenses of any persons/organizations or in case of suits, court proceedings, damage claims etc., due to any reason whatsoever. - ESC shall ensure that it possesses the latest revisions of various national and international standards, codes of practices, statutory & environmental regulations etc. - as applicable, for execution of the engineering work. BHEL shall not provide any such documents to ESC. Engineers of ESC assigned for this project shall have familiarity on relevant documents as mentioned above for their use and applications. - ESC shall maintain at their own cost the personal accidents policy, life insurance and / or any such insurance required in respect of their personnel deputed to outstation visits for the given contract. - BHEL reserves the right to terminate or suspend the contract or withdraw part of the scope of the work at any stage of its execution, if it found that ESC has not met its obligation for the		
	Ref. Doc		

Form No.	 HYDERABAD	PRODUCT STANDARD TURBINES AND COMPRESSORS ENGINEERING	TC-67602
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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED . It must not be used directly or indirectly in any way detrimental to the interest of the company.		performance / progress is not up to the expected standards and overall work is likely to suffer. In such an event, BHEL shall give one-month notice in writing. In such case all costs incurred accordingly by BHEL to complete any work forming part of the contract shall be recovered from ESC. In case of such premature termination of contract, BHEL reserves the right to claim damages from ESC including the initiation of judicial proceedings.	
		12. ESC shall keep all information/data/drawings etc. related to the work as confidential information and shall not divulge or use the information indirectly or directly in any way detrimental to the interest of BHEL. All drawings, documents, manuals, design calculations including all originals prepared or obtained during the work shall remain the property of BHEL and shall be handed over to BHEL on demand. 13. ESC shall comply with the laws and regulations of the country, the state and territories concerned, during the progress of the work. 14. ESC shall submit progress report on the status of the work entrusted to him periodically and as mutually agreed upon. 15. ESC shall be fully responsible for the accuracy and adequacy of engineering services rendered by him. Any modifications / rectification, if required in engineering and design shall be carried out expeditiously by ESC at their own cost. Losses / damages if any due to wrong engineering shall be compensated by ESC and a maximum of 10% of the lump sum engineering fee shall be deducted from the bills of ESC arising out of such errors. 16. ESC shall ensure optimal & economic design while executing the engg. Work, but without sacrificing the customer specification requirements /Statutory regulations/code provisions/safety aspects.	
Ref. Doc			

TD-106-3		Rev No. 5		Form No.		बी एच ई एल BHEL HYDERABAD		PRODUCT STANDARD		TC-67602	
								TURBINES AND COMPRESSORS ENGINEERING		Rev No. 00	
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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company.		RECORD OF REVISIONS									
		Rev. No.	Date	Revision Details		Revised By		Approved By			
		00	08.09.22	FIRST ISSUE		Deepak Kumar Jha		Prafulla D Mahulikar			
		Ref. Doc.									



(Attachment to Enquiry No. XXXXXXXXXX Due on Date XX.XX.XXXX for submission by 11.00 hrs to open from 14.00 hrs.)

INSTRUCTIONS TO BIDDER (ITB)**NOTE: Bidder to confirm in affirmative by typing "YES" or "Applicable Data" in the response column. Deviations, if any shall be recorded in deviations/comments column (Separate sheet can be attached if needed). Non deviatable clauses are indicated as "NON DEVIATABLE".**

Sl. No.	DETAILED TERMS & CONDITIONS	BIDDER RESPONSE (YES/NO)	DEVIATIONS / COMMENT
1	SCOPE OF SUPPLY:		
	Signed & Sealed offers are invited for the Scope of Supply of goods or services or both as detailed in the enquiry. Relevant enclosures/supporting documents / catalogue, if any shall be enclosed to the technical offer.		
2	DEFINITIONS		
A	'The Buyer' means BHEL-HPEP, Ramachandrapuram, Hyderabad-502 032 of Bharat Heavy Electricals Limited (A Govt. of India Undertaking) incorporated under the companies Act having its registered office at BHEL House, Siri fort, New Delhi-110049, India and shall be deemed to include its successors and assigns. It may also be referred to as BHEL.		
B	'The Bidder' means the persons, firm, company or organization on whom the Purchase order is placed and shall be deemed to include the bidder's successors, representatives, heirs, executors and administrator as the case may be. It may also be referred to as Contractor, supplier or bidder.		
C	'Contract' shall mean and include the Purchase order incorporating various documents viz., Notice Inviting Tender (NIT), Offer, Letter Of Intent/Acceptance (LOI/LOA), Instruction to Bidders (ITB) and Special Conditions of Contract (SCC), specifications, inspection/quality plan, schedule of prices and quantities, drawings, if any, enclosed by Bidder/ provided by the Buyer or his authorized nominee and the samples or patterns if any to be provided under the provision of the contract. In case of any inconsistency or contradiction between any of the documents, the order of precedence shall be Purchase Order, LOI/LOA followed by Minutes Of Meeting (MOM), NIT, SCC, ITB.		
D	'Parties to the contract' shall mean the bidder and the buyer as named in the main body of the Purchase Order.		
E	'Goods/Material' shall include Works and Services which are incidental or consequential to supply.		
3	GENERAL INSTRUCTIONS:		
A	Mode of submission of offer shall be as indicated in SCC		Non Deviatable
B	The quotation should be neatly typed and free from over writing/ erasures. Any correction or addition must be authenticated. The offer including annexures and brochures should be submitted in English / Hindi. All Pages of Techno Commercial Bids (Main Pages), ITB, SCC should be signed and Stamped. If there is a conflict in case of bilingual submission, the submission in English will be final. Prices shall be quoted both in figures and words. In case of any discrepancy in value, the prices quoted in words shall be considered for evaluation and establishing L1 Status. Any discount / revised offer / bids submitted by a bidder on his own shall be considered, provided it is received on or before the due date and time of offer / bid submission (Part-1). Conditional discounts shall not be considered for evaluation of tenders.		Non Deviatable
C	Incomplete offers are liable for rejection.		Non Deviatable
D	Bidders to please note that the Terms & conditions contained in this document and SCC are to be read fully before submission of quotations.		Non Deviatable
E	Bidders are advised to comply with ITB and SCC, should there be any deviations (where deviations are permitted), it shall be entered in the deviation column. BHEL reserves the right to reject such offers or load the bid suitably for evaluation.		Non Deviatable
F	Offers shall be submitted directly, only by the bidder or by their authorized representative / agent and the offer should be in line with the regulatory guidelines (i.e. A valid Agency agreement between principal bidder and agent / representative shall be attached and the agreement shall cover the scope of services rendered by Agent, Agency Commission and any other information called for as per the regulatory guidelines). OEM / Mill details shall be provided if bidder is not a manufacturer. Bid envelopes shall bear the name of Bidder. In case of submission through authorized representative/agent, the name of representative/agent should also be mentioned apart from bidder name.		Non Deviatable
G	Offer received after the specified time and date of submission will be rejected. No further correspondence shall be entertained.		Non Deviatable
H	Unsolicited offers will not be considered.		Non Deviatable
4	OTHER PARTICULARS (Please indicate applicable data)		
A	Name of the Bid currency (freely tradable foreign currency for imports and Indian Rupees for indigenous purchase).		
B	Name of the Port of loading and Port of Discharge (applicable to imports).		

5	BID SUBMISSION PROCEDURE FOR CONVENTIONAL TENDER:		
A	For Single Part Bids:		
	The complete bid shall be submitted in a single sealed cover superscribing the Tender number and due date, addressed to Sr DGM/CMM, Vendor Complex, BHEL, Hyderabad and sent by appropriate mode to above address or dropped in tender box located at vendor complex on or before the specified time and date of submission of offers, preferably in the bidder's envelope. E- mail bids shall be sent to mail ID pricebid_hyd@bhel.in only as an attachment.		Non Deviatable
B.	For two-Part Bids:		
i	The offer is to be submitted in two parts viz., Techno-commercial Bid - (Part-I), with all technical specification & scope including bill of material etc., Earnest Money Deposit (EMD)(wherever applicable) and unpriced bid with all applicable Commercial Terms and Conditions, rates of agency commission, duties, taxes and other charges, Signed and Stamped ITB and SCC, <u>except the price</u>, shall be kept in a separate sealed cover, superscribing enquiry No. (Techno-Commercial Bid) and due date AND Price Bid (Part-II), containing ONLY the price (including agency commission, if any) and the applicable duties/taxes/other charges shall be kept in a separate sealed cover superscribing Enquiry no. (Price bid) & due date. Both the above covers (Part –I & II) shall be kept in a Third cover superscribing Enquiry no. & due date. Bidder can also submit offer through email. Technical offer to be submitted to mail ID technicalbid_hyd@bhel.in, and price bid to be submitted to mail ID pricebid_hyd@bhel.in only as an attachment. Interchanging the information in the mails may lead to rejection of the offer. Bidder shall have no claim on e-mail offers sent to any other e-mail ID. In case of e-mail offers, the mail subject should contain Enquiry Number, Due date and Bidder name. Bidder address including contact details shall be mentioned in the content of the mail. Without these details, the offer is liable for rejection. All techno commercial terms & conditions mutually agreed prior to price bid opening shall prevail and supersede any terms and conditions specified otherwise in price bid.		Non Deviatable
ii	The bidders whose bids are techno commercially not accepted will be informed and EMD shall be returned wherever submitted.		
iii	Bidders will be allowed to submit the impact on their quoted prices due to changes in technical scope, specifications, and commercial terms/conditions as specified in NIT which in the opinion of BHEL , warrant changes in prices.		Non Deviatable
C	Bids shall be opened on due time and date in the presence of bidders who may like to be present. Only one representative of each bidder shall be permitted to attend the bid opening. Only the price bids of bidder (in case of two part bid) whose techno commercial bids are accepted will be opened later on a specified date.		Non Deviatable
6	DELIVERY TERMS		
A	Indigenous Purchase		
	a. Terms of Delivery for dispatches to BHEL Hyderabad (HPEP) shall be FOR Destination. b. Terms of Delivery for Direct Dispatch (DD) items shall be Ex Works. i. Incase specified in SCC that insurance is in customer/BHEL scope, price quoted shall include Freight charges up to Destination. ii. Otherwise, price quoted shall include Freight and Insurance upto Destination. However, beneficiary for insurance shall be BHEL.		
B.	Imports		
	The goods shall be delivered on FCA capital airport basis in case of freight by Air and CIP basis in case of freight by Sea.		
7	Documentation for Payment		
A	Indigenous Purchase		
	Following documents shall be submitted immediately on dispatch of material to BHEL HPEP / Site a. Original Tax Invoice (Refer ITB clause no 11 for Tax Compliance) b. Packing List - clearly showing number of packages, gross weight and net weight. c. Test/Warranty/Guarantee certificates, O&M Manual (If specified in SCC) d. Insurance intimation/declaration certificate e. Pre-dispatch Inspection report /Third Party Inspection Certificates. f. Consignee copy of LR signed & stamped by Customer/Site representative for DD Items g. e-waybill h. Any other documents as specified in SCC. Softcopies of the above documents shall be uploaded in Pradan portal https://hpep.bhel.com/mm immediately after dispatch of the material.		Non Deviatable

B

Imports

i) Bidder shall inform BHEL the readiness of material along with packing details 30 days in advance from the date of delivery.

ii). Bidder shall also upload the soft copy of the dispatch documents consisting of BL / AWB, Invoice, delivery note, packing list, country of origin & Test certificates and other documents as specifically indicated in the SCC in PRADAN Portal (<https://hpep.bhel.com/mm>) within Five days from the B/L date for sea shipment and One day from AWB date for Air shipment and sent to email ids: mssea@bhel.in, msair@bhel.in, cmmfe@bhel.in.

iii) AWB/BL must contain the information of BHEL GST no., and PAN no.

iv) **Air Shipments:**
Bidder shall ensure the following

a) Port of discharge -- Mumbai/Chennai/Hyderabad (as indicated in SCC).

b) Consignee shall be BHEL, Hyderabad. Material shall be air freighted through cargo mode only and not through Courier.

c) Upon handing over the cargo to the forwarder, bidder shall ensure the acknowledgement receipt with wordings" Cargo handed over in sound condition for Air freighting".

Note: Warehouse receipt will not be considered for penalty calculations.

d) In case of CIF/ shipments, bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within one day from the date of Shipment.

e) Following dimensions of single package may be noted.

i). Maximum dimension of the cargo(ODC) -- 125" x 88" x 63"

ii). Maximum weight of the cargo -- 3.5 MT.

If any package dimension or weight exceeds the above set limits, it will be treated as Over Dimension Cargo (ODC) or Over Weight Cargo and bidder shall inform BHEL 30 days in advance to the delivery date to enable BHEL to finalize the freight forwarder.

f). If package falls under Hazardous category, bidder shall communicate BHEL 30 days in advance period with document support.

v) **Sea Shipments:-**
bidder shall ensure the following

a). Port of discharge -- Nhavaseva/Mumbai/Chennai.

b). Place of Delivery / Final Destination for CIP shipments - Nhavaseva CFS / Chennai CFS.

c). In case of FOB shipments, bidder shall handover the material to BHEL nominated forwarder and obtain the cargo receipt.

d). If the material cannot be containerised in 20 or 40 GP containers, an advance information of 30 days prior to the delivery date shall be communicated to BHEL for necessary arrangements and finalisation of freight forwarder.

e). **For CIP shipments**

1. In case of FCL shipments, Detention free period must be 14 days.

2. Bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within 5 days from the date of Shipment.

3. No charges for the services rendered till place of destination will be payable by BHEL. Incase liner / forwarder insist for charges, not in the scope of BHEL, the same will be adjusted from bidder account.

4. In case of CIF shipments -- Bidder must select a forwarder/liner whose discharge port published tariff for THC and other services is available. Any charges over and above the published tariff will not be borne by BHEL or will be adjusted from the bidder's bill.

5. bidder must insure the cargo for 110% of material value including the freight amount.

(vi). Recovery charges for non-submission of documents: -
Bidder shall submit all the required documents to BHEL as prescribed in the Purchase order and NIT.

If BHEL incurs any charges such as Penalty, demurrage, container detention, wharfage, storage, Ground rent etc., due to non - compliance / non - submission of documents prescribed in Purchase Order/ NIT/Letter of credit, the same shall be recovered from the bidder as under:

1. EUROPE/USA/Black Sea/ Far East/Middle East/South East sector

A. **For FOB Sea Consignments:-**

Penalty for late submission / negotiation of documents beyond 14 days shall be as under:

Sl. no	Period (From Date of Bill of Lading)	Recoverable Charges	Recoverable Charges per day per container	
		LCL per week/ Break bulk cargo per day	20FT Container	40FT Container
i	Upto 14th day	Nil	Nil	Nil
ii	15th day onward	USD 10	USD 110	USD 200



	B. For CIP Sea Shipments: - Bidder shall provide rates for detention charges after free period at the time of offer itself in case of engagement of 20FT Container and 40FT category. In case of late presentation of documents to the bank recovery will be effected from the Bidder as per the rates quoted by the Bidder at the time of offer in this regard. In case of Break bulk cargo and LCL, Demurrage charges shall be recovered at the rate of USD 1 per Ton per day and storage charges at the rate of USD 10 per week respectively shall be charged as late presentation charges. (vii) Description of items in invoice, packing list, BL / AWB or LR shall be same as PO item description. Bidders shall ensure that invoice shall contain PAN nos. of both bidder and BHEL along with other tax related numbers. BHEL PAN AAACB4146P and BHEL TAN HYDB00086C Any other additional documents sought by the statutory authorities, the same shall be produced by the bidder on priority basis. (viii) Bidder shall provide package details including number of packages, gross weight, net weight etc. (ix) The bidder shall provide the following documents at the time of submission of offer: a) No Business Connection in India declaration issued by the bidder as per the format specified. (or) b) (i) No Permanent Establishment in India declaration issued by the bidder as per the format specified. (ii) Tax Residence Certificate issued by the bidder's tax authorities. (iii) Form 10F, as attached in Annexure V, to be issued by the bidder. c) In case the bidder has a Business Connection in India as per Section 9 of Income Tax Act or significant economic presence in India as per rule 11 UD of IT Act or Permanent Establishment in India as per Article 5 of Double Taxation Avoidance Agreement between India and the bidder's country, the bidder shall provide a withholding tax order issued by the Indian Income Tax authority for recovery of applicable tax.		
8	Delivery Schedule		
	The tendered goods shall be delivered within the period stipulated in NIT/ SCC as accepted. Inordinate delay/early supply are liable for rejection/Hold on payment.		Non Deviatable
9	Pricing Terms		
	Quoted price shall be inclusive of Packing & Forwarding and shall remain firm and valid during the execution of PO. Offers with PVC will be rejected outright except in cases where specifically called for in the SCC.		Non Deviatable
10	PRICE VALIDITY :		
	Unless otherwise specified, offer shall be valid for a period of 90 days from the date of bid opening (Technical bid /part-I in case of two part bid). However the prices quoted for spare parts of the Main equipment shall be kept valid for a period as specified in SCC.		Non Deviatable
11	Taxes & Duties (RATE TO BE INDICATED by the bidder against the space provided)		
A	Indigenous Purchase i) Only valid GST registered bidders will be considered for the tender. The GSTIN of the bidder should be clearly mentioned in the offer. ii) If bidder is exempted from GST registration under any provision of the GST Law, a declaration with due supporting documents should be furnished for considering the offer. iii) Bidder to quote the applicable taxes in the following manner: - Harmonized System of Nomenclature (HSN) of Goods - Services Accounting Code(SAC) of Services. - IGST/CGST/SGST/UTGST: Rate of Tax to be quoted as extra in % against the space provided iv) Bidders to ensure correct applicability of IGST/CGST/SGST/UTGST based on the Inter / Intra state movement of goods/services. v) In case Bidder has opted for GST Composition Scheme, the same may be stated explicitly both in their technical and price bids. An undertaking to the effect that any change in the status of the bidder will be intimated. vi) Any other taxes & duties not covered anywhere above may be indicated separately. Taxes deducted at source: - TDS as per the extant statutes shall be deducted. - In case bidder does not provide PAN details, higher rate of tax shall be deducted as per the Act. - Concessional certificates, if any, should be provided well in time for lower deduction of tax.		Non Deviatable

	Terms & Conditions to be complied 1. All invoices (incl. Credit Notes, Debit Notes) to contain BHEL HPEP GSTIN ie 36AAACB4146P1ZG. Invoices submitted should be in the format as specified under GST Law. All details as mentioned in Invoice Rules including Dealer GST registration number (GSTIN), invoice number with date of issue, quantity, rate, value, taxes with nomenclature – CGST, SGST, UGST, IGST mentioned separately, HSN Code / SAC Code etc. 2. Reimbursement of GST amount will be made only upon completion of the following: i. Bidder declaring such invoice in their GSTR-1 Return/ IFF ii. Receipt of Goods or Services and Submission of Tax invoice by BHEL iii. The tax invoice is reflected in the GSTR2B of BHEL, HPEP (buyer). Payment of GST will be made only if it is matching with data uploaded by the Bidder in GST portal. 3. In case of discrepancy in the data uploaded by the bidder in the GSTN portal vis-a-vis the tax invoice or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit. The same would be available in PRADAN Portal for the bidder's information. Bidder has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims for processing of such invoices. 4. In cases where invoice details have been uploaded by the bidder but failed to remit the GST amount to GST Department within stipulated time, then GST on the invoices in default will be recovered from the bidder along with the applicable interest. 5. In case GST credit is delayed/denied to BHEL due to non/delayed receipt of goods and/or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, such GST amount will be recoverable from bidder along with interest levied/leviable on BHEL. 6. Under GST regime, BHEL has to discharge GST liability on LD recovered from bidders. Hence applicable GST shall also be recoverable from bidders on LD amount. For this Tax Invoice digitally signed will be issued by BHEL indicating the respective supply invoice number. The same can be downloaded from PRADAN Portal. 7. GST TDS deducted as per GST Act, is uploaded in GSTN portal along GSTR7. Bidders can directly download the GST TDS Certificate from the GSTN Portal. 8. Bidders to note that Rules & Regulations pertaining to E-way bill system are to be strictly adhered to, as and when notified by Govt. authorities.		
B.	Foreign Purchase (Imports) The offered price shall be inclusive of all the Taxes and duties as applicable in country of export / country of dispatch for the quoted price. Taxes deducted at source: a. In case of goods or services subject to Income tax in India, such tax as per the extant statute shall be recovered. b. In case bidder does not provide necessary documents for beneficial taxation (Refer clause 7-B-(ix) a-c of ITB), the TDS deduction shall be at the maximum percentage stipulated as per the provisions of Income Tax Act.		Non Deviatable
12	Payment Terms: Unless otherwise specified in SCC, following shall be the terms of Payment.		
A	Indigenous: a. Micro & Small Enterprises (MSEs) - 100% Direct EFT payment within 45 days b. Medium Enterprises - 100% Direct EFT payment within 60 days c. Non MSME Bidders - 100% direct EFT Payment within 90 Days Note A. Above due date is reckoned from the date of Receipt of material or 15 days from the date of submission of complete set of documents as per PO whichever is later. Payment will be made on acceptance of Material. B. MSEs (covered under MSME Act) need to register and renew periodically and update the same with BHEL C. The taxes that are reimbursed are limited to applicable taxes as on the Purchase Order delivery date or the amount actually paid whichever is less. D. Adherence to the above time schedule of payment is contingent upon Bidder complying with GST provisions and availment of Input Tax Credit by BHEL before the date of payment. E. In case of packaged items, 10% of supply value will be retained till completion of total supplies. F. Bidders to comply with clause 11 on GST requirements Inland Letter of Credit (ILC) In case Bidder opts for ILC Payment, the LC Usance period shall be 120 days with all charges to bidder's account and loading of 0.50%.		
B	Imports: i) 100% payment (less Indian Agency Commission, if any) shall be through Wire Transfer with a credit period of 60 days - Cash Against Documents (CAD) ii) In case Bidder opts for Letter of Credit payment, the LC Usance period shall be 90 days with respective bank charges to respective accounts and loading of 0.50% iii) Indian Agency commission if payable and so specified in the Purchase order shall be paid in Indian Rupees, considering the SBI TT selling exchange rate, as on the date of payment after successful completion of the contract.		

C	Conditions for both Inland & Foreign LC: a. LC validity period will be 90 days and for any extension, applicable charges will be to bidder's account. b. LC will be opened 7 working days after receipt of request along with successful pre dispatch inspection completion report / material readiness intimation with Material Test Certificate (MTC), prior to the scheduled / agreed delivery date.		Non Deviatable
D	Conditions for both Indigenous & Foreign Bidders: a. In case Bidders insist for lesser Credit period, loading of 0.60% for every 15 days reduction will be applicable. b. In case PBG as required is not furnished, Payment will be released deducting the BG amount, which will be paid after expiry of warranty period against submission of supplementary claim. c. Payment does not imply in any respect whatsoever a waiver of Buyer's right to performance of the Order. Buyer is entitled to set off claimable debts against claimable liabilities with the bidder by means of a setoff Note.		Non Deviatable
E	Wherever EMD is applicable, the EMD will be paid back to unsuccessful bidders within fifteen days after award of the contract. Successful bidder's EMD will be retained till submission of Performance Bank Guarantee (PBG). Tender Fee wherever applicable is not refundable. No interest shall be payable by BHEL on earnest money or security deposit or any money to the contractor by BHEL.		Non Deviatable
13	Penalty clause: In the event of delay in supply /part-supply of goods, Penalty as detailed below is leviable a. Penalty of 0.5% per week or part there of shall be levied, limited to a max of 10% (ten percent) of delayed portion value / order value (as specified in SCC). b. Penalty applicable for delay in documentation is as per SCC. c. Date Reckoned for Penalty - Indigenous Orders with delivery terms FOR HPEP: C Note date. - Indigenous Orders (Others): Date of e-waybill. - Imports: For CIP/CIF Orders: IGM date - Imports: For FOB Orders: AWB / BL date - Imports: For FCA/Ex Work Orders: Date of acknowledgement from Freight Forwarder. d. In case of Deviation to above Penalty clause, loading applicable to the extent to which not agreed by Bidder. e. Timelines as mentioned in the Annexure 1 will be considered for reckoning delivery. Penalty amount so determined along with applicable GST (for Indigenous orders) thereon shall be recovered. Imposition, recovery or settlement of this penalty shall not affect BHEL's right to performance, compensation and termination of the order.		
14	Excess materials supplied beyond tolerance limit as specified in PO will not be paid and bidder may raise credit note for the excess/unaccepted material as per GST law.		Non Deviatable
15	Rejected materials , if any, shall be collected by the bidder within 90 days of such communication to the bidder. Beyond this period the bidder forfeits their right to the materials.		Non Deviatable
16	Guarantee / Warranty Period: Wherever required, and so provided in the specifications/SCC/Purchase Order, the bidder shall guarantee that the goods supplied shall comply with the specifications laid down, for materials, workmanship and performance. a. Guarantee period shall be 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier. b. In case erection & commissioning is involved, guarantee period shall be 12 months from the date of commissioning. c. In case of equipment bought as a package which are intended to be incorporated in installations or systems, the guarantee period shall be 12 months from the date of commissioning of such equipment. The guarantee period shall be extended by the period during which the goods are not in compliance. If the delivery is found to be non-complaint, bidder shall replace, repair or re-execute the as requested by BHEL. If the bidder defaults on his obligations, buyer has the right to proceed to replace, repair or re-execute at the bidder's expense. A guarantee period as described above shall apply afresh to replaced, repaired or re-executed parts of a delivery. Loading for deviation: In case warranty specified in SCC is over and above the period mentioned in b & c above; loading will be 1% per annum for the deviation in warranty end period, on the contract value. Expected commissioning period is as indicated in SCC.		Non Deviatable

17	PERFORMANCE BANK GUARANTEE (PBG) (Applicable in case mentioned in SCC) In case enquiry specifically spells out PBG requirement, PBG is to be submitted by Bidder in requisite format as per Annexure VII. Further detailing on PBG as specified in SCC. The PBG shall be for the performance of the goods and shall remain binding not withstanding such variations, alterations or extensions of item as may be made, give, conceded or agreed to between the Bidder and BHEL under these Terms and conditions or otherwise.	Non Deviatable																									
NOTE: Deviations (Commercial as well as Technical) from the tender specifications and conditions are generally not acceptable. However, deviation if any, shall be brought out clearly with proper justification in the offer. The deviation, if considered by BHEL, shall be loaded for comparison, while evaluating the offer. If a bidder unconditionally withdraws any deviation before price bid opening, the same shall not be loaded. Loading criteria in respect of major commercial conditions where deviations if any are accepted shall be as per clause No.18. The Bidders may specifically note the following.																											
18	Evaluation and Loading Criteria: i) Evaluation Currency for this tender shall be “INR”. ii) Evaluation of prices shall be done item-wise unless otherwise specified in the SCC. iii) Evaluation shall be on the basis of delivered cost, i.e. “Total Cost to BHEL” w.r.t the finalized technical scope and commercial conditions (after considering incidence of applicable taxes and duties and loading). iv) In the course of evaluation, if more than one Bidder happens to occupy L1 status, effective L1 will be decided by soliciting discounts from the respective L1 Bidders. In case more than one Bidder happens to occupy the L1 status even after soliciting discounts, the L1 Bidder shall be decided by a toss/draw of lots, in the presence of the respective L1 Bidders or their representatives. Ranking will be done accordingly. BHEL decision in such situations shall be final and binding. INDIGENOUS a. Bidder shall ensure to indicate the applicable taxes against each line item, failing which the same will be considered as inclusive/NIL. b. Ex-works offers received (as against FOR Destination mentioned in enquiry) shall be loaded by 2% of Ex-works value. c. GST and any other charges quoted will be added to the base price. However, in case input credit is available for GST (SGST, CGST/IGST), the same shall be excluded for arriving at “Total Cost to BHEL” IMPORTS For evaluation of offers in foreign currency, exchange rate (TT selling rate of State Bank of India) as on the date of bid opening (Part-I, in case of two-part bids) shall be considered. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken. In case of foreign Bidders, the quoted CIP price shall be loaded by the following factors to arrive at “Total Cost to BHEL”: - Import duty as applicable on the date of Part-I bid opening. - Loading will be as per the table below <table><tr><td></td><td>Ex Works</td><td>FOB/FC A</td><td>CIF/CFR</td><td>CIP</td></tr><tr><td>Foreign Inland freight and insurance</td><td>2%</td><td></td><td></td><td></td></tr><tr><td>Marine freight and marine insurance</td><td>3%</td><td>3%</td><td></td><td></td></tr><tr><td>Destination Port handling charges</td><td>0.50%</td><td>0.50%</td><td>0.50%</td><td></td></tr><tr><td>clearing charges & inland freight and insurance</td><td>2%</td><td>2%</td><td>2%</td><td>2%</td></tr></table> COMMON LOADING FOR IMPORTS & INDIGENOUS that will be added for arriving the "Total Cost to BHEL" A. Loading on Deviated Penalty clause shall be 10% or to the extent to which the bidder has opted for deviation. B. Loading for payment terms as per clause 12 of ITB C. Loading for deviation in Warranty & PBG as per clause 16,17.			Ex Works	FOB/FC A	CIF/CFR	CIP	Foreign Inland freight and insurance	2%				Marine freight and marine insurance	3%	3%			Destination Port handling charges	0.50%	0.50%	0.50%		clearing charges & inland freight and insurance	2%	2%	2%	2%
	Ex Works	FOB/FC A	CIF/CFR	CIP																							
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Destination Port handling charges	0.50%	0.50%	0.50%																								
clearing charges & inland freight and insurance	2%	2%	2%	2%																							
19	Procurement directly from the manufacturers/ suppliers shall be preferred. However, no agent shall be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer / supplier could bid directly but not both. In case bids are received from both from the manufacturer/ supplier and the agent, bid received from the agent shall be ignored.																										
20	RIGHT OF REJECTION /NON- PLACEMENT OF PO: BHEL reserves the right to accept or reject any or all bid/s in full or part without assigning any reason whatsoever.																										
21	INTEGRITY PACT Bidders shall have to enter into Integrity Pact with BHEL as per Annexure VI - for Tender value of rupees two crores and above and shall be signed by the authorized signatory along with the offer, failing which Bidder’s offer will be rejected.																										
22	Public Procurement																										
A	Make in India For this Procurement, the local content to categorize a bidder as a Class I local bidder / Class II local bidder / Non-Local bidder and purchase preference to Class I local bidder, is as defined in Public Procurement (Preference to Make in India) order No P-45021/2/2017-PP(BE-II) dated 04-06-2020 issued by DPIIT as amended from time to time. Proforma for self-certification for minimum local content and auditor’s certification is given in Annexure III.																										

B	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 competent authority. GOI website https://www.mea.gov.in/ to be referred for latest details of competent authority and exemptions . Proforma for self-certification for compliance is given in Annexure IV.
C	Startups: For Start-ups duly registered with DPIIT (Copy of certificate to be provided), condition of prior turnover and prior experience in Public Procurement may be relaxed subject to meeting of Quality and Technical Specifications. Startups are exempt from paying EMD.
23	Benefits earmarked for Purchase from Micro & Small Enterprises (MSEs) – Indigenous Purchase
A	All Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy are exempt from Paying EMD. NSIC/UDYAM registered bidders shall submit NSIC/UDYAM Certificate along with bid documents. Date to be reckoned for determining the deemed validity will be the last date of Technical bid submission. Non- submission of such document will lead to consideration of their bid, at par with other bidders and MSE status of such bidders shall be shifted to Non- MSE Category till the bidder submits these documents.
B	In tender, MSEs quoting price within price band of L1+15% shall also be allowed to supply a portion of requirement by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE and such MSE shall be allowed to supply at least 25% of total tendered value. In case of more than one such MSE, the supply shall be shared proportionately. Out of these 25% minimum 3% shall be earmarked for MSEs owned by women and 6.25% for MSEs owned by SC/STs who submit the relevant documents.
C	If an enterprise falling under MSME category as defined in the Act, graduates to a higher category from its original category or beyond the purview of the Act, it shall continue to avail all non-tax benefits of its original category notified by the Ministry of Micro, Small and Medium Enterprise for a period of three years from the date of such graduation to the higher category.
D	BHEL HPEP is registered with RXIL (TReDS) platform. MSME bidders are requested to get registered with RXIL (TReDS) platform to avail the facility as per the GOI guidelines.
24	Inspection Measuring and Test Equipment (IMTE) used by the Bidder/ Contractor or sub-contractor shall be calibrated, maintained and controlled. Calibration shall be valid and IMTE maintained in sound condition during usage.
25	ISO-9001, ISO14001 and OHSAS 18001 shall be complied
26	If BHEL registered supplier is not quoting against this NIT, supplier shall send regret letter positively with valid reasons for not participating. Repeated lack of response on the part of supplier may lead to deletion of such registered supplier from BHEL's approved supplier's list as per BHEL SEARP Guidelines.
27	Risk Purchase clause: In case bidder fails/delays to supply whole or part of the ordered items or supplies defective items or fails to fulfil any other terms and conditions given in Purchase Order/Contract, BHEL has the right to terminate the order/contract or withdraw balance scope of work/supply and make the purchase of such material / services from elsewhere at the risk and cost of the defaulted bidder. The bidder is liable for the additional expenditure / difference in Cost, if any, including consequential losses which BHEL may sustain by reason of risk purchase in addition to the applicable LD as per the order/contract. Non-performance of contract attracts penal provisions in line with BHEL guidelines for Suspension of Business Dealings (SBD).
28	Any other terms and conditions of the bidder attached / referred against the tender enquiry will not be considered.
29	All drawings, patterns and tools supplied by BHEL or made at BHEL's expense are BHEL's property. These cannot be used or referred to any other party and must be used only in the execution of BHEL's orders.
30	Any amount payable by the bidder under any of the conditions of this contract shall be liable to be adjusted against any amount payable to the bidder under any other work / contract awarded by BHEL HPEP or any other BHEL Units. This is without prejudice to any other action as may be deemed fit by BHEL.
31	The bids of the bidders who are on the banned list and also the bids of the bidders, who engage the services of the banned firms, will be rejected. The list of firms banned by BHEL is available on BHEL web site: www.bhel.com
32	Ordering and confirmation of order
	The bidder shall send the order acceptance within one week from the date of LOI/Purchase order or such other period as specified/agreed by the Buyer. Buyer reserves the right to revoke the order placed if the order confirmation differs from the original order placed. Buyer shall be legally bound, only if agreed for any deviation explicitly in writing. The acceptance of deliverables or supplies by Buyer as well as payments made in this regard shall not imply acceptance of any deviations. The Purchase order will be deemed to have been accepted if no communication to the contrary is received within one week (or the time limit as specified /agreed by the Buyer) from the date of P.O. Buyer, is at liberty to send signed P.O. through electronic media such as e-mail and the receipt of which shall be treated as receipt of order.
33	Execution
	The whole contract is to be executed in the most workman like manner, substantial and approved as per the contracted terms.
34	Progress Report
	The bidder shall render such report as to the progress of work and in such form as may be called for by the Buyer from time to time. The submission and acceptance of such reports shall not prejudice the rights of the buyer in any manner. Bidder shall communicate to BHEL immediately, the change of address, ownership, contact person(s), the mobile numbers and e-mail of the dealing person concerned. Milestones shall be periodically updated by bidder through PRADAN Portal (https://web.bhelhyd.co.in/mm/). Non updation will adversely affect service rating of bidder performance.

35	Non-disclosure Obligations
	Drawings, technical documents or other technical information received by one party shall not without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to third parties. All information and data contained in general product documentation, whether in electronic or any other form, are confidential and binding only to the extent that they are by reference expressly included in the contract. The bidder shall, as per agreed date/s but not later than the date of delivery, provide free of charge any information and/or drawings which are necessary to permit the Buyer to erect, commission, operate and maintain the product. Such information and drawings shall be supplied as specified in technical specification. All intellectual properties, including designs, drawings and product information etc. exchanged during the formation and execution of the contract shall continue to be the property of the submitting party. The bidder shall provide Buyer with all information pertaining to the delivery in so far as it could be of importance to Buyer. The bidder shall not reveal confidential information to its own employees not involved with the tender/contract and its execution and delivery or to third parties, unless Buyer has agreed to this in writing beforehand. The bidder shall not be entitled to use the Buyer's name in advertisements and other commercial publications including website without prior written permission from Buyer. In the event of violation of the confidentiality as agreed, BHEL will take legal action as deemed fit. Non-disclosure agreement to be entered as per Annexure- II wherever applicable.
36	Inspection and Testing
A	The goods and stores shall be manufactured by approved quality system and each part/component may be inspected and tested by the Buyer prior to shipment and shall comply with relevant requirements. Buyer has the right to inspect at any stage during manufacture/ delivery.
B	Buyer or his authorized representative shall be entitled at all reasonable times during execution to inspect, examine and test at the bidder's premises the material and workmanship of all stores to be supplied under the contract, and if the part of the stores are being manufactured at other premises, the bidder shall obtain for buyer or his authorized representative permission to inspect, examine and test as if the said stores are being manufactured at the bidder's premises. Such inspection, examination and testing, if made shall not release the bidder from any obligation under the contract. For indigenous bidders all costs related to first inspection request shall be borne by the buyer and the cost of subsequent inspections due to non-readiness of material/rework/ rejections shall be borne by the bidder. In case of imports all inspection charges including third party inspections if any shall be borne by the bidder. The cost of inspection staff/third party specified by the Buyer shall be borne by bidder unless otherwise specifically agreed. If the contract provides for tests on the premises of the bidder or any of his sub-contractor/s, bidder shall be responsible to provide such assistance, labor, materials, electricity, fuels, stores, apparatus, instruments as may be required and as may be reasonably demanded to carry out such tests efficiently. Cost of any type test or such other special tests shall be borne by the bidder unless otherwise specifically agreed in the contract. The Bidder shall give the authorized representative of the buyer reasonable notice in writing of the date on and the place at which any stores will be ready for inspection/ testing as provided in the Contract. Annexure – I, may strictly be complied with for the time lines. Any delay in submission of the documents by the bidder will not alter the delivery date.
37	Quality and Condition of the Deliverables
	The bidder shall be responsible for compliance with applicable technical, safety, quality, environmental requirements and other regulations in relation to products, packaging and raw and ancillary materials.
38	Packaging and Dispatch
	The bidder shall package the deliverables safely and carefully and pack them suitably in all respects considering the peculiarity of the material for normal safe transport by sea/air/rail/road to its destination suitably protected against loss, damage, corrosion in transit and the effect of tropical salt laden atmosphere. The packages shall be provided with fixtures/hooks and sling marks as may be required for easy and safe handling by mechanical means. Special packaging conditions/ environmental conditions as defined in the NIT shall be fully complied. Each package must be marked with consignee name, address, P.O. number, Package Number, gross weight & net weight, dimensions (L x B x H) and bidder's name. The packing shall allow for easy removal and checking of goods on receipt and comply with carrier's conditions of packing or established trade practices. Packing list for goods inside each package with P.O. item No. & quantity must also be fixed securely outside the box to indicate the contents. If any consignment needs special handling instruction, the same shall be clearly marked with standard symbols/instructions. Hazardous material should be notified as such and their packing, transportation and other protection must conform to relevant regulations.
39	Contract variations; Increase or decrease in the scope of supply
	Buyer may vary the contracted scope during execution due to exigencies of project requirement. If the bidder is of the opinion that the variation has an effect on the agreed price or delivery period, Buyer shall be informed of this immediately in writing along with technical details, and in the event of additional work, submit a quotation with regards to the price and period involved, as well as the effect this additional work will have on the other work to be performed by the bidder. Wherever unit rates are available in the contract, the same shall be applied to such additional work. The bidder shall not perform additional work before buyer has issued written instructions/amendment to the purchase order to that effect. The work which the bidder should have or could have anticipated in terms of delivering the service (s) and functionality (ies) as described in this agreement should be executed by the bidder without any price implication. In case of no change in the scope / technical specifications, bidder shall endeavor to keep the material ready and intimate the same to BHEL within the contractual delivery date, failing which, the delay if any will be attributed to supplier, and any upward price variation thereof for delivery at a later date is not admissible.
40	Rejected/Short shipments/ warranty/guarantee replacements
	In case of any short shipment during initial supply which is subsequently dispatched by the bidder or any guarantee / warranty replacements shall be dispatched on "DDP-Delivered duty paid BHEL stores" basis for imported items and "FOR-BHEL Stores/designated destination" basis for indigenous items.
41	Export Administration Regulations
	If a delivery includes such technology and / or supply that is subjected to the export regulations the bidder shall obtain due permissions, approvals, license etc.

42	Force Majeure
	The bidder shall not be considered in default if delay occurs due to causes beyond their control such as Acts of God, Natural calamities, Fire, Frost, Flood, Civil War, civil commotion, riot, Government Restrictions. Only those causes that have duration of more than seven days shall be considered cause of force majeure. Notification to this effect duly certified by local chamber of commerce/statutory authorities with supporting documents shall be given by the bidder to BHEL by registered letter/courier service immediately without loss of time. In the event of delay due to such causes the delivery schedule shall be extended for a length of time equal to the period of Force Majeure or at the option of BHEL the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of BHEL. In the event of such cancellation the bidder shall refund any amount advanced or paid to the bidder by BHEL and deliver back any material issued to him by BHEL and release facilities, if any provided by BHEL.
43	Non-waiver of Defaults
	If any individual provision of the contract is invalid, the other provisions shall not be affected.
44	Settlement of Disputes
	Except as otherwise specifically provided in the contract, all disputes concerning questions of the facts arising under the contract, shall be decided by the Buyer, subject to written appeal by the bidder to the buyer, whose decision shall be final. Any disputes of differences shall to the extent possible be settled amicably between the parties thereto, failing which the disputed issues shall be settled through arbitration The bidder shall continue to perform the contract, pending settlement of disputes(s).
45	Conciliation clause
	CONCILIATION CLAUSE FOR CONDUCTING CONCILIATION PROCEEDINGS UNDER THE BHEL CONCILIATION SCHEME, 2018: The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding, penalty deduction, time extension), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators. The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure in http://www.bhel.com/index.php/story_details?story=2454 . The Procedure together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this ITB
46	ARBITRATION (WITH SOLE ARBITRATOR)
	Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, penalty deduction, validity or execution of the Contract; time extension, or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration . Sole arbitrator to be appointed by Head of the Unit - BHEL , HPEP . The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties. Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Sangareddy / Hyderabad, Telangana. The language of arbitration shall be English and the documents shall be submitted in English. The cost of arbitration shall initially be borne equally by the Parties subject to the final apportionment of the cost of the arbitration in the award of the Arbitrator. Subject to the arbitration in terms of clause 45, the courts at Sangareddy, Telangana State shall have exclusive jurisdiction over any matter arising out of or in connection with this contract. Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.
	ARBITRATION FOR CONTRACT WITH PUBLIC SECTOR ENTERPRISE (PSE) OR A GOVERNMENT DEPARTMENT
	In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No 4(1)/2013-DPE(GM/FTS 1835 dated 22-05-2018
47	Applicable Laws and jurisdiction of Courts
	This agreement shall be construed and interpreted in accordance with the laws of India and shall have exclusive jurisdiction of Sangareddy/Hyderabad courts, Telangana, India.
48	BHEL-Fraud prevention policy shall be adhered to.
	The Bidder along with its associate/ Collaborators/ Sub-contractors/ sub-bidders/ 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. List of nodal officers is hosted on BHEL Hyderabad website https://hpep.bhel.com/.
49	Suspected Cartel Formation
	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 .

Note: Purchase officer has to fill Annexure-I while sending enquiry

(Attachment to Enquiry No. XXXXXXXXXX Due on Date XX.XX.XXXX)					
Special Conditions of Contract (SCC)					
Sl.No	ITB Clause No.	Clause	Available Options	BHEL requirements	Bidder response
1	3	Mode of Submission	Conventional / E-Procurement		
2	5	Type of Bid	Single part / Two Part / Three Part		
3	6	Indigenous purchase - Destination	BHEL, RCPuram, Hyderabad / Site		
4			Destination in case of Site		
		Mode of Shipment	Air / Sea		
5		Imports purchase - Destination	Mumbai / Navasheva / Hyderabad / Others		
6		Freight	Customer / BHEL / Vendor		
7		Insurance	Customer / BHEL / Vendor		
8		Basic Custom Duty	Project Imports/ Concessional Duty / Merit Duty / Nil / Others Duty Structure		
9	9	Price validity	_____ days		
		Optional Spares price validity	_____ Months / years from the date of _____		
10	8	Delivery Period	_____ weeks / _____ Months (Staggered delivery to be detailed)		
11	18	Evaluation basis	Itemwise / Total		
12	Others	Quantity Split	Splittable / Non-Splittable		
13			(Tabulation for splitting to be detailed)		
14	9	Price Variation Clause (PVC)	Applicable / Not applicable		
15	12	Payments Terms			
16		Tender cost	Applicable / Not applicable		
17		Earnest Money Deposit (EMD)	_____ % of tender value / Not applicable		
18		E & C Supervision Charges	Applicable / Not applicable		
19			If applicable , max 2% of Total contract value .		
20		Bank Guarantee against milestone payment	(If envisaged to be detailed with %)		
21	Others	Contract execution Bank Guarantee	_____ % of PO Value to be submitted after receipt of PO / Not Applicable		
22	17	Performance Bank Guarantee			
	7	Additional documentation for payment	Test / Warranty / Guaranty / O&M Manual etc.,		
24	13	Max Penalty applicable on	Delayed portion / Order value		
25	Others	Contract Specific Penalty Clause	including Documentation delay , Performance , E&C etc., to be detailed , considering Project , Unit , Set , etc.,		
26	16	Guarantee / Warranty Period	Applicable Clause a/b/c		
27		Contract Specific Guarantee / Warranty Period	Specific period if any to be detailed		
28	Others	Expected commissioning period	_____ months from the date of supply		
29	48	Detailed Billing Breakup (BBU)	Applicable / Not applicable		
30			(If applicable , Bidder shall provide detailed billing break-up in respect of the major items/components (stipulated in the tender) as part of offer .)		
31	Others	Customer approval of vendor	Applicable / Not applicable		
32		Drawing approval	Applicable / Not applicable		
33		QAP approval	Applicable / Not applicable		
34	36	Inspection by	BHEL / BHEL TPI / Vendor TPI / Customer		
35	Others	Financial / Commercial PQC	Applicable / Not applicable		
36			if Applicable to be detailed		

Annexure-I			
Major Activity timelines shall be considered for indigenous purchases			
S No	Activity	Agency	Timeline
1	PO acknowledgement	Vendor	_____ days from PO
2	Submission of Drawings and QP	Vendor	_____ days from PO
3	Approval of Drawings and QP	BHEL/Customer	_____ days from PO
4	Raising of Inspection Call	Vendor	_____ days from PO
5	Inspection completion	Self/BHEL/Third party inspection agency	_____ days from inspection call date
6	Despatch Instructions	BHEL	_____ days from inspection report
7	Reciept of Material	Vendor	_____ days from Despatch instructions

Above is illustrative only. Purchase department can add more activities depending on nature of prodcut/contracts

However absence of this annexure in NIT will entail non processing of delivery extention cases in case of delay in supplies of goods owing to reason attributable to BHEL.

(To be executed on Non- Judicial Stamp Paper for an appropriate value.
To be stamped as an agreement)

(For Suppliers on Unit's / Division's PMD)

ANNEXURE-II

Framework Confidentiality Agreement Cum Undertaking

This Agreement made on this the _____ day of (month) _____ 20 ____ ("Effective Date") by and between M/s. BHARAT HEAVY ELECTRICALS LIMITED, having registered office at "BHEL House", Siri Fort, New Delhi – 110049 (India), acting through its _____ Unit (hereinafter may be referred to as "BHEL" or "the company").

And

M/s. _____ (address) _____
represented by authorized representative Sri _____ (herein after referred to as the "Supplier").

The supplier and the company may, unless the context otherwise requires, hereinafter be collectively referred to as "Parties" or singly as the "Party".

RECITALS

Whereas, BHEL is engaged in the design, engineering, manufacturing, construction, testing, commissioning and servicing of a wide range of products, systems and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable energy, Oil & Gas and Defence and providing associated services to varied customers in relation to which BHEL / its affiliates own valuable information of a secret and confidential nature.

Whereas the Company may, in connection with contract(s) (as defined hereunder) placed or to be placed upon the supplier, or otherwise, from time to time, make available, Technical Information as is defined hereunder.

And Whereas BHEL is willing to provide such Technical Information to the Supplier from time to time and the Supplier understands and acknowledges that such Technical Information is valuable for the Company and as such is willing to protect confidentiality of such information, subject to the terms and conditions set out hereunder.

Now therefore, in view of the foregoing premises and in consideration of the mutual covenants and agreements hereinafter set forth, the parties agree as under:

1. Definitions:

Unless the context so requires, in this Agreement, the following terms will bear the meaning ascribed to the said term in this clause.

- A. **“Contract”** means the contract entered into with a supplier and includes a Purchase Order, or a Work Order for procurement of any goods or for provision of any services.
- B. **“Effective Date”** means the date of this Agreement as mentioned in the preamble of this Agreement.
- C. **“Supplier”** includes a Contractor or a Vendor of the Company whether for supplying of goods or for providing any services under a Contract or both.
- D. **“Technical Information”** includes Drawings, and / or Product Standards and / or Specifications and / or Corporate / Plant Specifications and / or Technological Process Sheets and / or Technical Data Sheets and / or Jigs & Fixtures and / or Pattern & Dies and / or Special Gauges and / or Tools etc. Belonging to or wherein the Company has acquired from a third party a right of user and includes any improvement thereto from time to time whether carried out by the Company or by the Suppliers.
- E. **“Intended Purpose”** means the purpose for which the Technical Information is provided to the supplier under or in connection with a contract.
- F. **“Improvement”** includes any modification made to, or adaptation of, the Technical Information which enhances or is calculated to enhance the performance (Whether in terms of effectiveness or in terms of efficiency or both) of the product and / or the service to be provided by the Supplier under a Contract.

2. This Agreement shall come into force / deemed to have come into force, as the case may be, on the Effective Date; or, on the first date when the Technical Information or any part thereof is provided by BHEL to the supplier; whichever is earlier.

3. **Agreement deemed to be incorporated in each contract:** Unless and to the extent otherwise stipulated in the Contract, the conditions of this Agreement are deemed to be incorporated in all Contracts which may be entered into between the Company and the Supplier. Further, unless otherwise stipulated, the obligations under this Agreement are and will be independent of the obligations under the Contracts and such obligations of the Supplier hereunder will remain of full effect and validity notwithstanding that the period of validity of the Contract has expired by efflux of time stipulated therein; or, the contract has been discharged by performance or breach; or, the termination of the Contracts for any reason whatsoever.

4. **Ownership:**

4.1 The Company may, from time to time, make available to the Supplier, Technical Information on a non-exclusive basis by way of loan.

4.2 The Supplier acknowledges and agrees that all Technical Information and copies thereof that are or may be provided by the Company to the Supplier, are and shall remain the property of

BHEL or that of the concerned entity from whom BHEL has obtained the Technical Information and such Technical Information are and shall constitute trade secrets of the BHEL. Nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any patent, copyright or design or any other intellectual property rights of whatsoever description that subsists or may hereinafter exist in the Technical Information. Furthermore, nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the supplier any license or right of use of such patent, copyright or design or any other intellectual property rights of whatsoever description which may now or hereafter exist in the Technical Information except for use of the Technical Information strictly in accordance with this Agreement and the contract and / or as directed in writing by the Company, solely for the Intended Purpose under the Contract.

- 4.3 Neither party is obligated by or under this Agreement to purchase from or provide to the other party any service or product and that any such purchase / sale of any product and / or service by one party to the other party will be governed by the Contract if any, that may be entered into by and between the Company and the Supplier.
- 4.4 The Supplier is / has been made well aware and acknowledges that the Technical Information being / which may be shared with it by the Company has been either generated by the Company by incurring huge investment and cost or obtained from foreign collaborators under Technical Collaboration Agreement (TCA) with stringent confidentiality conditions.
- 4.5 The supplier agrees and undertakes to adhere to confidentiality requirements as applicable to BHEL under a TCA and also ensure that the confidentiality requirements are adhered to by all its concerned employees or sub-contractors /suppliers (where permitted to be engaged by BHEL). Any damages, losses, expenses of any description whatsoever, arising out of or in connection with a breach of the confidentiality requirements under a TCA owing to any act or omission on the part of the supplier or its employees or sub-contractors / suppliers that is claimed by a foreign collaborator from the Company shall be wholly borne by the Supplier and it shall keep BHEL fully indemnified in this behalf. The demand by the Company shall be conclusive upon the Supplier who shall thereupon forthwith pay to the Company without demur, dispute or delay the amount as demanded without demanding any further proof thereof.
- 4.6 The Supplier agrees and undertakes that unless so decided and advised by the Company in writing all rights / title to any Improvement to the Technical Information shall vest in the Company. The Supplier undertakes and agrees to inform forthwith to the Company of any such Improvement made to the Technical Information and transfer all drawings / documents or other materials connected with such Improvement to the Company and also agrees to fully cooperate with the Company for protecting the Company's interests in such Improvements

in the Technical Information including but not limited to obtaining necessary protection for the intellectual property rights in such improvement, if so desired by the Company. If a question arises whether a modification amounts to improvement to the Technical Information, the same shall be decided by the Company and such decision shall be final and binding upon the supplier.

5. Use and Non – Disclosure:

5.1 Unless otherwise stipulated by the Company, all Technical Information made available to the supplier, by the Company shall be treated as Confidential irrespective of whether the same is marked or otherwise denoted to be Confidential or not.

5.2 The Supplier undertakes and agrees that the Technical Information in its possession shall be held in strict confidence and will be used strictly in accordance with this Agreement and solely for the Intended Purpose under the Contract. Use of the Technical Information for any other purpose other than Intended Purpose is prohibited.

5.3 In particular, the Supplier shall not use Technical Information or any Improvement in its possession for the manufacture or procurement of the product(s) or components or parts thereof or use the Technical Information or any portion thereof or any modification or adaptation thereof in any form to provide any product and / or service to any third party, without the prior written consent of the Company.

5.4 The Supplier shall not disclose any of such Technical Information to any third party without the prior written consent of the Company. The Supplier agrees that without prior written consent of the Company, the supplier shall not disclose to a third party about the existence of this Agreement, or of the fact that it is / was in possession of or has experience in the use of any Technical Information nor shall the Supplier share in any manner whatsoever, with a third party, the name or details of any Contract(s) awarded by the Company to it or performed by the Supplier or the scope of work thereof or share any document or correspondence by and between the Company and the supplier in or in connection with this Agreement or such Contract(s). Notwithstanding what is stated elsewhere, the overall responsibility of any breach of the confidentiality provisions under this Agreement shall rest with the Supplier.

5.5 This Supplier undertakes and agrees not to make copies or extracts of and not to disclose to other any or all of the Technical Information in its possession, except as follows:

(a) The Supplier may disclose the Technical Information to such of its officers and employees strictly to the extent as is necessary for such officer or employee for the Intended Purpose, provided that the Confidential Information (or copies thereof) disclosed shall be marked

clearly as the confidential and proprietary information of Company and that such officers and employees shall similarly be bound by undertakings of confidence, restricted use and non-disclosure in respect of the Technical Information. The Supplier shall be responsible for any breach of such confidentiality provisions by such officers and employees.

- (b) With the prior written consent of Company, the supplier may disclose for the Intended Purpose such Technical Information as is provided for in such consent to such of its professional advisers: consultants, insurers and subcontractors who shall be similarly bound by undertakings of confidence, restricted use and non-disclosure in respect of such Technical Information.
- (c) The Supplier shall not be prevented to make any disclosure required by (i) order of a court of competent jurisdiction or (ii) any competent regulatory authority or agency where such disclosure is required by law, provided that where the supplier intends to make such disclosure, it shall first consult Company and take all reasonable steps requested by it to minimize the extent of the Technical Information disclosed and to make such disclosure in confidence and also shall cooperate with the Company in seeking any protective order or any other remedy from proper authority in this matter.

6. Exceptions:

The Obligations of the Supplier pursuant to the provisions of this agreement shall not apply to any Confidential Information that:

- a) was / is known to, or in the possession of the Supplier prior to disclosure thereof by the Company;
- b) is or becomes publicly known, otherwise than as a result of a breach of this agreement by the Supplier.
- c) is developed independently of the Disclosing party by the Supplier in circumstances that do not amount to a breach of the provisions of this Agreement or the Contract;
- d) is received from a third party in circumstances that do not result in a breach of the provisions of this Agreement.

- 7. The Obligation of maintaining confidentiality of the Technical Information on each occasion, shall subsist for the entire duration during which the Technical Information / equipment is in possession of the Supplier and shall thereafter subsist for a further period of _____ years from the date when the complete Technical Information has been returned in portions on different dates, the period of ____ years will be reckoned from the date when the last portion of the Technical Information has been returned. Notwithstanding the expiry of the confidentiality obligation, the obligation of the Supplier under clause 5.4 shall continue to subsist for a further period of _____ years.

8. Warranties & Undertakings:

- a) The Supplier undertakes to ensure the due observance of the undertakings of confidence, restricted use and non-disclosure by its persons to whom it discloses or releases copies or extracts of the Technical Information.
- b) The Supplier shall keep the Technical Information or improvement made therein properly segregated and not mix up the same with any other material / documents belonging to him / it or to any other third party.
- c) The Supplier further undertakes that he / it shall not hypothecate or give on lease or otherwise alienate or do away with any of the Technical Information and / or equipment of the Company, made available to him / it, and undertakes that he / it shall hold the same as a trustee, in capacity of custodian thereof and use / utilise the same solely for the purpose of executing the contract awarded by the Company.
- d) The Supplier further undertakes that he / it shall return all the equipment and / or Technical Information as far as practicable in the same condition in which the same was made available to him / it by the Company together with any Improvement thereon and the documents connected with such Improvement, to the Company forthwith upon completion of the scope of work or contract for which such Technical Information was provided by the Company to it or as directed by the Company together with a confirmation by way of an affidavit or in such manner as directed by the Company that it has not retained any equipment and / or Technical Information / improvement thereof. In case any such equipment and / or Technical Information or thereof shall remain in his possession or is not capable of being returned, the retention and use of such Technical Information or improvement thereto shall continue to be governed by this Agreement.
- e) The Supplier undertakes to indemnify the Company for all the direct, indirect and / or consequential losses, damages, expenses whatsoever including any consequential loss of business, profits suffered by the Company owing to breach by the Supplier of its obligations under this Agreement and / or the confidentiality requirements, if any, contained in the Contract and that the Supplier hereby agrees that the decision of the Company in all such or any such matter/s shall be final and binding on the Supplier. On mere written demand of the Company, the Supplier shall forthwith and without demur or delay pay to the Company any such sum as determined by the Company as the amount of loss or damage or expense which has been suffered by the Company. The Supplier agrees that the Company shall be entitled to withhold and appropriate any amount payable to the Supplier under any Contract then existing between the Company and the Supplier, in case the Supplier fails to make payment, in terms of the written demand, within 7 days thereof. Without prejudice to the forgoing actions, in respect to any breach of this Agreement, the Company shall be entitled to take

any other action against the Supplier as per applicable laws, the Contract, Company's applicable policies, guidelines rules, procedures, etc.

9. Without prejudice to any other mode of recovery as may be available to the Company for recovery of the amount determined as due as per Clause 9 (f) hereinabove, the Company shall have a right to withhold, recovery and appropriate the amount due towards such losses, damages, expenses, from any amount due to the Supplier in respect of any other Contract (s) placed on him / it by any department / office / unit/ division of the said Company.

10. Arbitration & Conciliation:

Except as provided elsewhere in this contract, in case amicable settlement is not reached between the parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the contract; or, the respective rights and liabilities of the parties; or, in relation to interpretation of any provision of the contract; or, in any manner touching upon the contract, then, either party may, by a notice in writing to the other party refer such dispute or difference to the sole arbitration of an arbitrator appointed by head of the BHEL unit issuing the contract.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause, the seat of arbitration shall be at Hyderabad.

The cost of arbitration shall be borne as per the award of the Arbitrator.

Subject to the arbitration in terms of clause 55, the courts at Sangareddy, Telangana State shall have exclusive jurisdiction over any matter arising out of or in connection with this contract.

Notwithstanding the existence or any dispute or differences and / or reference for the arbitration, the contractor shall proceed with and continue without hindrance the performance of its obligations under this contract with due diligence and expedition in a professional manner except where the contract has been terminated by either party in terms of this contract.

In case of contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of the contract, such dispute or difference shall be referred by either party for arbitration to the sole arbitrator in the Department of Public Enterprises to be nominated by the secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and

justice, Government of India. Upon such reference the dispute shall be decided by the Law secretary or the special Secretary or Additional secretary when so authorized by the Law secretary, whose decision shall bind the parties hereto finally and conclusively. The parties to the dispute will share equally the cost of arbitration as intimated by the arbitrator.

11. Governing Law & Jurisdiction:

This agreement shall be construed and interpreted in accordance with the laws of India and shall have exclusive jurisdiction of Sangareddy/Hyderabad courts, Telangana, India.

SIGNATURE

WITNESSES

1

Name:

Address:

2

Name:

Address:

Annexure - III

Proforma for self-certification by Supplier for minimum local content on their letter head for tender value less than Rs 10 Crore

"We _____ (Name of Manufacturer) undertake that we meet the mandatory minimum Local Content (LC) requirement i.e. _____ (to be filled as notified in the policy) for claiming Purchase Preference linked with Local Contents under the Govt. policy against tender no. _____."

Auditor's certification with respect to minimum local content on the letter head of Statutory Auditor for tender value above Rs.10 crore

"We _____ the statutory auditor of M/s _____ (name of the bidder) hereby certify that M/s _____ (name of manufacturer) meet the mandatory Local Content requirements of the Goods and/or Services i.e. _____ (to be filled as notified in the policy) quoted vide offer No. _____ dated _____ against BHEL's tender No. _____ by M/s _____ (Name of the bidder)."

Annexure - IV

Proforma for self-certification by Supplier for Compliance to Clause No 20 (B)

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and I certify that M/s.... (Name of firm) is **not from such a country/is from such a country** (delete whichever is NOT applicable) and has been duly registered with the Competent authority (delete if NOT applicable) . I hereby certify M/s fulfills all requirements in this regard and is eligible to be considered . (where applicable , valid registration by the competent authority shall be attached)

Sd/-

Authorised Signatory with Stamp

Annexure V

(On Company Letter Head)

FORM NO. 10F

[See sub-rule (1) of rule 21AB]

Information to be provided under sub-section (5) of section 90 or sub-section (5) of section 90A of the Income-tax Act, 1961

I..... son/daughter of Mr in the capacity of.....
(Designation) do provide the following information, relevant to the previous year **2021-22** in case of for the purposes of sub-section (5) of section 90/section 90A:-

Sl.No.	Nature of information	Details
(i)	Status (individual; company, firm etc.) of the assessee	Company
(ii)	Permanent Account Number (PAN) of the assessee if allotted	
(iii)	Nationality (in the case of an individual) or Country or specified territory of incorporation or registration (in the case of others)	.....
(iv)	Assessee's tax identification number in the country or specified territory of residence and if there is no such number, then, a unique number on the basis of which the person is identified by the Government of the country or the specified territory of which the assessee claims to be a resident	.....

(v)	Period for which the residential status as mentioned in the certificate referred to in sub-section (4) of section 90 or sub-section (4) of section 90A is applicable	<u>2022-23</u>
(vi)	Address of the assessee in the country or territory outside India during the period for which the certificate, mentioned in (v) above, is applicable	..... ..... .....

I have obtained a certificate to in sub-section (4) of section 90 of sub-section (4) of section 90A from the Government of..... (name of country or specified territory outside India)

Signature:.....

Name:.....

Address:.....

Email ID:.....

Contact Number.....

Permanent Account Number:.....

Verification

I..... do hereby declare that to the best of my knowledge and belief what is stated above is correct complete and is truly stated. Verified today the..... day of.....

In case the M/s Bharat Heavy Electricals Limited, HPEP, Ramachandrapuram, Hyderabad is declared as an assessee in default due to any misstatement or incorrect declaration, we indemnify M/s Bharat Heavy Electricals Limited from any ensuing consequences thereunder.

Signature of the person providing the information

Place:.....

(On Company Letter Head)

No Business Connection or Permanent Establishment Certificate

Date

To

Bharat Heavy Electricals Limited
Ramachandrapuram, Hyderabad
India - 502032

Sir,

Sub: No Business Connection or Permanent Establishment declaration for FY **2021-22**

This is to certify that (Name of the supplier) is a company incorporated in(country) and does not have any business connection in India as per the provision of Section 9 of the Income Tax Act 1961 or any Permanent Establishment as defined in Article 5 of the India and(country) DTAA.

We hereby certify that we will notify BHEL in case of any change in the status as certified above.

For

Authorised Signatory

(Note – Please refer definition of the Business Connection on reverse and Permanent Establishment in the relevant DTAA)

"Business connection" as defined in Section 9 of the Income Tax Act shall include any business activity carried out through a person who, acting on behalf of the non-resident,—

- (a) has and habitually exercises in India, an authority to conclude contracts on behalf of the non-resident or habitually concludes contracts or habitually plays the principal role leading to conclusion of contracts by that non-resident and the contracts are—
 - (i) in the name of the non-resident; or
 - (ii) for the transfer of the ownership of, or for the granting of the right to use, property owned by that non-resident or that non-resident has the right to use; or
 - (iii) for the provision of services by the non-resident; or
- (b) has no such authority, but habitually maintains in India a stock of goods or merchandise from which he regularly delivers goods or merchandise on behalf of the non-resident; or
- (c) habitually secures orders in India, mainly or wholly for the non-resident or for that non-resident and other non-residents controlling, controlled by, or subject to the same common control, as that non-resident:

Provided that such business connection shall not include any business activity carried out through a broker, general commission agent or any other agent having an independent status, if such broker, general commission agent or any other agent having an independent status is acting in the ordinary course of his business :

Provided further that where such broker, general commission agent or any other agent works mainly or wholly on behalf of a non-resident (hereafter in this proviso referred to as the principal non-resident) or on behalf of such non-resident and other non-residents which are controlled by the principal non-resident or have a controlling interest in the principal non-resident or are subject to the same common control as the principal non-resident, he shall not be deemed to be a broker, general commission agent or an agent of an independent status

For the removal of doubts, it is hereby clarified with explanation-2A, that the significant economic presence of a non-resident in India shall constitute "business connection" in India and "significant economic presence" for this purpose, shall mean—

- (a) transaction in respect of any goods, services or property carried out by a non-resident in India including provision of download of data or software in India, if the aggregate of payments arising from such transaction or transactions during the previous year exceeds such amount as may be prescribed; or
- (b) systematic and continuous soliciting of business activities or engaging in interaction with such number of users as may be prescribed, in India through digital means:

Provided that the transactions or activities shall constitute significant economic presence in India, whether or not,—

- (i) the agreement for such transactions or activities is entered in India; or
- (ii) the non-resident has a residence or place of business in India; or
- (iii) the non-resident renders services in India:

Thresholds for the purposes of significant economic presence.

11UD. (1) For the purposes of clause (a) of Explanation 2A to clause (i) of sub-section (1) of section 9, the amount of aggregate of payments arising from transaction or transactions in respect of any goods, services or property carried out by a non-resident with any person in India, including provision of download of data or software in India during the previous year, shall be two crore rupees;

(2) For the purposes of clause (b) of Explanation 2A to clause (i) of sub-section (1) of section 9, the number of users with whom systematic and continuous business activities are solicited or who are engaged in interaction shall be three lakhs.

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi – 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved

in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. 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.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/ PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 The Bidder(s)/ Contractor(s) 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.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors". framed by the Principal.

Section 4 – Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

Section 5 – Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 – Equal treatment of all Bidders/ Contractors/ Sub-contractors

- 6.1 The Bidder(s)/ Contractor(s) undertake(s) to obtain from all subcontractors a commitment consistent with this Integrity Pact and report Compliance to the Principal. This commitment shall be taken only from those sub-contractors whose contract value is more than 20 % of Bidder's/ Contractor's contract value with the Principal. The Bidder(s)/ Contractor(s) shall continue to remain responsible for any default by his Sub-contractor(s).
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 – Criminal Charges against violating Bidders/ Contractors /Sub-contractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 –Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 8.5 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or heal the situation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- 8.6 The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- 8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the

Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.10 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

9.1 This Pact begins and shall be binding on and from the submission of bid(s) by bidder(s). It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

9.2 If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 – Other Provisions

10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

10.5 Only those bidders/ contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal

(Office Seal)

For & On behalf of the Bidder/ Contractor

(Office Seal)

Place-----

Date-----

Witness: _____

(Name & Address) _____

Witness: _____

(Name & Address) _____

BANK GUARANTEE FOR PERFORMANCE SECURITY

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited ¹ (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) having its registered office at _____ ² hereinafter referred to as the 'Contractor/Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated ³ valued at Rs.....⁴ (Rupees -----)/FC.....(in words.....) for ⁵ (hereinafter called the 'Contract') and the Contractor having agreed to provide a Contract Performance Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we, ..., (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount Rs ----- (Rupees -----) without any demur, immediately on a demand from the Employer, . Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the contractors/supplier shall have no claim against us for making such payment.

We the bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor/Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

This Guarantee shall remain in force upto and including.....⁶ and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the ⁷we shall be discharged from all liabilities under this guarantee thereafter.

We, ... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁸
- b) This Guarantee shall be valid up to ⁹

- c) Unless the Bank is served a written claim or demand on or before _____¹⁰ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ PROJECT/SUPPLY DETAILS

⁵ BG AMOUNT IN FIGURES AND WORDS

⁶ VALIDITY DATE

⁷ DATE OF EXPIRY OF CLAIM PERIOD

⁸ BG AMOUNT IN FIGURES AND WORDS.

⁹ VALIDITY DATE

¹⁰ DATE OF EXPIRY OF CLAIM PERIOD

Note:

1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.

2. In Case of Bank Guarantees submitted by Foreign Vendors-

- a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
- b. **From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
 - b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

- b.2** In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
- b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
- b.4** The BG should clearly specify that the demand or other document can be presented in electronic form.



HYDERABAD

PRODUCT STANDARD
TURBINES & COMPRESSORS

PQC-67602

REV NO: 00

SHEET 1 OF 3

PRE-QUALIFICATION CRITERIA (PQC) FOR P&ID (SPPID Ver. 2019) OFFLOADING

1.0 Scope

This PQC is applicable for vendors participating in open tender for designing/drafting the P&ID in SPPID version 2019 /deliverables being offloaded to Engineering Sub Contractor (ESC) by Steam Turbines & Compressors Engineering of BHEL Hyderabad.

2.0 Pre-Qualification Criteria (Technical)

Clause wise response of vendor is necessarily to be submitted for technical evaluation of technical bid

Sl. No.	Description	Vendor's Response	Details of Documents enclosed, if any
1.	The bidder must have during last 07 years (01st Apr 2015 to 31st Mar 2022) experience of having successfully completed similar work (preferably steam turbine /compressor power / process piping based on ANSI B31.1 & B31.3) of designing/drafting the P&ID in SPPID version 2019 software in Central/ State Govt. department/ Autonomous Bodies/ Public Sector Undertakings/ reputed private organizations. The copies of Purchase/ Work Orders/ Satisfactory Completion certificates are required to be enclosed with the technical bid for evaluation purpose. Name & Address of the service receiver for whom the service provider has rendered the similar service earlier to be given so that BHEL shall have the right to know the credentials of the bidder about his past service.		
2.	The firm/ agency should have its office preferably in Hyderabad for better coordination during the execution of the work. Contact details and address of firm's/company's office in Hyderabad to be provided in the tender. Vendor should have Video conferencing facility for conducting 3D model review meeting with BHEL.		
3.	The bidder shall be a professional agency engaged in design and 3D modelling business with full- fledged office set-up. For this proof shall be submitted and BHEL team may visit the party site/office to assess the capability.		
4.	Bidder to confirm that they will meet all the requirements of BHEL specification provided with the enquiry.		

Prepared	Checked	Approved	Date
Kanhaiya Kumar	Deepak Kumar Jha	Prafulla D. Mahulikar	09.09.2022
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HYDERABAD

PRODUCT STANDARD
TURBINES & COMPRESSORS `

PQC-67602

REV NO: 00

SHEET 2 OF 3

Sl. No.	Description	Vendor's Response	Details of Documents enclosed, if any
5.	The bidder shall have the valid and sufficient no. of licences of the required and applicable softwares, being used for this enquiry.		
6.	Timely completion of the work is essence of the contract. The work as detailed in this tender shall be executed and completed in all respects in accordance with the tender document and to the complete satisfaction of BHEL. Hence Each project shall have one project manager.		

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TD-201
REV-00

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 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS			PQC-67602
				REV NO: 00
				SHEET 3 OF 3
Record of revisions				
Rev. No.	Date	Revision Details	Revised	Approved
00	08.09.2022	Issued first.	Deepak	Prafulla D. Mahulikar
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ANNEXURE-A**Special Conditions of the Contract (SCC)**

This is a mandatory document to be filled and attached to technical bid for evaluation

(Non submission may lead to disqualification)

NOTE :

- 1) Vendors have to record their confirmation against "Supplier confirmation" column.
- 2) For any deviation, please write in "Deviation / Remarks, if any" column.
- 3) Vendor has to submit this ANNEXURE-A along with their technical bid, failing which their offer will be not evaluated.
- 4) Commercial Conditions quoted in any place other than this format, including stated in Vendor's General Terms and conditions enclosed, if any, shall be summarily ignored and be invalid for evaluation of the Preferred Bidder.
- 5) Bidders to please note that the terms & conditions contained in ITB (Instructions To Bidder) are to be read before filling this ANNEXURE-A.
- 6) Bidders to please note that the Terms & Conditions contained in Special Conditions of the Contract (SCC) will supersede the Terms and conditions of ITB (Instructions To Bidder).

Sl. No	Terms & Conditions	Supplier confirmation	Deviations / Remarks, if any
1	Price Validity: Unless otherwise specified, offer shall be valid for a period of 180 days from the date of bid opening (Technical bid / Part-I in case of two part bid).		
2	2) If the job is awarded, the successful bidder's price shall be kept firm till 12 months from the date of LOI or till completion of project, whichever is later. Offers with PVC will be outrightly rejected except in cases where specifically called for in the NIT.		
3	Bonus and Over Run Compensation (ORC) are not applicable		
4	PAYMENT TERMS: For Indian vendors: Payments will be made to ESC (Engineering Sub Contractor) against ESC's invoices. All payments will be made within below given days after submission of original documents to BHEL for processing. Payment for engineering will be controlled based on milestone payments as per clause V of SCP-67602. For MSEs-45 Days. For Medium Enterprises-60 Days. For Non MSME-90 Days. For Foreign vendors: 100% payment on CAD basis with credit period of 120 days, and in line with the terms of clause V of SCP-67602.		
NOTE: In case BHEL considers any deviation in payment terms, the bids shall be loaded with 18% interest per annum for L1 evaluation.			
5	Delivery period: <i>The project Engineering completion shall be 6 months from the date of PO</i>	6 Months from the date of PO	
6	Penalty: In the event of delay in supply of services, penalty of 0.5% per week or part there of shall be levied on the undelivered portion subject to a maximum of 10% of the order value.		
NOTE: For any deviations to the penalty clause, the offer shall be loaded @ 10% or to the extent to which it is not agreed to by the vendor.			
7	Taxes & Duties (Data to be indicated by the bidder)		
a)	Indigenous Purchase:		
	i) Applicable GST : (To be quoted in %)		
	ii) GST registration number		
	iii) HSN Codes		
NOTE: Bidders are requested to provide their GST registration number. Offers of those who do not provide the above information are liable for rejection. Bidders to ensure correct applicability of GST based on the Inter / Intra state movement of goods.			

Sl. No	Terms & Conditions	Supplier confirmation	Deviations / Remarks, if any
8	<u>REVERSE AUCTION :</u> BHEL reserves the right to go for Reverse Auction (RA) after opening the sealed envelope price bid, submitted by the bidder. This will be decided after Techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids. In case BHEL decides to go for Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in RA. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit, "Online sealed bid" in the Reverse Auction. Non-submission of online sealed bid by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue. Start price/percentage for Reverse Auction will be as per the BHEL RA guidelines. OMI-195 is applicable wherever necessary. Furnish the following details: a) Name of the participating person b) Telephone number c) Fax Number d) E-mail address e) Mobile Number		
9	Bidder should strictly confirm to BHEL drawings (if any), specifications.		
10	In the technical bid/ price bid, ESC to fill/quote the details as given in price format only (i.e Lumpsum price & No of Manhours/Rates in Rs per manhour are to be quoted for each project as per SCP-67602).BHEL will not entertain any other expenses/assumptions written separately in the price format than those specified.		
11	Splitting of order quantity is applicable in this enquiry. This order has 3 projects. Vendors, other than L1 vendor, shall be asked to match the price of L1 vendor. Upon agreement by vendors, the quantity of order will be distributed to L1- 1 project, L2- 1 project and L3- 1 project in the order of priority L1,L2 & L3 in case of more than three qualified vendors. In case, if two or three qualified vendors, distribution shall be L1 – 2 Projects and L2 - 1 Project. In case of disagreement by any party/parties within this counter offers or if less number of parties are qualified, all 3 projects will be transferred to L1.		
12	The offers shall be evaluated project wise and order shall be placed accordingly on Techno commercially qualified L1 bidder of each project. Hence vendor to quote the prices project wise, in the prescribed format.		
13	BHEL reserves the right to increase / decrease the quantity indicated and to cancel the item / items of the enquiry.		
14	BHEL may choose for placing repeat order for additional quantity, as and when required, with the acceptance of vendor.		
15	Bidders to confirm that they read the terms & conditions in ITB (Instruction To Bidder) and confirmed.		



NUMALIGARH REFINERY LIMITED

Total pages: 23

NRL EXPANSION PROJECT
SMART PLANT P&ID SPECIFICATION

A2	02/07/2020	Issued For Information				MKB	RG	GKB
A1	30/04/2020	Issued For Information				MKB	RG	GKB
Rev	Date	Reason for Issue	Prepared Disc. Eng.	Checked Disc. Lead	Approved Contr. Rep	Prepared Disc. Eng.	Review Proj. Eng	Review Com.Rep. Dept. Head
This document is copyright and shall not be reproduced without permission of NRL						NRL		
			Contract Number			Disk Ref.		
			Category		Code	Description		
			Facility Area Code		OZ	Common Document		
			Document Type		SPE	Specification		
			System Number		00	General		
			Life Cycle		01			
			Originator/ Contractor	Asset Code	Disc	Document Type	Sequence Number	Revision
			NR	OZZZZ	PR	SPE	0001	A2

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REFERENCES

1. NRL Technical Document Numbering Specification
2. NRL Engineering Tag Numbering Specification
3. NRL Circular for Process Safety Initiative
4. NRL Legend Sheet
5. NRL Piping Material Specification (PMS)

1. PURPOSE

The purpose of the SPP&ID Specifications is to enable a baseline installation of each SPP&ID application that delivers the typical NRL setup and configuration and provides a standard way of using the software. It also provides templates that will produce deliverables in the standard NRL presentation style. The Specifications is a template or a common starting point for all projects which allows for additional project specific configuration if required.

Any additional configuration to the Specifications must take into account how this will affect working in an integrated environment. Additional configuration will accepted only through change management process.

2. SCOPE

This document specifies the structure and content of the SPP&ID (SmartPlant Piping & Instrumentation) Specifications for **Numaligarh Refinery Expansion Project (NREP), Paradeep Crude Oil Terminal and PIPELINE** Projects.

3. OBJECTIVE

The purpose of this standard is to promote uniformity and consistency across NRL. Piping & Instrumentation data can then be effectively managed during the project development phase and has value for those in future phases such as operation & Maintenance.

This Standard serves mainly the following objectives:

- To ensure that Engineering Electronic information is complete, consistent, and fit for purpose for project engineering, operations and maintenance processes and systems.
- To ensure that information is classified according to business standards and requirements.
- To ensure that every entity is uniquely identified, described and cross-referenced, where required, each entity is correctly connected.
- Provides the necessary data required by the Business users during Brownfield's and Greenfield projects.
- NRL requirements for the Engineering data is clearly defined so that CONTRACTOR supplies/handover the same in the defined manner which can be stored for future modifications.

4. BENEFITS

- Standardization of Engineering Design Systems through the use of Specifications provides a stable and consistent basis for efficient and secure project execution. It allows NRL to leverage the SPP&ID specialist skills within the organization in developing and deploying Specifications. It brings substantial benefits to all sites by way of more efficient use of support personnel consistency in system upgrades.
- Another benefit of the Specifications is its use as a mechanism for evaluating and improving NRL work processes and the methodology we employ to deliver projects to Contractors. The Specification is a common starting point which will result in improved work process. Efficiency gains, regardless of how small, can save a significant amount of time when deployed on multiple projects.
- Alignment and standardization of systems throughout the organization enables consistency.

For future projects, there is possibility of receiving vastly different SPP&ID builds from each EPC contractors, leading to unfamiliarity, inefficiencies, rework, an inability to adequately support functions like upgrades and integration. The Specifications will eliminate many of these issues.

5. DISTRBUTION TARGET AUDIENCE

NRL: SPP&ID Administrator / Instrument Engineer /Designer

Contractor: SPP&ID Administrator/ Instrument Engineer /Designer

6. DEFINITIONS

General definitions

The COMPANY is the party, which initiates the project and ultimately pays for its design and construction.

The COMPANY will generally specify the technical requirements. The COMPANY may also include an agent or consultant authorized to act for, and on behalf of the COMPANY.

The CONTRACTOR is the party(s) which carries out all or part of the design, engineering, procurement, construction, commissioning or management of the PROJECT.

Manufacturer/Supplier/Vendor – The party(s) which manufactures and/or supplies the material/equipment, and provides technical documents/drawings and services to perform the duties specified by COMPANY/CONTRACTOR.

SUBCONTRACTOR – The party(s) which carries out all or part of the design, procurement, installation and testing of the System(s) as specified by the CONTRACTOR/VENDOR.

The word SHALL is used to indicate that a provision is mandatory.

The word SHOULD is used to indicate that a provision is not mandatory, but recommended as good practice.

Specific definitions

Term	Definition
Customer	A person or organization that took services from business.
Data	Information to be manipulated by tools, e.g., Tag list & Properties, Maintenance Routines, etc.
Document	Information (Printed or Electronic) to be read by people, e.g., Reports, Specifications, Data sheets, Drawings, etc.
EPC	Engineering Procurement and Construction
Equipment	Equipment is a physical object designed to perform a Tag function.
P&ID	Piping and Instrumentation Diagram.
Process Unit	Process Units are created to decompose the "high level" Plant function into more granular "sub-functions". This Work Breakdown Structure is used by the process engineer.
Revision	A code used to identify the content of a document at a certain point in time. It is used to track the evolution of a document during its lifecycle.
Seed	A seed file is term for a template. The advantage of the seed file is that it can be used to standardize all new drawings that you create.
Sheet	A sheet is a single piece of paper and is often an one-sheet drawing.
Site	A site represents a geographical surface that can be identified on a map.
String	A string is data type and is often implemented as an array of bytes (or words) that stores a sequence of elements, typically characters, using some character encoding. In computer programming, a string is traditionally a sequence of characters, either as a literal constant or as some kind of variable.
Tag	Tags are created to decompose a "high level" Process Unit function into more granular "sub-functions".
PBS	Plant Breakdown Structure.

7. DATABASE TYPE & VERSION

7.1 Database Type : MSSQL Server

7.2 Database Version : MS SQL Server 2016 (Standard Edition and/or Enterprise Edition)

Any updates about Database type and version should be confirmed before start of any SmartPlant related work.

8. SOFTWARE TYPE & VERSION

The following details shall be implemented for all NRL projects:

Software Type and Version for all NRL future project	
Software Type	SmartPlant P&ID
Software version SPPID	09.00.00.1405 (2019)
Software version SEM	10.00.00.0059 (2019)

Any updates about SmartPlant software version should be confirmed before start of any SmartPlant related work.

Following Report Templates can be used for NREP, Paradeep Crude Oil Terminal and PIPELINE Projects.

[illegible]

EQUIPMENT LIST																													
EQUIPMENT TAG NUMBER	EQUIPMENT NAME	EQUIPMENT TYPE	EQUIPMENT TITLE (DESCRIPTION)	UNIT NO.	PAID NO.	PROCESS DATA SHEET NO.	DESIGN CONDITION			OPERATING CONDITION			SIZE				MATERIAL OF CONSTRUCTION	DUTY	DRIVER TYPE	DRIVER RATING	TRIM	HEAT TRACING REQUIREMENT	HEAT TRACING MED IUM	HEAT TRACING TEMPERATURE	INSULATION PURPOSE	INSULATION THICKNESS	COATING	PASSIVATI ON REQUIREMENT	REMARKS
							CAPACITY	PRESSURE	TEMPERATURE	PRESSURE	TEMPERATURE	L	D	H	W														
							m3	(mbar)	(g/cm2g)	(°C)	(g/cm2g)	(°C)	(m)	(m)	(m)	(m)		100% SCALE		(KW)					(mm)				

[illegible]

SPECIALTY COMPONENT LIST																		
PAID NO.	UNIT No.	SPEC. COMP. ID/ITEM TAG	LINE ID / ITEM TAG	TYPE	TAG SEQ. NO.	DESCRIPTION	PIPING CLASS SPECIFICATION	SERVICE STATUS	NOMINAL DIAMETER	END 2 NOMINAL DIAMETER	END 2 NOMINAL DIAMETER	INSULATION PURPOSE	HEAT TRACING REQUIREMENT	CORROSION ALLOWANCE	RATING	OPENING ACTION	CLEANING REQUIREMENT	REMARKS
									INCH	INCH	INCH			(mm)				

[illegible]

10. CATALOG ITEMS

10.1 Title Block and Revision Block

Template size : A1

For Title Block

Font Type : Arial
Font Size : 0.15 in

For Revision Block:

Font Type : Arial
Font Size : 0.10 in

Title block shown below shall be common for all NRL future projects.

							C
AN	DD/MM/YYYY						
Rev.	Date	Reason for Issue	Prepared	Checked	Approved	Owner Approved	
NAME & LOGO OF CONTRACTOR (NRL's PO NO.:) (Vendor's PO NO.:) (Vendor's Document NO.:)							B
		NUMALIGARH REFINERY LIMITED					
PROJECT:							
UNIT/FACILITY:							
DRAWING TITLE:						Scale:	
SYSTEM DESCRIPTION:						Drg. Size:	AN
Originator/ Contractor	Asset Code	Disc	Drawing Type	Sequence Number	Rev.	Sheet	A
AA	NAAAA	AA	AAA	NNNN(N).NN	AN	NN OF NN	
3		2			1		

102 Unit of Measure

UOM Settings at all NRL SPP&ID setup should be standardized & unified for all new plants in future as per the following table.

Data Type	Format	Data Type	Format
Mass	kg	Volume	m ³
Time	second	Composition	Vol % / wt %
Temperature	DEG C	Conductivity	S/m
Electrical current	A	Resistance per length	Ohm/m
Velocity, angular	rpm	Apparent power	VA
Area	m ²	Reactive power	VAR
Thermal Expansion	Deg-C ⁻¹	Current Density	A/m ²
Heat Transfer Coefficient	kcal/hr-m ² -DEG C	Date	dd.mmm.yyyy
Electrical Conductance	S	Thickness	mm
Electrical potential	V	Length	m-mm
Electrical resistance	ohm	Stress	N/m ²
Liquid relative density	sp gr T DEG C/15 DEG C	Number	g.3
Liquid density	kg/m ³	Pipe Size	inch
Vap flowing density	kg/m ³	Force	N
Pressure (gauge)	kg/cm ² (g)	String	a80
Pressure (absolute)	kg/cm ² (a)	Ampere hours	ampere-hours
Furnace draft	mm of WC	Vacuum	mm of Hg, mmWC
Flowing mass	kg/hr	Storage tank pressure	mm of WC
Flowing vapour	Nm ³ /hr	Sound Power	dB(A)
Flowing liquid	m ³ /hr	Thermal Conductivity	W/m-K
Standard vapour	Nm ³ /hr at 0 DEG C & 1.033 kg/cm ² a	Enthalpy	kcal/kg
Standard liquid	Sm ³ /hr at 15 DEG C	Entropy	J/kg-K
Velocity, linear	m/s	Surface tension	N/m
Mass per length	kg/m	Inertia	Kg/m ²
Power	kW	Torque	N-m
Viscosity, Dynamic	cP	Angle	deg
Viscosity, kinematic	cS	Heat Duty	Mkcal/hr or MM kcal/hr

103 Gapping Representation

The Gapping options allow you to establish priorities and define symbols for displaying line intersections in drawings. In a drawing, when lines, hoses, capillaries, or other line routes intersect, you place gaps in the line with lower priority, while lines with higher priority remain unbroken.

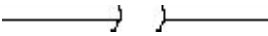
You can define a priority list to handle such intersections. The placement of the connector type in the Gapping list indicates its gapping priority. For example, when you place two lines that appear to intersect in the drawing but do not intersect in the plant model, the design software automatically gaps the line that appears lower in the list. By default, piping lines gap signal lines, and primary lines gap secondary lines; however, an undefined gapping style

receives the highest priority by default.

The gapping style dictates whether the software displays a jumper or a gap when two lines intersect in a drawing. When you define gapping options, you choose from the following gapping styles:

Plain Gap: 

Jumper: 

Gap with Break Marks: 

Options set for gapping in Smart Plant P&ID Options Manager apply only to automatically gapped lines. You can turn the automatic gapping of lines on and off with gapping commands in the design software.

Currently NRL is using default Gapping style for each Line type and orientation, as shown above.

11. SMART PLANT REFERENCE DATA PATH

Following are the smart plant reference data files details and the same shall be used for all NRL projects:

11.1 Symbols

It contains all symbols i.e. Piping, Equipment, Instruments & their labels, graphics, Item notes & Assemblies etc.

11.2 Report Files

It contains all reports templates like equipment list, line list, instrument list & valve list etc.

11.3 Exportlayer.xls

This is excel file which is used for saving SPPID drawing to AutoCAD drawings. It contains the information regarding the layers i.e. equipment & piping symbols, labels etc. *Which* will create to their respective layers while saving SPPID drawings in AutoCAD.

11.4 Import Map Files

This folder is necessary for drawing imports from other plants, if this file is missing in Reference Data, the drawings will not be imported, and there will be an error message of the missing file.

11.5 Template Files

All drawings templates and Border files are stored in this folder.

11.6 InsulationSpec.isl

This file is necessary for creating new insulation spec in insulation manager.

11.7 Rules.rul

This file decides the Rule manager settings, any new defined rule will be updated in this file.

11.8 EFResources

This file contains SPEMdataMAp.xml & SPPIDDatamap.xml

12. SYMBOLOGY FOR ALL P&ID OBJECT

The below color coding is default symbology for all P&ID objects and same shall be used for all NRL projects.

Symbology			
Plant Filter	Color	Width	Pattern
Equipment - New		0.35 mm	_____
Equipment - Future		0.18 mm	.. .. .
Equipment - Existing		0.18 mm	_____
Ducting Nozzle - New		0.35 mm	_____
Ducting Nozzle - Existing		0.18 mm	_____
Ducting Nozzle - Future		0.18 mm	_____
Nozzle - New		0.35 mm	_____
Nozzle - Future		0.18 mm	.. .. .
Nozzle - Existing		0.18 mm	_____
Piping Component - New		0.35 mm	_____
Piping Component - Future		0.18 mm	.. .. .
Piping Component - Existing		0.18 mm	_____
Primary Piping - New		0.70 mm	_____
Primary Piping - Future		0.35 mm	.. .. .
Primary Piping - Existing		0.35 mm	_____
Secondary Piping - New		0.35 mm	_____
Secondary Piping - Future		0.18 mm	.. .. .
Secondary Piping - Existing		0.18 mm	_____
Hose - New		0.35 mm	_____
Hose - Future		0.18 mm	.. .. .
Hose - Existing		0.18 mm	_____
Utility Primary - New		0.50 mm	_____
Utility Primary - Future		0.25 mm	.. .. .
Utility Primary - Existing		0.25 mm	_____
Utility Secondary - New		0.25 mm	_____
Utility Secondary - Future		0.13 mm	.. .. .
Utility Secondary - Existing		0.13 mm	_____
Utility Hose - New		0.25 mm	_____
Utility Hose - Future		0.13 mm	.. .. .
Utility Hose - Existing		0.13 mm	_____
Jacket Utility - New		0.25 mm	_____
Jacket Utility - Future		0.13 mm	_____
Jacket Utility - Existing		0.13 mm	_____

Jacket Utility - Existing	0.13 mm	
Piping OPC	0.35 mm	
Capillary	0.18 mm	
Connect To Process	0.18 mm	
Electric	0.18 mm	
Electric Binary	0.18 mm	
Guided Electromagnetic	0.18 mm	
Hydraulic	0.18 mm	
Mechanical	0.18 mm	
Pneumatic	0.18 mm	
Pneumatic Binary	0.18 mm	
Software	0.18 mm	
Serial	0.18 mm	
Unguided Electromagnetic	0.18 mm	
Off-Line Instrument	0.18 mm	
In-Line Instrument - New	0.35 mm	
In-Line Instrument - Future	0.18 mm	
In-Line Instrument - Existing	0.18 mm	
Instrument OPC	0.35 mm	
Revision Cloud Large	0.00 mm	
Revision Cloud Small	0.00 mm	
Construction Status	0.35 mm	
Undefined	0.18 mm	
Duct Run - New	0.70 mm	
Duct Run - Future	0.35 mm	
Duct Run - Existing	0.35 mm	
Secondary Ducting - New	0.35 mm	
Secondary Ducting - Future	0.18 mm	
Secondary Ducting - Existing	0.18 mm	
Chute - New	0.35 mm	
Chute - Future	0.18 mm	
Chute - Existing	0.18 mm	
De-Dusting - New	0.35 mm	
De-Dusting - Future	0.18 mm	
De-Dusting - Existing	0.18 mm	

Ducting Component - New	0.35 mm	
Ducting Component - Future	0.18 mm	
Ducting Component - Existing	0.18 mm	
Ducting OPC	0.35 mm	
Room - New	0.35 mm	
Room - Future	0.18 mm	
Room - Existing	0.18 mm	
Room Component - New	0.35 mm	
Room Component - Future	0.18 mm	
Room Component - Existing	0.18 mm	

13. FILTER MANAGER

The filters include:

- Display filters
- Report filters
- Rule filters
- Gapping filters
- Label placement filters
- Multipurpose filters
- Symbolology filters

Filters can help you show different views of the same drawing and can make your workflow more

efficient. For example, you can use a filter to display an "operational" drawing, or an "under construction" drawing. You can show all items added after a certain date or after a certain revision number. You can also use filters if you want to delete items of a certain type.

You can filter for certain components in a stockpile, such as instruments or pipes, leaving the remaining items available to place in the drawing or vice versa. For example, when you use filters with a stockpile, you can keep track of specific items that are needed for completing a particular drawing.

You can use filters when you create report templates to display only certain items on a report. You can also use filters in Rule Manager to define how items interact within a view. You can associate filters with the source or target properties in rules, and you can use filters to find and replace items as well.

Filters can also be used to control the display of hierarchy items in Drawing Manager. These filters are not saved to any folder in Filter Manager, but the methods of creating these filters are the same as those for creating filters saved in Filter Manager.

14. DRAWING SETTING

Following are drawing settings and the same shall be implemented for all NRL projects:

- A1- Size.pid
- Sheet • Units
 - o Length: "mm" Precision=.12
 - o Angle: "deg" Precision=.12
 - o Area: "m^2" Precision=.12
 - o Standard Template sheet: Wide 841 mm x 594 mm.pid
- Grid Settings
 - o Style: Static
 - o Density: 7mm
 - o Index: 4

15. NRL EXISTING PBS GUIDELINES

Current Setup of NRL Plant is as shown in the following tables for each plant.

NRL		TOTAL PLANT	00
	Process	CRUDE DISTILLATION UNIT/ NAPTHA SPLITTER UNIT	01
		VACUUM DISTILLATION UNIT	02
		DELAYED COKER UNIT	03
		HYDROCRACKER	04
		HYDROGEN UNIT	05
		COKE CALCINATION UNIT	06
		SULPHUR RECOVERY UNIT	07
		SOUR WATER STRIPPER -1-S	08
		SOUR WATER STRIPPER -2-S	09
		AMINE TREATING UNIT	10
		AMINE REGENERATION UNIT	11
		MOTOR SPIRIT UNIT (NSU, CRU, ISOMU)	14-16
		MAIN CONTROL ROOM	18
		WAX HYDRO-FINISHING UNIT (WHFU)	19
		WAX SLABBING & PACKING UNIT	20
		DHDT	21
	Utilities	RW STORAGE & DISTRIBUTION INCL TREAT. &	23
		DRINKING WATER FAC (TREA	24
		CW(SUPP.& RET) FOR PROCESS	25
		CW (SUPP & RET) FOR TH. P. S.	26
		INST./PLANT AIR FACILITY	27
		INERT/NITRO/PLANT GAS FACILITY	28
		FUEL OIL/IFO FACILITY	29
		HYDROGEN STORAGE FACILITY	30
		FUEL GASS SYSTEM	31
		DM/ PROCESS WATER FACILITY	32
		POWER & STEAM GEN. CPP	34
	Offsite	CRUDE OIL STORAGE / HANDLING	40
		INTERMEDIATE PRODUCT STORAGE/HANDLING	41
		WAX OFFSITE (PUMP HOUSE)	43
		FINISHED PRODUCT STORAGE/HANDLING	44
		CHEMICAL STOR / HAND / TPTN	45
		PRODUCT BLENDING FACILITY(MARKETING TRML)	46
		LPG STORAGE & DISPOSAL FACILITY	47
		COKE STORAGE & DISPOSAL FACILITY	48
		DIVERSION OF NH-39 (LINK PROJECT)	52
		MARKETING TERMINAL-(LINK PROJECT)	53

	CRUDE SUPPLY LINE -(LINK PROJECT)	54
	EFFLUENT TREATMENT FACILITY	61
	FLARE SYSTEM	63
	FIRE FIGHTING FACILITY	65
	RAILWAY INSIDE PLANT B/L	67
	RAILWAY OUTSIDE B/L(LINK PROJECT)	68
	SITE OFFICE	75
	CEMENT GODOWN	76
	ADMINISTRATION BLOCK	80
	CENTRAL WAREHOUSE FACILITY	81
	CENTRAL WORKSHOP	82
	TRAINING FACILITY	85
	CANTEEN, FIRST AID ETC.	86
	FAC. FOR APPROACH TO PLANT	88
	FENCING/COMPOUND WALL, G/HSE, WITWR FOR SECURITY	91
	ROAD, CULVERTS ETC.	92
	CONSTRUCTION POWER FACILITY	93
	CONSTRUCTION WATER FACILITY	94

16. NRL PROPOSED PBS GUIDELINES FOR FUTURE PROJECTS

Approved Plant Hierarchy is Hierarchy 7 i.e. Plant-Area-Unit for NRL Plant. Unit Number (to be used in the naming conventions) can be kept consistent with Unit Name mentioned in the following tables, for the SPP&ID setup. Current Setup of NRL Plant is as shown in the following table.

PBS Guidelines for all NRL future projects	
Note: Plant, Area, Unit & Description should be same across all SmartPlant Applications	
Hierarchy	Hierarchy 7 (Plant- Area - Unit)
Domain Name	NRL
Plant Name	NRL_XXXX
Plant Description	XXXX (To be provided as per new plant)
Area Name	XXXX (To be provided as per new area)
Area Description	XXXX (To be provided as per new area)
Unit Name	XXXX (To be provided as per new unit)
Unit Description	XXXX (To be provided as per new unit)

Domain	Plant Name	Area Name with description	Unit number with description	
NRL	NRL_NREP	General (G)	101	FIRE STATION
			102	FIRST AID/OHC
			103	ADMINISTRATION BLOCK
			104	SITE OFFICE
			105	TRAINING FACILITY
			106	CANTEEN
			107	CENTRAL WORKSHOP
			108	CENTRAL WAREHOUSE FACILITY
			109-120	FUTURE UNIT
		Process (P)	121	CDU-VDU
			122	NHT
			123	CCR
			124	ISOM
			125	PFCCU
			126	PRU
			127	GDS
			128	DHT
			129	HGU
			130	RPTU
			131	VGO-HDT
			132	SWS
			133	ARU
			134	ATU
			135	SRU-1
			136	SRU-2
			137	TGTU
			138-150	FUTURE UNIT
		Utilities (U)	151	RW STORAGE & DISTRIBUTION
			152	DRINKING WATER SYSTEM
			153	CW SYSTEM
			154	INST./PLANT AIR FACILITY
			155	INERT/NITRO/PLANT GAS FACILITY
			156	FUEL OIL/IFO FACILITY
			157	HYDROGEN STORAGE FACILITY
			158	FUEL GAS SYSTEM
			159	DM / PROCESS WATER FACILITY
			160	POWER & STEAM GEN. SYSTEM
			161	FLARE SYSTEM
			162	FIRE FIGHTING FACILITY
			163	SWITCH YARD
			164	ELECTRICAL CONTROL ROOM
			165	TELEPHONE EXCHANGE
			166-170	FUTURE UNIT
		Offsite (O)	171	CRUDE OIL STORAGE / HANDLING/ PUMP HOUSE
			172	INTERMEDIATE PRODUCT STORAGE/HANDLING / PUMP HOUSE
			173	FINISHED PRODUCT STORAGE/HANDLING/ PUMP HOUSE
			174	CHEMICAL STORAGE / HANDLING / PUMP HOUSE
			175	PRODUCT BLENDING FACILITY
			176	LPG STORAGE & DISPOSAL FACILITY
			177	COKE STORAGE & DISPOSAL FACILITY
			178	SULFUR STORAGE & DISPOSAL FACILITY
			179	EFFLUENT TREATMENT PLANT
			180-190	FUTURE UNIT
		Construction (C)	191	FENCING/COMPOUND WALL, WATCH TOWER
			192	ROAD, CULVERTS ETC.
			193	CONSTRUCTION POWER FACILITY
			194	CONSTRUCTION WATER FACILITY
			195-200	FUTURE UNIT

Domain	Plant Name	Area Name with description	Unit Name with description	
NRL	NRL_PCOPL	General (G)	201	FIRST AID/OHC
			202	ADMINISTRATION BLOCK
			203	AMENITY BLOCK
			204-220	FUTURE UNIT
		Process (P)	221	DESPATCH AND METERING
			222	PIG LAUNCHER AND PIPELINE
			223	INTERMEDIATE PUMPING STATION
			224	PIG RECEIVER AND METERING
			225-250	FUTURE UNIT
		Utilities (U)	251	SERVICE WATER
			252	EMMERGENCY POWER GENERATOR
			253	SWITCH YARD
			254-260	FUTURE UNIT
		Construction (C)	261	FENCING/COMPOUND WALL, WATCH TOWER
			262	ROAD, CULVERTS ETC.
			263	CONSTRUCTION POWER FACILITY
			264	CONSTRUCTION WATER FACILITY
	NRL_PCOT	General (G)	265-300	FUTURE UNIT
			301	FIRE STATION
			302	FIRST AID/OHC
			303	ADMINISTRATION BLOCK
			304	AMENITY BLOCK
			305	TRAINING FACILITY
			306	CENTRAL WORKSHOP
			307	CENTRAL WAREHOUSE FACILITY
			308-320	FUTURE UNIT
		Process (P)	321	CRUDE OIL STORAGE / HANDLING
			322	EFFLUENT TREATMENT PLANT
			323	RECEIVING TERMINAL (SPM)
			324-350	FUTURE UNIT
		Utilities (U)	351	RW STORAGE & DISTRIBUTION
			352	DRINKING WATER
			353	
			354	INST/PLANT AIR FACILITY
			355	INERT/NITRO FACILITY
			356	
			357	
			358	
			359	
			360	POWER GEN. SYSTEM
			361	
			362	FIRE FIGHTING FACILITY
			363	SWITCH YARD
		Construction (C)	364-370	FUTURE UNIT
			371	FENCING/COMPOUND WALL, WATCH TOWER
			372	ROAD, CULVERTS ETC.
			373	CONSTRUCTION POWER FACILITY
			374	CONSTRUCTION WATER FACILITY
			375-400	FUTURE UNIT
	NRL_PNPL	General (G)	401	FIRST AID/OHC
			402	ADMINISTRATION BLOCK
			403	PIG LAUNCHER AND PIPELINE
			404-420	FUTURE UNIT

Domain	Plant Name	Area Name with description	Unit Name with description	
NRL	NRL_PNPL	Process (P)	421	DESPATCH AND METERING
			422	PIG LAUNCHER AND PIPELINE
			423	INTERMEDIATE PIG LAUNCHER/RECEIVER #1
			424	INTERMEDIATE PIG LAUNCHER/RECEIVER #2
			425	INTERMEDIATE PIG LAUNCHER/RECEIVER #3
			426-435	INTERMEDIATE PIG LAUNCHER/RECEIVER
			436	INTERMEDIATE PUMPING STATION #1
			437	INTERMEDIATE PUMPING STATION #2
			438	INTERMEDIATE PUMPING STATION #3
			439-445	INTERMEDIATE PUMPING STATION
			446	PIG RECEIVER AND METERING
			447-450	FUTURE UNIT
		Utilities (U)	451	SERVICE WATER
			452	EMMERGENCY POWER GENERATOR
			453	SWITCH YARD
			454-460	FUTURE UNIT
		Construction (C)	461	FENCING/COMPOUND WALL, WATCH TOWER
			462	ROAD, CULVERTS ETC.
			463	CONSTRUCTION POWER FACILITY
			464	CONSTRUCTION WATER FACILITY
			465-500	FUTURE UNIT
	NRL_NSPL	General (G)	501	FIRST AID/OHC
			502	ADMINISTRATION BLOCK
			503	AMENITY BLOCK
			504-520	FUTURE UNIT
		Process (P)	521	DESPATCH AND METERING
			522	PIG LAUNCHER AND PIPELINE
			523	INTERMEDIATE PIG LAUNCHER/RECEIVER #1
			524	INTERMEDIATE PIG LAUNCHER/RECEIVER #2
			525	INTERMEDIATE PIG LAUNCHER/RECEIVER #3
			526-535	INTERMEDIATE PIG LAUNCHER/RECEIVER
			536	INTERMEDIATE PUMPING STATION #1
			537	INTERMEDIATE PUMPING STATION #2
			538	INTERMEDIATE PUMPING STATION #3
			539-545	INTERMEDIATE PUMPING STATION
			546	PIG RECEIVER AND METERING
			547-550	FUTURE UNIT
		Utilities (U)	551	SERVICE WATER
			552	EMMERGENCY POWER GENERATOR
			553	SWITCH YARD
			554-560	FUTURE UNIT
		Construction (C)	561	FENCING/COMPOUND WALL, WATCH TOWER
			562	ROAD, CULVERTS ETC.
			563	CONSTRUCTION POWER FACILITY
			564	CONSTRUCTION WATER FACILITY
			565-600	FUTURE UNIT

Domain	Plant Name	Area Name with description	Unit Name with description	
NRL	NRL_SMTE	General (G)	601	AMENITY BLOCK
			602	CENTRAL WORKSHOP
			603	CENTRAL WAREHOUSE FACILITY
			604-620	FUTURE UNIT
		Process (P)	621	HSD STORAGE AND PUMPING
			622	SKO STORAGE AND PUMPING
			623	MS STORAGE AND PUMPING
			624	RAIL LOADING
			625	ROAD TANKER LOADING
			626-650	FUTURE UNIT
		Utilities (U)	651	RW STORAGE & DISTRIBUTION
			652	DRINKING WATER
			653	
			654	INST/PLANT AIR FACILITY
			655	INERT/NITRO FACILITY
			656	
			657	
			658	
			659	
			660	POWER GEN. SYSTEM
			661	
			662	FIRE FIGHTING
			663	SWITCH YARD
			664-680	FUTURE UNIT
		Construction (C)	681	FENCING/COMPOUND WALL, WATCH TOWER
			682	ROAD, CULVERTS ETC.
			683	CONSTRUCTION POWER FACILITY
			684	CONSTRUCTION WATER FACILITY
			685-700	FUTURE UNIT

16.1.1 Role Rights Configuration

SmartPlant P&ID Access Privileges:

- **None** - The user is not allowed to execute the application or utility for particular Plant structure.
- **Read-Only** - The user can execute the application or utility for particular plant Structure to view the data held within it.
- **Modify Settings** - The user can execute the application or utility for particular Plant structure to view the data held within it and to modify any custom Settings.
- **Full Control** - The user can execute the application or utility for particular plant Structure and perform all commands and modifications.

SmartPlant P&ID users at NREP:

SmartPlant P&ID Users	SmartPlant P&ID Group Role Name
NREP Plant Administrators	NREP_SP_SUPERUSER
NREP Draftsman, NREP Office Engineers	NREP_SP_USER
NREP SmartPlant Consultants	NREP_SP_TEMP

SmartPlant P&ID users at NRPT:

SmartPlant P&ID Users	SmartPlant P&ID Group Role Name
NRPT Plant Administrators	NRPT_SP_SUPERUSER
NRPT Draftsman, NREP Office Engineers	NRPT_SP_USER
NRPT SmartPlant Consultants	NRPT_SP_TEMP

SmartPlant P&ID users at PNPL:

SmartPlant P&ID Users	SmartPlant P&ID Group Role Name
PNPL Plant Administrators	PNPL_SP_SUPERUSER
PNPL Draftsman, NREP Office Engineers	PNPL_SP_USER
PNPL SmartPlant Consultants	PNPL_SP_TEMP

SmartPlant P&ID users at NSPL:

SmartPlant P&ID Users	SmartPlant P&ID Group Role Name
NSPL Plant Administrators	NSPL_SP_SUPERUSER
NSPL Draftsman, NREP Office Engineers	NSPL_SP_USER
NSPL SmartPlant Consultants	NSPL_SP_TEMP

16.1.2 NRL Standard Numbering System

Numbering Philosophy in each NRL Plants shall be followed as per NRL Engineering Tag Numbering Specification (NR-0ZZZZ-GE-SPE-0002) and NRL Legend sheet (NR-0ZZZZ-PR-PID-0001).

16.1.3 Data Dictionary Manager Setting

16.1.3.1 Database Table:

Followings are the common list of new Attributes added for **Numaligarh Refinery Expansion Project (NREP)**, **Paradeep Crude Oil Terminal** and **PIPELINE** Projects.

Database Table	Attribute name	Attribute Display name	Data Type	UOM
Drawing	ContractorDWGNo	Contractor DWG No	String(80)	
	ProjectNumber	Project Number	String(40)	
	SheetNo	Sheet No	String(40)	
Equipment	FlowRateMass	Flow Rate Mass	Flow rate, mass	kg/hr
	FlowRateVolume	Flow Rate Volume	Flow rate, volume	m ³ /hr
	NRL_PipingMaterialClass	NRL_Piping Material Class	Select List	
	InletPressure	Inlet Pressure	Pressure	kg/cm ² g
	InletVolume	Inlet Volume	Volume	m ³
	OutletPressure	Outlet Pressure	Pressure	kg/cm ² g
	OutletVolume	Outlet Volume	Volume	m ³
	ProcessDataSheetNo	Process Data Sheet No	String(80)	
	Width	Width	Distance	mm
Nozzle	NRL_PipingMaterialClass	NRL_Piping Material Class	Select List	
Pipe Run	DepressTemperature	Depressurisation Temperature	Temperature	Deg-C
	DepressurisationPressure	Depressurisation Pressure	Pressure	kg/cm ² g
	FluidVelocity	Fluid Velocity	Velocity, linear	m/s
	NRL_PipingMaterialClass	NRL_Piping Material Class	Select List	
Piping Component	ServiceStatus	Service Status	String(80)	
	SPCompTypeCode	Specialty Component Type Code	String(20)	
Vessel	DiameterExternal	Diameter External	Distance	mm

16.1.4 Line Service , Insulation Purpose & Piping Material Class

16.1.4.1 Line Service Designation & Insulation Purpose

Line Service Designation shall be followed as per NRL Engineering Tag Numbering Specification for **Numaligarh Refinery Expansion Project (NREP)**, **Paradeep Crude Oil Terminal** and **PIPELINE** Projects.

16.1.4.2 Piping Material Class :

Piping specification Philosophy in each NRL Plants shall be followed as per NRL Piping Material Specification (NR-0ZZZZ-PI-SPE-0001).

16.1.5 NRL Symbols & Labels

16.1.5.1 Symbols

Symbols are graphical representations of an item such as piping, vessels, pumps, generators and so forth that include a drawing of the item as well as the properties associated with that item.

16.1.5.2 Labels

Technical drawings often have many labels that display important information about the objects or elements in the document. The text and graphical information in labels completes the drawing and constitutes its intelligence to the reviewer. The textual part of a label is attribute data from the database and is defined using the Smart Text Editor. Defining text this way makes labels containing this text a true reflection of the information in the database. To help you maintain this data, you can also add and modify information as you place labels in the drawing.

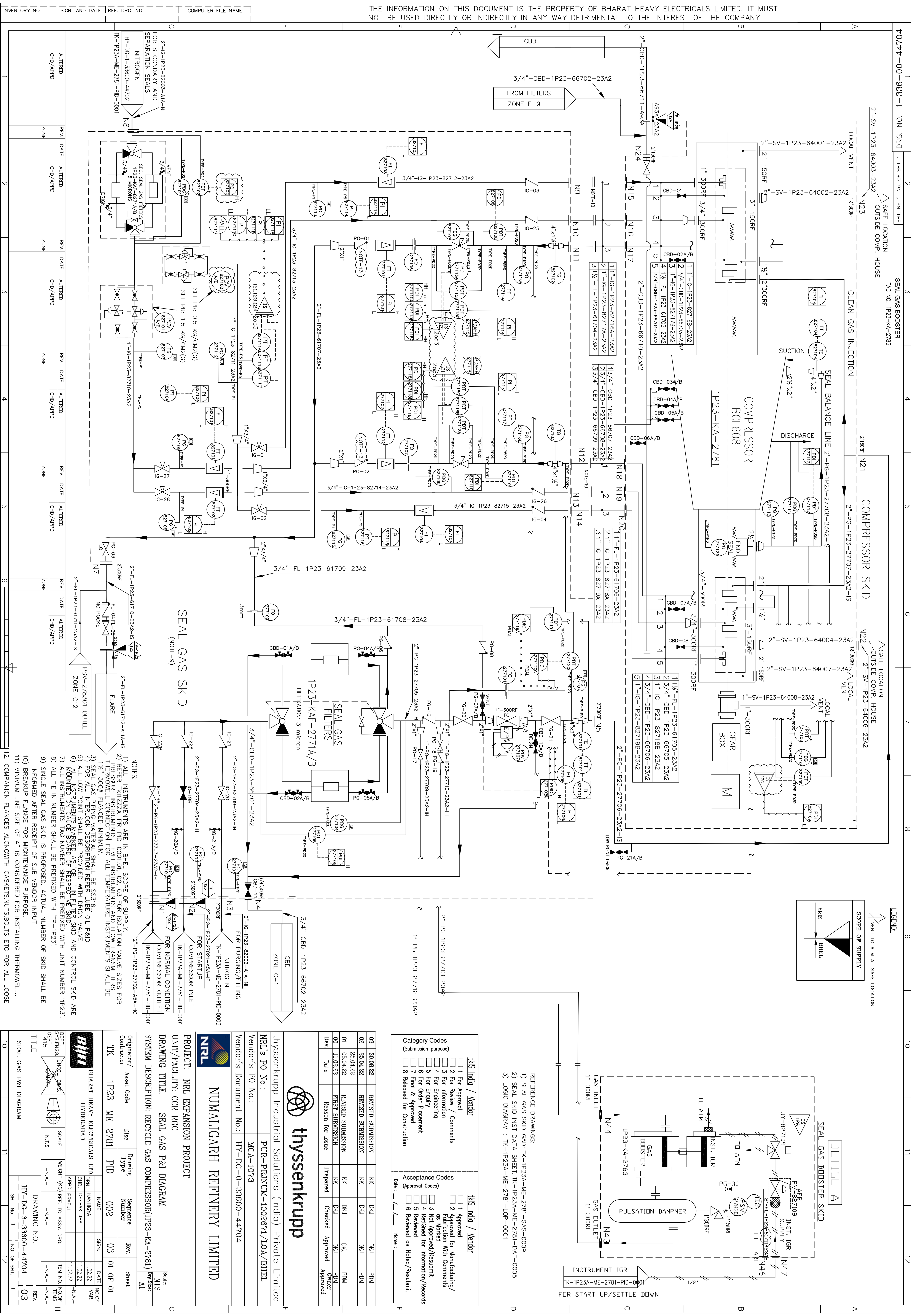
- Label font type: Arial Narrow
- Label font size : 09

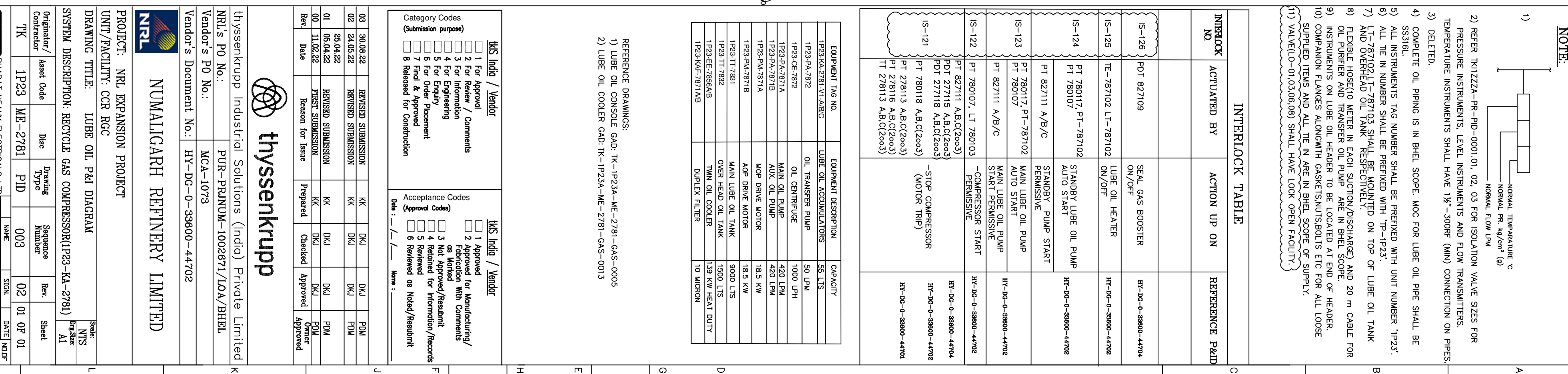
Symbols and labels of all **NREP, Paradeep Crude Oil Terminal and PIPELINE** Projects shall be implemented based on NRL Legend sheet.

17. SMARTPLANT P&ID DELIVERABLES

The following documents are to be generated from SPP&ID.

- | | |
|------|--------------------------|
| 17.1 | Line List |
| 17.2 | Equipment List |
| 17.3 | Instrument List |
| 17.4 | Specialty Component List |
| 17.5 | Valve List |
| 17.6 | Process Data Sheet |





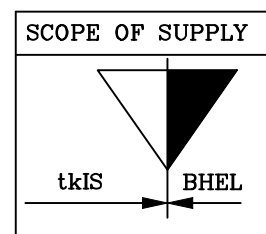
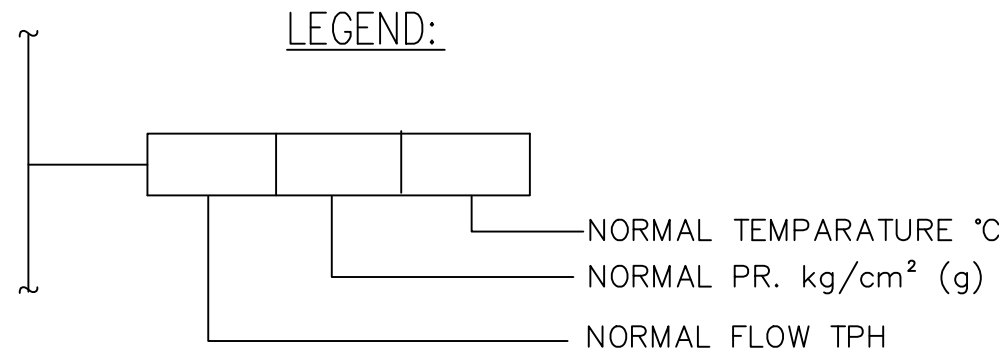
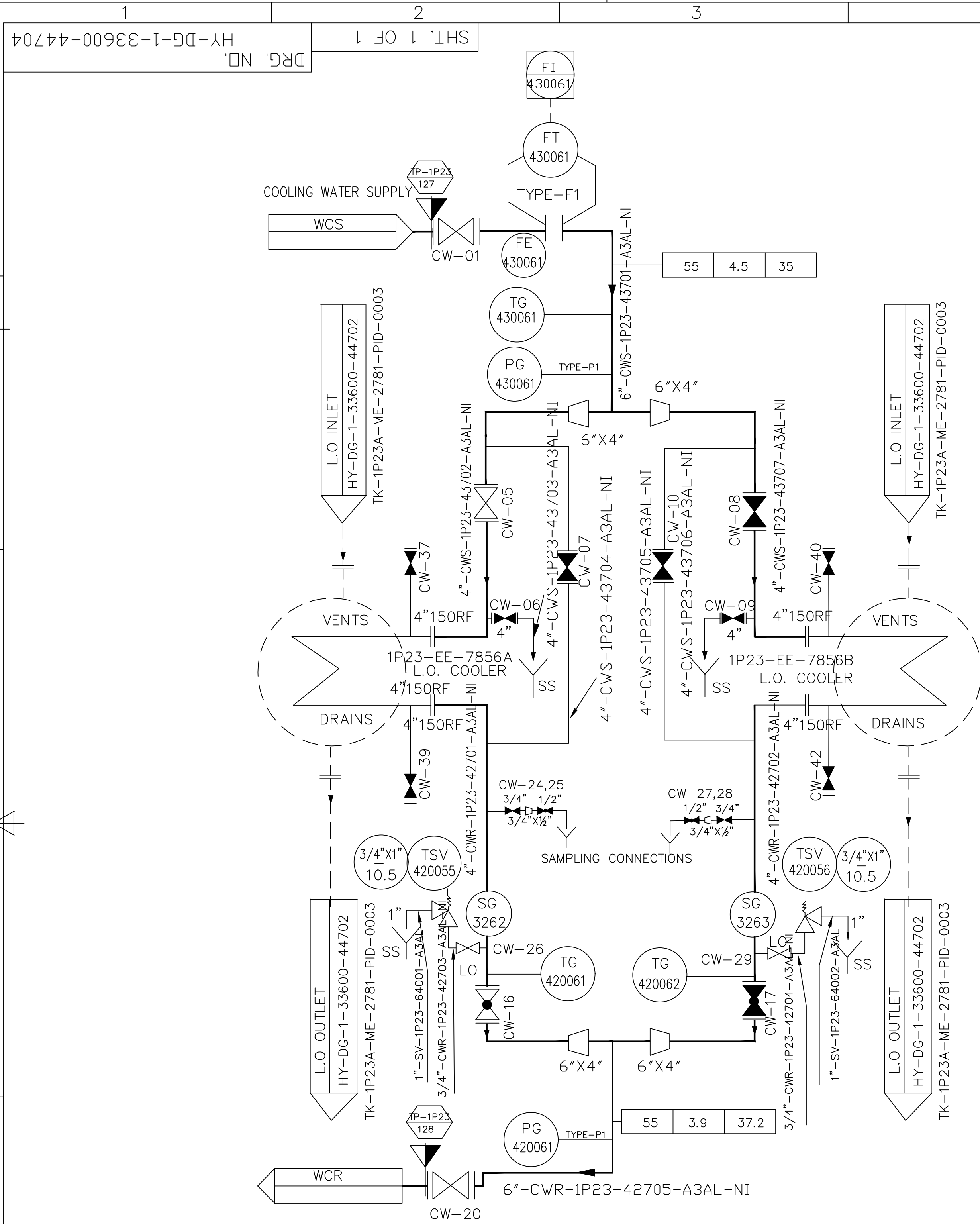
INTERLOCK TABLE			REFERENCE PAID
INTERLOCK NO.	ACTUATED BY	ACTION UP ON	
(S-126)	POT 827109	SEAL GAS BOOSTER ON/OFF	HY-DC-0-38000-4704
(S-125)	1E-787102, LT-787102	LUBE OIL HEATER ON/OFF	HY-DC-0-38000-4702
(S-124)	POT 780718 PT 780710	STANDBY LUBE OIL PUMP AUTO START	HY-DC-0-38000-4702
(S-123)	PT 827111 A/B/C	STANDBY PUMP START PERMISSIVE	
(S-123)	PT 780717 PT-787102 PT 780710	MAIN LUBE OIL PUMP MAIN LUBE OIL PUMP START PERMISSIVE	HY-DC-0-38000-4702
(S-122)	PT 780707 LT 780703 PT 827111 A,B,C,D,E	COMPRESSOR START PERMISSIVE	HY-DC-0-38000-4702
(S-121)	POT 277118 A,B,C,D,E POT 277118 A,B,C,D,E PT 780718 A,B,C,D,E	-STOP COMPRESSOR (MOTOR TRIP)	HY-DC-0-38000-4702 HY-DC-0-38000-4704 HY-DC-0-38000-4702
	PT 278113 A,B,C,D,E TT 278113 A,B,C,D,E		HY-DC-0-38000-4703

[illegible]

	
Vendor's Document No.: HY-DS-0-33600-44702	thys senkrupp Industrial Solutions (India) Private Limited Vendor's PO No.: PUR-PRIINM-1002671/LOA/BHEL MCA-1073
Vendor's PO No.: MCA-1073	thys senkrupp Industrial Solutions (India) Private Limited Vendor's PO No.: PUR-PRIINM-1002671/LOA/BHEL MCA-1073

PROJECT: NGL EXPANSION PROJECT									
DRAWING TITLE: LUBE OIL Pd DIAGRAM									
UNIT/FACILITY: CCS RGE									
SYSTEM DESCRIPTION: RECYCLE GAS COMPRESSOR(I)P23 KA-2781)									
Organizer/ Contractor	Asset Code	Date	Drawing Type	Sequence Number	Rev.	Sheet			
TK	I/P23	MA-2781	PID	003	02	01 OF 01			
									
BHARAT HEAVY ELECTRICALS LTD.									
HYDERABAD									
DESIGN OFFICE	UNIT, DMS, OR OTHER	SCALE	WEIGHT		WEIGHT TO ASSY		ITEMS		
LUBE OIL Pd DIAGRAM		NIS	NA		NA		NA		
DRAWING NDL									
HT-50-0-55800-44702									
SIT. No. 1									
NDL PR. SIT. 1									
REV.	03								

INVENTORY NO. SIGN AND DATE REF. DRG. NO. COMPUTER FILE NAME THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY



NOTE:

- 1) REFER TK1ZZZA-PR-PID-0001.01, 02, 03 FOR ISOLATION VALVE SIZES FOR PRESSURE INSTRUMENTS, LEVEL INSTRUMENTS AND FLOW TRANSMITTERS. THERMOWELL CONNECTION FOR ALL TEMPERATURE INSTRUMENTS SHALL BE 1½" 300# FLANGED MIN. FOR LINES.
- 2) DELETED.
- 3) ALL INSTRUMENTS TAG NUMBER SHALL BE PREFIXED WITH UNIT NUMBER 1P23'.
- 4) ALL TIE IN NUMBER SHALL BE PREFIXED WITH 'TP-1P23'.
- 5) COMPANION FLANGES ALONGWITH GASKETS,NUTS,BOLTS ETC FOR COOLING WATER SUPPLY AND RETURN BATTERY LIMIT ARE IN BHEL SCOPE OF SUPPLY.

REFERENCE DRAWINGS:

- 1) LUBE OIL P&ID: TK-1P23A-ME-2781-PID-0003
- 2) LUBE OIL COOLER GAD: TK-1P23A-ME-2781-GAS-0013

tkis India / Vendor		tkis India / Vendor	
Category Codes (Submission purpose)	☐ 1 For Approval	Acceptance Codes (Approval Codes)	☐ 1 Approved
	☐ 2 For Review / Comments		☐ 2 Approved for Manufacturing/ Fabrication With Comments as Marked
	☐ 3 For Information		☐ 3 Not Approved/Resubmit
	☐ 4 For Engineering		☐ 4 Retained for Information/Records
	☐ 5 For Enquiry		☐ 5 Reviewed
	☐ 6 For Order Placement		☐ 6 Reviewed as Noted/Resubmit
	☐ 7 Final & Approved		
	☐ 8 Released for Construction		
		Date : _ / _ / _ Name : _	

02	24.05.22	REVISED SUBMISSION	KK	DKJ	DKJ	PDM
01	05.04.22 25.04.22	REVISED SUBMISSION	KK	DKJ	DKJ	PDM
00	11.02.22	FIRST SUBMISSION	KK	DKJ	DKJ	PDM
Rev.	Date	Reason for Issue	Prepared	Checked	Approved	Owner Approved



thyssenkrupp Industrial Solutions (India) Private Limited					
NRL's PO No.:			PUR-PRJNUM-1002671/LOA/BHEL		
Vendor's PO No.:			MCA-1073		
Vendor's Document No.:			HY-DG-1-33600-44704		



NUMALIGARH REFINERY LIMITED

PROJECT: NRL EXPANSION PROJECT

UNIT/FACILITY: CCR RGC

DRAWING TITLE: COOLING WATER P&I DIAGRAM			Scale: NTS
SYSTEM DESCRIPTION: RECYCLE GAS COMPRESSOR(1P23-KA-2781)			Drg.Size: A1

Originator/ Contractor	Asset Code	Disc	Drawing Type	Sequence Number	Rev.	Sheet
TK	1P23	ME-2781	PID	004	02	01 OF 01

	BHARAT HEAVY ELECTRICALS LTD.			NAME	SIGN.	DATE	NO.OF VAR.
	HYDERABAD			DRN.	KANHAIYA	11.02.22	
				CHD.	DEEPAK	11.02.22	
				APPD.	PRAFULL	11.02.22	

DEPT. SYS.ENGG. CODE 415	UNTOL. DIMS. GR. g/m/φ		SCALE NTS	WEIGHT (KG) NA	REF. TO ASSY. DRG. NA	ITEM NO. NA	NO.OF ITEMS NA
TITLE PIPING & INSTRUMENTATION DIAGRAM COOLING WATER SYSTEM				CARD CODE	DRAWING NO. HY-DG-1-33600-44704	REV. 02	
				SHT. No 1		NO. OF SHT. 1	

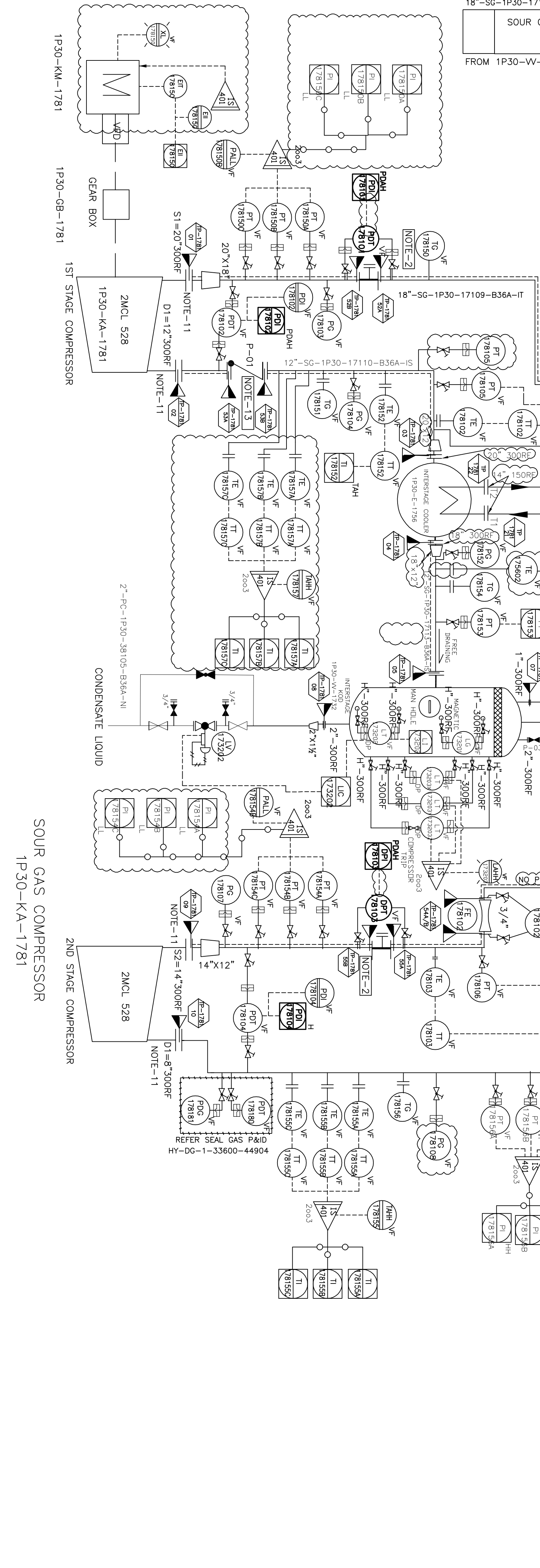
SOUR GAS COMPRESSOR
TAG NO.: 1P30-KA-1781
RATED FLOW-1ST STAGE: 23950 kg/hr
RATED FLOW-2ND STAGE: 24321 kg/hr
DIFF. PRESSURE: 15.63 KG/CM2
DESIGN PRESSURE: 16.5 KG/CM2g

GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

SOUR GAS COMPRESSOR
1P30-KA-1781

DEPT. **UNCL. DMS**
SCALE **N.T.S**
WEIGHT (KG) REF. TO ASSY. DRG. **-N.A.-**
ITEM NO. NO. OF ITEMS **-N.A.-**

REV.	DATE	CHD/APPD	ZONE
1			
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NOTES:

- 1) 'VF' MARKED INSTRUMENTS ARE IN BHFL SCOPE OF SUPPLY.
- 2) FOR COMPRESSOR SUCTION STRAINERS, FILTER ELEMENT WITH MESH 20 (TEMP. STRAINER) SHALL BE USED DURING START-UP AND FILTER ELEMENT WITH MESH SIZE 8 (TEMP. STRAINER) SHALL BE USED FOR NORMAL OPERATION.
- 3) SUCTION STRAINER IS T TYPE BUT WELD END CONNECTION.
- 4) ALL THE PRESSURE AND TEMPERATURE INSTRUMENTS CONNECTIONS ON PIPES SHALL BE AS PER TECHNIP STD AS SPECIFIED IN MR.
- 5) STRAIGHT LENGTH REQUIREMENT UPSTREAM OF COMPRESSOR SUCTION NOZZLE IS 5XD, WHERE D IS PIPE OD.
- 6) THIS P&ID TO BE REFERRED FOR BHFL SUPPLIED EQUIPMENT/ INSTRUMENTS ONLY. FOR OTHER DETAILS, LICENSORS P&ID NO. 1P30A-PR-PID-00057/58/59, TO BE REFERRED.
- 7) THE NR.V 'P-02' SHOULD BE LOCATED VERY NEAR TO THE COMPRESSOR DISCHARGE (UP TO 25 M FROM COMP. DISCHARGE).
- 8) ALL THE INSTRUMENT TAG NO.'S SHALL BE PREFIXED BY THE (1P30).
- 9) THE SPEED SIGNAL FROM VFD IS CONNECTED TO ASC THROUGH DCS.
- 10) THE DCS/ESD INDICATION FOR THE INSTRUMENTS ARE IN TECHNIP SCOPE.
- 11) COMPRESSOR SUCTION & DISCHARGE COMPANION FLANGES ALONG WITH GASKETS/NUTS/BOLTS ETC ARE NOT IN BHFL SCOPE OF SUPPLY.
- 12) ANTISURGE VALVE TO BE LOCATE CLOSE TO COMPRESSOR DISCHARGE.
- 13) NR.Vs IN BOTH 1ST STAGE AND 2ND STAGE COMPRESSOR DISCHARGE SHALL BE PLACED IN HORIZONTAL PLANE.
- 14) ANTISURGE VALVE IS AT THE HIGHEST POINT AND EITHER SIDE IS SLOPED TO RESPECTIVE EQUIPMENTS.

REFERENCE DRAWINGS:

1. LICENSOR P&ID: 1P30A-PR-PID-00057/58/59.
2. LUBE OIL P&ID: TP-1P30A-ME-0033-PID-0003
3. SEAL GAS P&ID: TP-1P30A-ME-0033-PID-0002
4. COOLING WATER P&ID: TP-1P30A-ME-0033-PID-0004

Rev.	Date	Reason for Issue	Prepared	Checked	Approved
02	19.08.22	FOR REVIEW	KANHAYA	DEEPAK	PRATUL
01	04.05.22	FOR REVIEW	KANHAYA	DEEPAK	PRATUL
00	31.01.22	FOR REVIEW	KANHAYA	DEEPAK	PRATUL

BHEL	TECHNIP	NUMALGARH REFINERY LIMITED	NREL
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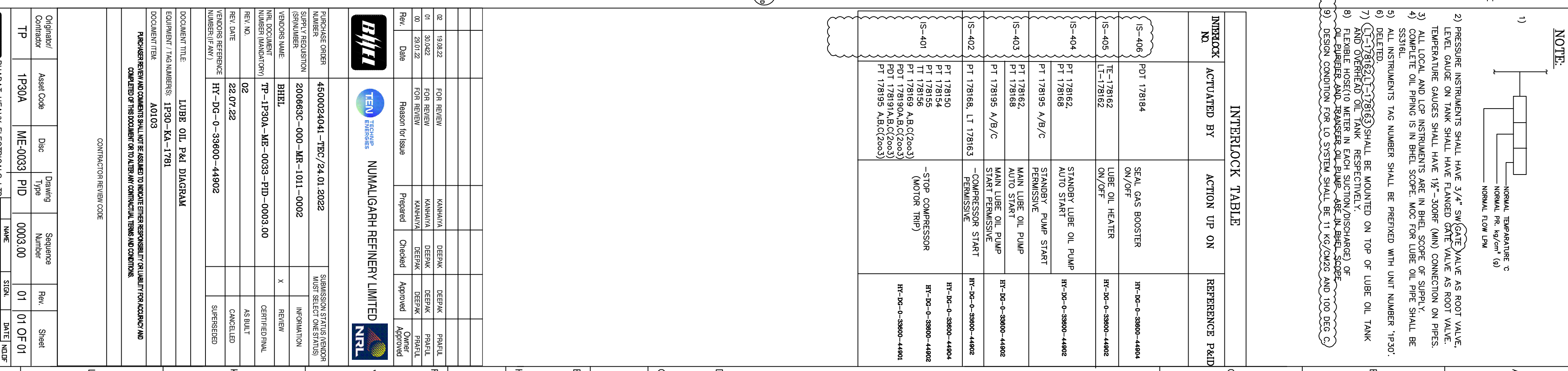
PURCHASE ORDER NUMBER:	4500024041-TEC/24.01.2022	SUBMISSION STATUS (VENDOR MUST SELECT ONE STATUS)	
SUPPLY REQUISITION (SR) NUMBER:	200663C-000-MR-1011-0002	INFORMATION	
VENDORS NAME:	BHEL	REVIEW	
NRL DOCUMENT NUMBER (MANUFACTURER):	TP-1P30A-ME-0033-PID-0001.00	CERTIFIED FINAL	
REV. NO.	00	AS BUILT	
REV. DATE	22.01.22	CANCELLED	
VENDORS REFERENCE NUMBER (IF ANY)	HY-DG-0-33600-44901	SUPPRESSED	

DOCUMENT TITLE:	PROCESS GAS P&ID DIAGRAM
EQUIPMENT / TAG NUMBER(S):	1P30-KA-1781
DOCUMENT TYPE:	P&ID
PURCHASER REVIEW AND COMMENTS SHALL NOT BE ASSUMED TO INDICATE EITHER RESPONSIBILITY OR LIABILITY FOR ACCURACY AND COMPLETION OF THIS DOCUMENT OR TO ALTER ANY CONTRACTUAL TERMS AND CONDITIONS.	
CONTRACTOR REVIEW CODE	

Originator/ Contractor	Asset Code	Disc	Drawing Type	Sequence Number	Rev.	Sheet
TP	1P30A	ME	PID	0001.00	00	01 OF 01

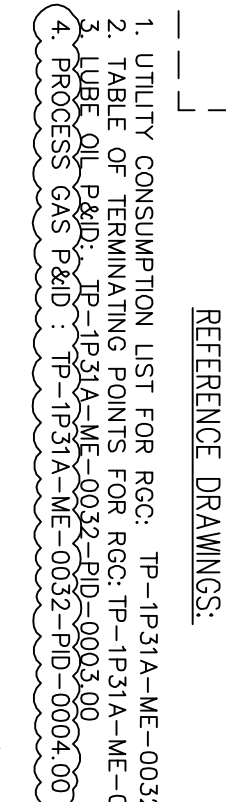
BHARAT HEAVY ELECTRICALS LTD.
HYDERABAD
DEPT. **UNCL. DMS**
SCALE **N.T.S**
WEIGHT (KG) REF. TO ASSY. DRG. **-N.A.-**
ITEM NO. NO. OF ITEMS **-N.A.-**

REV.	DATE	CHD/APPD	ZONE
1			
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[illegible]

INVENTORY NO	SIGN. AND DATE	REF. DRG. NO.	COMPUTER FILE NAME

[illegible][illegible]



- 1) ALL INSTRUMENT TAG NOS SHALL BE PREFIXED WITH UNIT NO.'1P31'
- 2) ALL THE INSTRUMENT HOOK-UPS AND ITS INSTALLATION SHALL BE AS PER PRODUCT SPECIFIC DRAWINGS.
- 3) SEAL GAS PIPING MATERIAL SHALL BE SS316/SS304.
- 4) BHEL STANDARD PWS SHALL BE FOLLOWED FOR SEAL GAS.
- 5) LOW POINT DRAIN IN PRIMARY SEAL GAS INTERCONNECTING PIPING SHALL BE PROVIDED WITH DRAIN VALVE.
- 6) FOR INTERLOCK DETAILS REFER LUBE OIL P&ID.
- 7) ALL LOCAL AND LCP MOUNTED INSTRUMENTS SHOWN IN THIS P&ID ARE IN BHEL SCOPE OF SUPPLY.
- 8) ALL THE IN POINT NUMBER SHALL BE PREFIXED WITH UNIT NO.'1P31'.
- 9) SINGLE SEAL GAS SKID IS PROPOSED. HOWEVER, ACTUAL NUMBER OF SKID SHALL BE INFORMED AFTER RECEIPT OF SUB VENDOR INPUT.

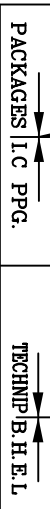


REV DATE		
10.06.2022		CANCELLED
VENDOR'S REFERENCE NUMBER(I/F AMY)	HY-DG-0-33600-44804	SUPERSEDED

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TITLE	DRAWING NO.	REV.
SEAL GAS P & I DIAGRAM	HY-DG-1-336-00-44804	02

NOTE:



- DESIGN CONDITION FOR LO SYSTEM SHALL BE 11 KG/CM²G AND 100 DEG C.

INTERLOCK TABLE

INBOX NO.	ACTUATED BY	ACTION UP ON	REFERENCE TRAD
I2 324	PT-1258	SEAL GAS OOSTER ON/OFF	SEAL GAS PAID
I2 323	TT-1352-0FF FOR TAIL TT-1352-0FF FOR LAL	LUBE OIL HEATED OFF	LUBE OIL PAID
I2 321, 322	ZSH 0401A ZSH 0401B	PST (ESVU-0401A) PST (ESVU-0401B)	COVERING SODICE PAID
319, 320	LT-1452	OP START/STOP	STEAM & BEAN PAID
I2-318	PT 1383 TURNING ZERO SPEED MONITOR	BARING DEGREE START PERMISSIVE	LUBE OIL PAID
I2-317	PT 1360 PT 1370 PT 1276(A,B,C)	LUBE OIL START/AUTO START MAIN LOF INLET STEAM STOP VAL455 ENRISURE LUBE OIL START/AUTO START	LUBE OIL PAID SEAL GAS PAID
I2-316	PT 1360 PT 1370 PT 1276(A,B,C)	LUBE OIL START/AUTO START LUBE OIL START/AUTO START LUBE OIL START/AUTO START	LUBE OIL PAID SEAL GAS PAID
I2-315	PT 1371 A,B,C(D,G)	EMERGENCY OIL PUMP AUTO START	LUBE OIL PAID
I2-314	PT 1370 PT 1353	COMPRESSOR START PERMISSIVE	LUBE OIL PAID
I2 313	PT 3741 A,B,C(D,G) TT 3706 A,B,C (3-5a) PT 1457 A,B,C(D,G) PT 1259 A,B,C(D,G) PT 1260 A,B,C(D,G) PT 0802 A,B,C(D,G)	STEAM COMPRESSOR (THRUINE TREE) STEAM & BEAN PAID LUBE OIL PAID SEAL GAS PAID COVERING SODICE PAID	

STEAM & PUMP PAID	TP-1P31A-ME-0032-PID-0005.00
PROCESS GAS PAID	TP-1P31A-ME-0032-PID-0001.01
SEAL GAS PAID	TP-1P31A-ME-0032-PID-0002.00
LUBE OIL PAID	TP-1P31A-ME-0032-PID-0003.00

Sl	Date	Reason for issue	Prepared	Checked	Approved	Overl	Approved
01	12.02.22	FOR REVIEW	KASHIYA	DEEPAK	DEEPAK		
02	12.02.22	FOR REVIEW	KASHIYA	DEEPAK	DEEPAK		
03	20.02.22	FOR REVIEW	KASHIYA	DEEPAK	DEEPAK		

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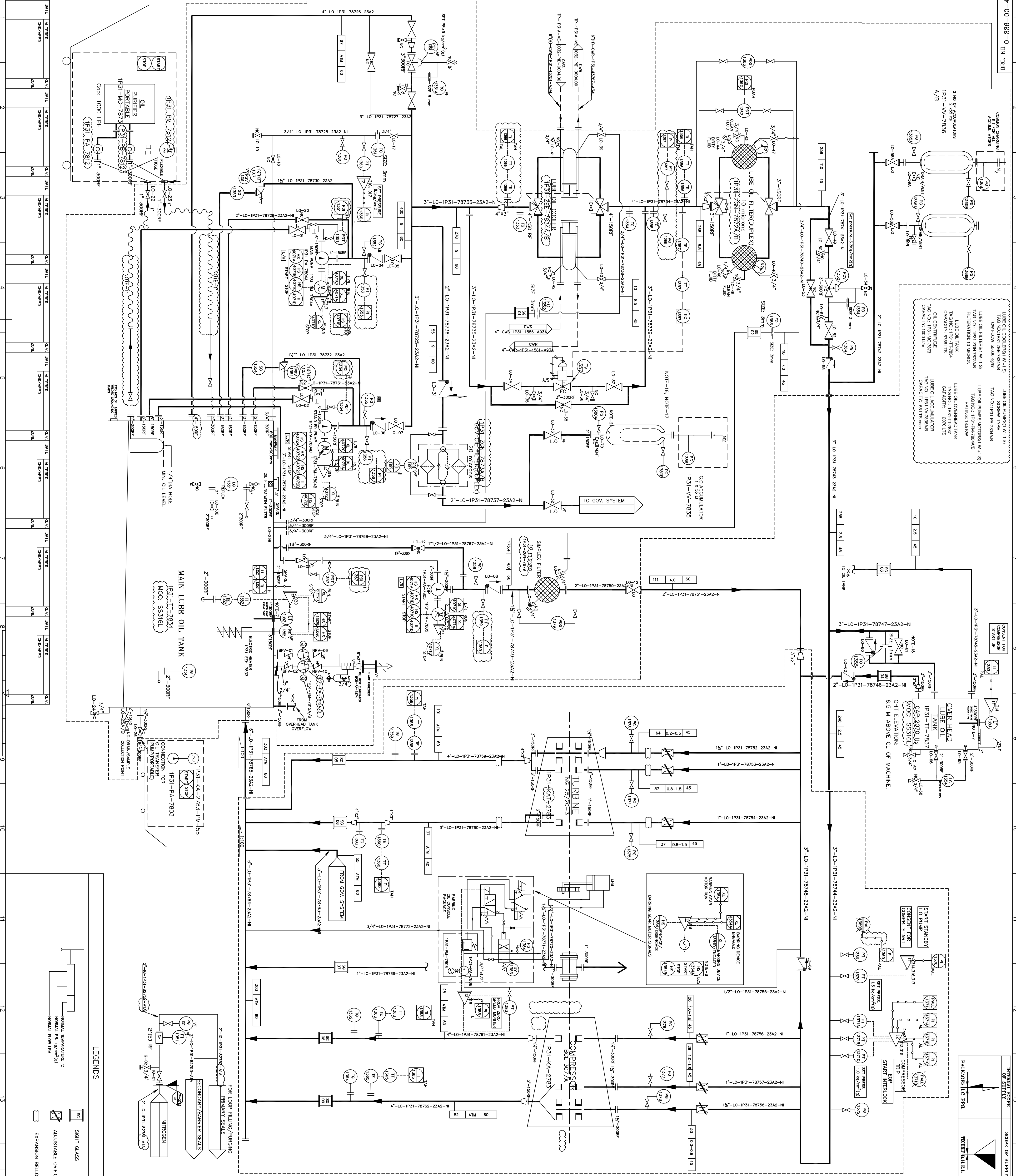
DOCUMENT TITLE: LUBE OIL P&I DIAGRAM
EQUIPMENT TAG NUMBERS: 1P31-KA-2783
DOCUMENT TYPE: PROCESS REVEN
P&ID READER AND COMMENTS SHALL BE ASSIGNED TO INDICATE ENTER RESPONSIBILITY OR QUALITY FOR ACCURACY AND COMPLETION OF THIS DOCUMENT TO A TECHNICAL COMPETENCE, TRAINING AND CERTIFICATION.

TD	Originator/ Contractor	Asset Code	Disc	Drawing Type	Sequence Number	Rev.	Sheet
	ADDA		MC	RD	0000.00	00	01 OF 04

BHARAT HEAVY ELECTRICAL LIMITED
HYDERABAD

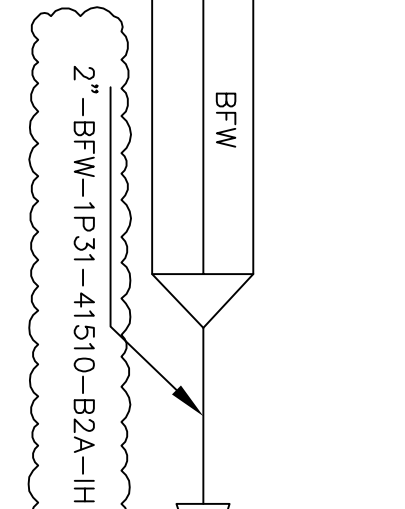
HY-DG-0-33600-44802	DRAWING NO.
01	REV.

TUBE OIL P&I DIAGRAM





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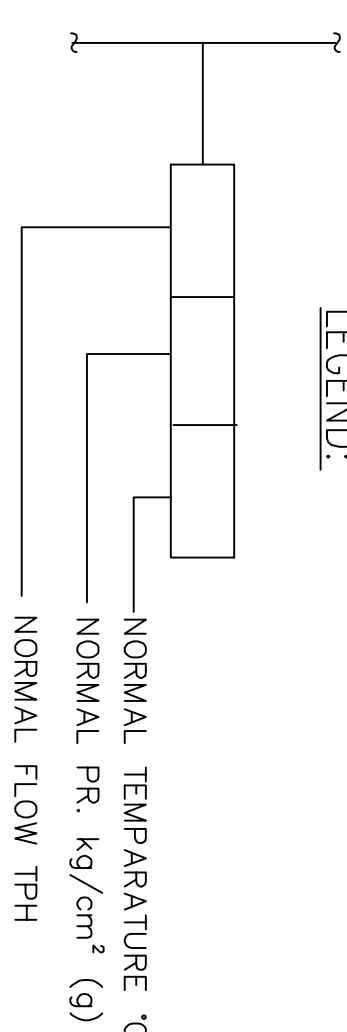
TITLE ITEM AND DRAWING	UNIT, DIMS, GPM/1'		SCALE N.T.S.	WEIGHT (KO) N.A.	REF. TO ASSY. DRG. N.A.	APPRO. PARTULL.		REV.	
						APPRO. PARTULL.	REV.	APPRO. PARTULL.	REV.
HY-DC-1-356-00-44808						0100422	N.A.	02	

GLAND STEAM CONDENSER	L.O. COOLER
1P31-KA-2783-E-51	1P31-KA-2783-E-50A/B
CW FLOW: 90000 Kg/hr	CW FLOW: 55000 Kg/hr

- 1) ALL INSTRUMENT TAG NO'S SHALL BE PREFIXED WITH UNIT NO.'1P3'
- 2) ALL INSTRUMENTS WILL BE SUPPLIED FOLLOWING THE TYPICAL HOOKUP DOC.(TP-1ZZA-IC-STD-0003) FOR INSTALLATION.
- 3) ALL TIE IN POINT NUMBER SHALL BE PREFIXED WITH UNIT NO.'1P3'.
- 4) ALL INSTRUMENTS IN THIS PID ARE IN BHEL SCOPE OF SUPPLY.
- 5) ALL VALVES NOS SHALL BE PREFIXED WITH '1P3'-HV-

LEGEND:

SC: SAMPLING CONNECTION



P&ID TO BE REFERRED AND READ IN CONJUNCTION WITH PROCESS GAS PID ARE:

1. STEAM AND DRAIN P&ID (CLIENT DOC NO. TP-1P31A-ME-0032-PID-0008.00)
2. UTILITY CONSUMPTION LIST (CLIENT DOC NO. TP-1P31A-ME-0032-UTS-000)
3. LUBE OIL P&ID (CLIENT DOC NO. TP-1P31A-ME-0032-PID-0003.00)
4. TABLE OF TERMINATION POINTS (CLIENT DOC NO. TP-1P31A-ME-0032-DTL-0001)

Rev.	Date	Reason for Issue	Prepared	Checked	Approved	Owner Approved
02	18.08.22	FOR REVIEW	KANHAIVA	DEEPAK	DEEPAK	
01	16.05.22	FOR REVIEW	KANHAIVA	DEEPAK	DEEPAK	
00	29.01.22	FOR REVIEW	KANHAIVA	DEEPAK	DEEPAK	



PURCHASE ORDER NUMBER:	4500024042--TEC-/24.01.2022	SUBMISSION STATUS (VENDOR MUST SELECT ONE STATUS)
SUPPLY REQUISITION (SPR) NUMBER:	200663C-000-MR-1011-0001	INFORMATION
VENDORS NAME:	BHEL.	X REVIEW
NRI DOCUMENT NUMBER (MANDATORY)	TP-IP31A-ME-0032-PID-0004.00	CERTIFIED FINAL
REV. NO.	01	AS BUILT
REV. DATE	10.05.2022	CANCELLED
VENDORS REFERENCE NUMBER(if ANY)	HY-DG-1-33600-44805	SUPERSEDED

ITEM TITLE:	COOLING WATER P&I DIAGRAM
ITEM / TAG NUMBER(S):	1P31 – KA – 2763
ITEM ITEM:	
PURCHASER REVIEW AND COMMENTS SHALL NOT BE ASSIGNED TO INDICATE EITHER RESPONSIBILITY OR LIABILITY FOR ACCURACY AND COMPLETION OF THIS DOCUMENT OR TO ALTER ANY CONTRACTUAL TERMS AND CONDITIONS.	

CONTRACTOR REVIEW CODE

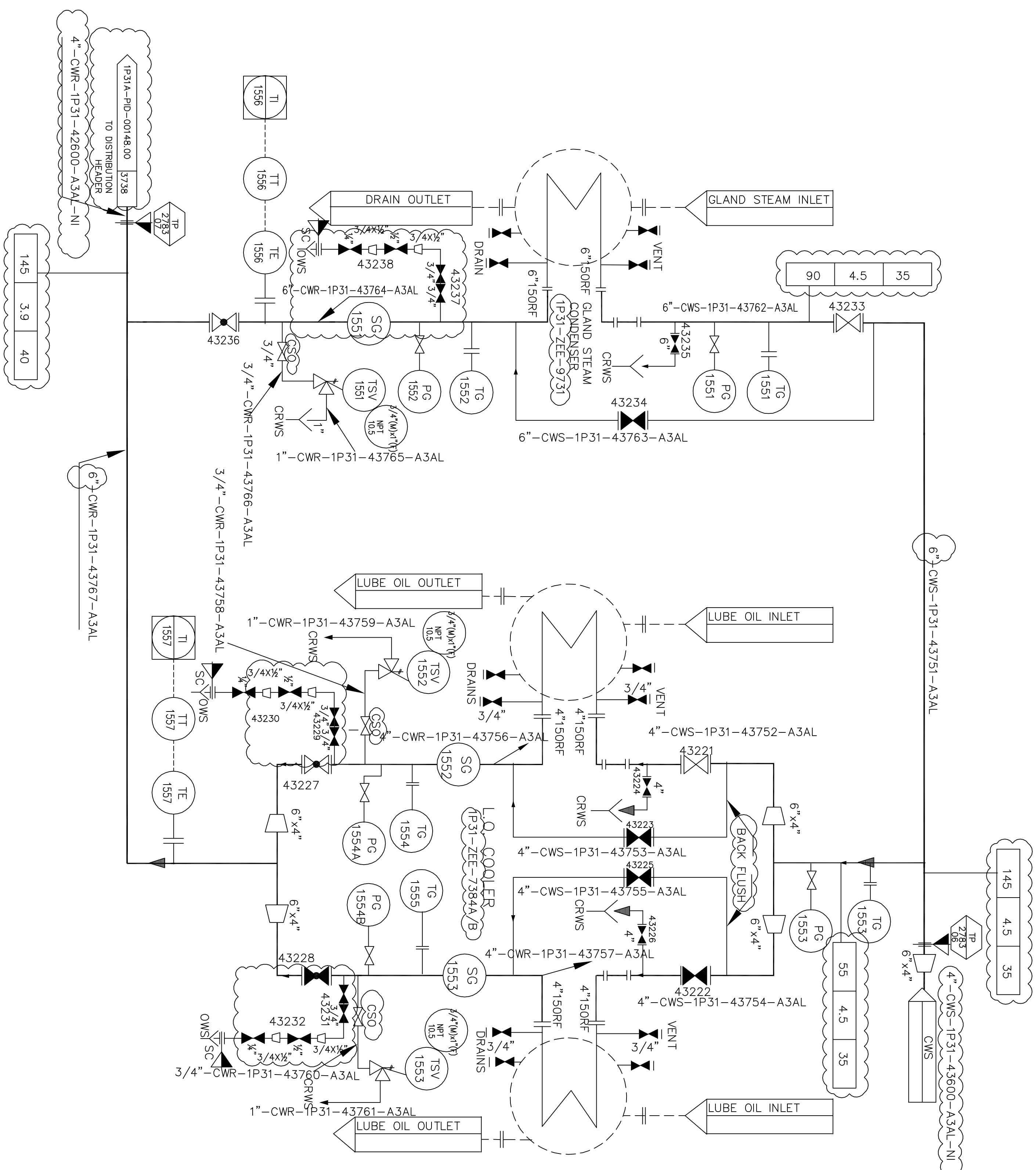
Originator/ Contractor	Asset Code	Disc	Drawing Type	Sequence Number	Rev.	Sheet
TP	1P31A	ME	PID	0004.00	00	01 OF 01

भारत भाराट
BHARAT
BHARAT HEAVY ELECTRICAL LIMITED
HYDERABAD

DEPT.:	UNCL. DIMS.	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO OF
SYS:ENGG		N.T.S.	-N.A.-	-N.A.-	-N.A.-	ITEMS
DPT: 415						
TITLE			DRAWING NO.			
COOLING WATER P & ID			HY-DG-1-33600-44805			
			REV. 02			

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GENERAL DIMENSIONAL LIMITS,FITS & TOLERANCES AS PER HY0230261



REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.
		CHD / APPD			CHD / APPD	
ZONE			ZONE			ZONE

DEPT. SYS/ENGRG	UNCL. DIMS. ~~OK~~ <i>CPM/F</i>		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO OF ITEMS
DEPT 415			N.T.S	-N.A.-	-N.A.-	-N.A.-	-N.A.-
TITLE COOLING WATER P & ID				DRAWING NO. HY-DG-1-33600-44805		REV. 02	