

BHARAT HEAVY ELECTRICALS LIMITED भारत हैवी इलेक्ट्रिकल्स लिमिटेड
(A GOVT. OF INDIA UNDERTAKING) (भारत सरकार का उपक्रम)
PROJECT ENGINEERING MANAGEMENT परियोजना अभियांत्रिकी

निविदा आमंत्रण सूचना
NOTICE INVITING TENDER (NIT)

Enquiry No.- 77/26/6155/SUM

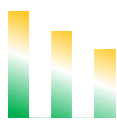
Date -24-Sep-26

BHEL invites offers from reputed Suppliers as per following terms and conditions -

1. Tender Type	Open Tender (Domestic-Indian)		
2. Package	M.E. BELLOWS		
3. Project	Framework Agreement (Rate Contract) of M.E. BELLOWS		
4. Executing Agency	BHEL-PEM		
5. Mode of Enquiry	E - PROCUREMENT		
6. Nature of Package (Divisible/Non-Divisible)	Divisible		
7. Numbers of Part bid	2-Part bid (Techno-commercial and Price bid)		
8. Due Date & Time	For offer submission		13:00 IST
	For P-1 bid opening		16:00 IST
9. Earnest Money Deposit (EMD)	Not Applicable	EMD Amount	NA
10. Tender Cost	NIL		
11. Eligibility of Local Supplier as per MII	Class I and Class II Local Suppliers		
12. Technical Scope	As per Technical specification No: PE-TS-020-100-M021		
13. Pre-bid Clarification	NA		
14. Prequalification Requirements	Financial PQR- YES	Technical PQR- YES	
15. Delivery terms for Supply	FOR Despatch Station		
16. Last Date for Seeking Clarification	29-Sep-26 Bidders may seek clarifications to the prescribed clauses and / or different part of the Tender Specifications. Such a request for clarifications, if any, should reach the Purchaser on or before the due date mentioned above. In case of non-receipt of any clarifications within the date specified above, it will be presumed that there are no queries/ clarifications and BHEL will be under no obligation to reply to queries/clarifications raised after the date.		
17. Schedule of Pre-Bid Discussion	Shall be decided based on bidder's request.		
18. Delivery Schedule:	Drawing/ documents submission & re-submission schedule shall be as per Technical Specification: PE-TS-020-100-M021		
Main Supply along with accessories	210 days from the date of PO		

Notes:

- a. Supplier to start Manufacturing/Supply only after getting the applicable Primary Engineering Drgs./docs



approved from BHEL/End Customer.

- b. Drawings /documents submission/re-submission schedule shall be as per Technical specification (PE-TS-020-100-M021) which shall be used for progress monitoring purpose and required course correction, if any.
- c. The delivery date specified is for completion of the deliveries. Deliveries to start progressively so as to meet the completion schedule.
- d. The delivery conditions specified are for Contractual purposes. However, to meet project requirement, BHEL may ask for early deliveries without any compensation thereof.

2.0 Validity of Contract placed on basis of Framework Agreement (Rate Contract) for individual projects (PO rates, terms and conditions):

Supplier has to make supply of goods/services as per the delivery time mentioned above. However, due to unavoidable circumstances if delay happens in providing inputs/ clearances (inputs, Engineering approvals, deputing inspector for inspection, issuance of MDCC and any hold imposed owing to site issues etc.) for which delivery time extension is admissible as per point no.3, in such situation it shall be obligatory at Supplier part to execute the Contract at PO rates, terms and conditions where inputs/ clearances has been accorded within validity of Contract. Validity period for various activities shall be as defined below or as mentioned in the NIT.

2.1 Contract for main supply shall be valid for 270 ('C') days from the PO date. However, delay at Supplier's end (if any) shall be added to the validity period and Contract validity shall get extended by the delay period at Supplier's end.

For example: Original Delivery period for main supply: A (in days)

Delay at Supplier's end: B (in days beyond "A" days)

Contract validity: C+B (in days)

Notes:

- a. B is the Supplier delay days beyond original Contractual delivery period for main supply /extended delivery period owing to time taken by BHEL.
- b. Main supply including quantity variation, mandatory spares/ services, applicable in the Contract released/ cleared for manufacturing within Contractual validity period, to be supplied by Supplier/Supplier at PO rates, terms and conditions.
- c. Execution of the Contract quantities released beyond Contract validity period shall be decided on mutual consent basis at PO rates, terms and conditions.

3.0 Delivery Extension: Extension of Contractual delivery time:

Delivery time mentioned in the NIT includes Engineering completion time (time for drawing/document submission/resubmission by the Supplier and review/approval of the same by the BHEL/End customer), manufacturing, inspection, Packing and dispatch time. Due diligence is to be observed by the Supplier to ensure timely completion of engineering and supply.

During the execution of the Contract, time loss occurred owing to the reason attributable to BHEL besides force majeure shall be considered for delivery time extension to the Supplier as given below: -

- i. Any Delay in providing comments/ approval on primary drawing/documents beyond the stipulated time as specified in NIT.
- ii. Time Loss in approval of the drawing/document as a result of increase in the iteration not attributable to the Supplier (i.e. resubmission owing to end customer comments) as certified by BHEL. Time extension equivalent to the resubmission time noted in the tech. spec and consequential increase in the approval time in lieu of increase in iteration shall be applicable. However, for incomplete re- submission time loss shall be in Supplier account.
- iii. Delay in providing engineering input/material by BHEL.
- iv. Delay in deputing inspector for inspection and delay in release of MDCC in line with GCC terms
- v. Any hold put by BHEL for whatever reasons during execution of Contract (within Contract validity period), time extension equivalent to hold period shall be admissible. However, in the event hold period continues for more than 30 days then, an additional fifteen days for the purposes of mobilization and demobilization of

resources shall also be admissible.

Note: Extension in delivery period if any with or without imposition of LD shall be considered after detailed delay analysis based on provisions given above. However, no delay analysis will be applicable if Supply is completed within delivery schedule as specified in Purchase Order.

19. Liquidated Damages (LD):

Buyer reserves the right to recover from the Supplier, as agreed liquidated damages and not by way of penalty, a sum equivalent to half (½) percent of the undelivered portion of Contract price excluding GST per week or part thereof, subject to a maximum of ten (10) percent of total of Contract price excluding GST, if the Supplier fails to deliver any part of the ordered goods/stores within the period stipulated in the Order/ Contract.

Supplier to essentially quote prices against each line item of the BOQ in the respective columns. 'NIL', 'Free of Cost', 'Zero' etc. shall not be mentioned for any line item of the BOQ. In such case, Liquidated Damages shall be levied on the Total order/ contract value instead of undelivered portion of the Order/ contract. Also, if price of any line item (X) is mentioned 'Included' in any other line item (Y), then in case of delay in delivery of item (X), LD shall be applicable on value of item (Y).

- **All other terms and conditions of LD shall be as per GCC Rev. 07 and Corrigendum 01, 02 & 03 to GCC Rev. 07.**

20. Guarantee Terms: As per Clause No. 12.0 except Clause no. 12.2(b) of General Commercial Terms & Condition of GCC Rev. 07.

21. Validity of offer shall be as per Clause no. 7 (Instruction to Suppliers) of GCC Rev. 07.

22. PVC (Price Variation Clause): Applicable (Refer Technical Specification and Annexure-I for details)

23. CIF Content	Not Available
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24. Integrity Applicability	Pact Yes
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25. In line with cl. No. 12 of (ITB) of GCC Rev07, following Independent External Monitors (IEMs) have been appointed by BHEL.:

1. Dr. Sarat Kumar Acharya, Ex-CMD, NLC : iem1@bhel.in;
2. Shri R. Mukundan, IRPS (Retd.) : iem2@bhel.in;
3. Shri Madan Lal Meena, IAS (Retd.) : iem3@bhel.in;

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

26. Tender Evaluation - Price will be finalized through RA. The evaluation currency for this tender shall be INR. Evaluation will be done on overall L1 (Total Package Price including Freight excluding taxes) basis with necessary loading as applicable.

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

In case more than one Supplier happens to occupy the L-1 status even after soliciting discounts, the L-1 Supplier shall be decided by a toss/ draw of lots, in the presence of the respective L-1 Supplier (s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situations shall be final & binding.

27. Payment Terms:

Main Supply: As per clause No. 9.1 of General Commercial Terms and Conditions of GCC Rev. 07 and Corrigendum 01, 02 & 03 to GCC Rev. 07.

28. GST shall be payable extra at actual as per the HSN code finalized for the items during detailed BBU.

29. Reverse Auction:

BHEL shall be resorting to Reverse Auction (RA) (Guidelines for Reverse Auction - 2024, as available on www.bhel.com on "Supplier registration page") for this tender. RA shall be conducted among all the Techno-Commercially qualified Suppliers.

Price Bids of all the Techno-Commercially qualified Suppliers shall be opened and same shall be considered as initial bids of Suppliers in RA. In case any Supplier(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.

"The Suppliers has to quote the Single Price (i.e. Total Cost to BHEL) in Reverse Auction. Prices are to be inclusive of Packing & Forwarding charges, all as per tender scope, Freight as applicable, including loading (if any) but excluding GST. De-loading (if any) shall be done in line with NIT terms."

30. Supplier to note that this is a conditional Open Tender enquiry and price bid opening & Reverse Auction participation shall be subject to following condition:

- a) Qualifying Technical Pre-Qualification Requirement and Financial Pre-Qualification Requirement
- b) Techno-Commercial acceptance of offer by BHEL-PEM
- c) Registration in BHEL-PEM for the Tender package

The Suppliers who are not registered with BHEL-PEM may apply for registration in BHEL-PEM through Registration Portal available at <https://Supplier.bhel.in/>. All credentials and/ or documents duly signed & stamped related to registration has to be uploaded on the website & submit the application for registration. One set of hard copy filled-up SRF downloaded from Online Registration Portal duly signed & stamped has to be submitted.

31. Performance Security (PS)

PS Applicability

No Performance Security (PS) against the current enquiry for Framework Agreement (Rate Contract) for Tender package.

However, Suppliers to note that Performance Security shall be submitted for orders placed by the concerned Purchase Group on the Framework Agreement (Rate Contract).

Successful Supplier/s will have to submit Performance Security for each POs (irrespective of value) which will be placed under the Framework Agreement (Rate Contract) finalized through this tender considering FA (RC) as original Contract as per the format given in GCC Rev 07.

Relevant details of the PS to be submitted on the basis of Framework Agreement (Rate Contract) are as following:

I

Initially 10% of the Contract value (total Ex-works price). However, 5% of the Contract

		value (as above) will be released after completion of Main Supply based on certification by Purchasing Department . Balance 5% of the Contract value (excluding PVC) will be released on completion of all Contractual obligations, including guarantee/warranty obligations based on certification by Purchasing Department.
		OR
		5% of the Contract value (total Ex-works price). Additional 5% of the Contract value will be retained from first bill & subsequent bill(s) of the same Contract. The retention amount will be released after completion of main supply based on certification by Purchasing Department. Balance 5% of the Contract value (excluding PVC) will be released on completion of all Contractual obligations, including guarantee/warranty obligations based on certification by Purchasing Department.
	Validity of PS	As per clause no. 11.0 (except 11.4) of General Commercial Terms and Conditions of GCC Rev 07.
	PS Submission	PS should be in favour of BHEL-PEM. Supplier may opt any of the following for submission of Performance Security: -
	Modes of Deposit	Performance security may be furnished in the following forms: - Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL. - Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL. - Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Supplier, a/c BHEL). - Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Supplier furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL). - Insurance Surety Bond. (Note: 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)

		Performance Security is to be furnished within 14 days from the date of PO and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all Contractual obligations of the Supplier, including warranty obligations.
	Remarks for PS:	a) The performance security will be forfeited and credited to BHEL's account in the event of a breach of Contract by the Supplier. b) Performance security should be refunded to the Supplier without interest, after he duly performs and completes the Contract in all respects but not later than 60 (sixty) days of completion of all such obligations including the warranty under the Contract. c) However, Performance Security validity is to be extended based on the actual delivery of package. The Performance Security shall not carry any interest.
32. Breach of Contract, Remedies and Termination (Tenderer to note that this clause will supersede any clause regarding recovery amount from Tenderer due to Breach on Contract mentioned anywhere in GCC Rev. 07 and its Corrigendum)	In case of Breach of Contract, BHEL shall recover 10% of the Contract value from the Supplier using following instruments: (i) Encashment of security instruments like EMD, Performance Security with executing agency (PEM) against the said Contract. (ii) Balance amount (if value of security instruments is less than 10% of the Contract value) from other Financial remedies i.e. available bills of the Supplier, retention amount etc. with executing agency (PEM). (iii) Balance amount from security instruments like EMD, Performance Security and other Financial remedies i.e. available bills of the Supplier, retention amount etc. with other units of BHEL. (iv) If recovery is not possible then legal remedies shall be pursued. However, Supplier shall continue performance of the Order/ Contract, under all circumstances, to the extent not cancelled. Refer Annexure-III for details of Breach of Contract, Remedies and Termination.	
33. Suppliers are requested to refer clause no 26.0 (Make in India) of Instructions to Bidder of GCC Rev. 07. Further, following shall be taken into consideration for submitting bids by Suppliers:		
- For this procurement, the local content to categorize a Supplier as a Class I local Supplier/ Class II local Supplier/ Non-local Supplier and purchase preference to class I local Supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT. In case of subsequent orders issued by the Nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after the issue of the NIT, but before opening of Part-II bids against the NIT. - Minimum Local Content prescribed for M.E. Bellows package by Nodal Ministry is 20% and hence for this procurement, as per Public Procurement (preference to make in India), order 2017 dtd. 15.06.17, 28.05.18, 29.05.19, 16.09.20 & 19.07.24 and subsequent orders issued by the nodal ministry, this package is reserved for only Class-I Supplier and Class-II Suppliers. Non-Local Suppliers are not eligible to quote for this enquiry.		

- Suppliers are requested to go through the above-mentioned orders and submit their adherence to Public Procurement (preference to make in India), order 2017 dtd. 15.06.17, 28.05.18, 29.05.19, 16.09.20 & 19.07.24 and subsequent orders.
- Local Content certificate (Make In India Certificate) from statutory/cost auditor of the company (in case of companies) or from a practicing Cost Accountant or practicing Chartered Accountant (in case of Suppliers other than companies), shall be essentially submitted by Supplier along with their offer as per clause No. 9 of Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024

34. Purchase preference to MSE Supplier: Yes.

35. Framework Agreement (Rate Contract) Order Splitting:

- Framework Agreement (Rate Contract) is proposed for Two (02) years from placement of Framework Agreement (Rate Contract) Purchase Order with a provision for further extension after review on mutual consent.
- Framework Agreement (Rate Contract) is to be done with 2 Suppliers in ratio of 70:30 value wise at L1 FOR Site Price (Ex-works + Freight) for this package. However, Purchase orders placed by BHEL for a project on the basis of Rate Contract shall not be split. Details of Framework Agreement (Rate Contract) order splitting shall be as per following:
 - Distribution in compliance with latest guidelines for MII & MSE shall be done. GOI circular dated 18.05.2023 for Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017 shall be applicable for order splitting (in the ratio of 70:30) and order finalization.
 - L1 Rates (Ex-works + Freight) shall be counteroffered to all techno-commercially qualified Suppliers and order splitting in ratio of 70:30 shall be done in line with GOI circular dated 18.05.2023 for Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.
 - In case acceptance of counteroffer is received from more than two Suppliers then acceptance shall be considered as per FINAL Reverse Auction Ranking (as applicable).
 - If none of the Supplier accepts counter-offered L1 rates, then Contract shall be awarded to L1 Supplier for 100% value.
- Framework Agreement (Rate Contract) will be finalized on total lump sum basis instead of item wise evaluation so that the complete requirement against one project is not split amongst various Suppliers to minimize operational difficulty.
- After finalization of the framework Agreement, if a supplier fails to execute the orders due to non-performance, not meeting quality requirements. or debarred by BHEL, BHEL reserves right to redistribute the unexecuted (not supplied or not yet ordered against RC) quantities to other supplier(s) or Short close the Rate Contract.

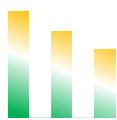
36. GOI circular dated 18.05.2023 for Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017 shall be applicable for order splitting and order finalization.

37. The quantities indicated in the tender are tentative quantities. No minimum quantity is guaranteed by BHEL.

38. Overall (%) quantity variation: The variation on overall package value shall be limited to +10% of the Contract value.

39. Suppliers shall Quote for the entire Scope. Partial scope is not acceptable.

40. Suppliers to ensure that Third party/ Customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document/ certificate issuing authority such as name & designation of Issuing Authority and its organization contact number and e - mail Id etc. Offer of only those Suppliers shall be considered further, who meets the PQR criteria. Suppliers to furnish latest verification details for checking veracity of



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document(s) by BHEL. In case the same found not available, Buyer has right to reject such document from evaluation. Format for the same is below: -

Sl. No.	Project Name	Customer Name, Contact Address, Phone No. & Email ID	Contract/ Order No.	Value of Contract/ Order	Brief of Work	Completion Date

41. Suppliers who fulfil Technical & Financial Pre-Qualification Requirement Criteria are eligible to participate in this tender. Bids of only those Suppliers shall be evaluated who meet the Technical as well as Financial Pre-Qualifying requirements.

Note: This item/Package/system falls under the list of items defined in Para 3 of Ministry of Finance guideline ref no.F.20/2/214-PPD(Pt.) dated 20-09-2016 (in respect of procurement of items related to public safety, health, critical security operations and equipment's, etc.) & hence criterion of prior experience shall be same for all Suppliers including startup/MSME. However, Annual Turnover Criteria shall not be applicable for Micro and Small Enterprises and Startups recognised by DPIIT.

42. In respect of procurement of goods or services from Micro, Small and Medium enterprises (MSMEs), the settlement of invoice shall be only through any of the TReDS platform (i.e RXIL, M1 xchange, Invoicemart, KReDX, C2FO), authorised by the Reserve Bank of India. Such MSME suppliers to select their preferred TReDS platform before award of contract so that the data is captured in the Order /Contract database of the Unit. They also will have the option to change the TReDS platform from the drop-down menu on Suvidha portal of BHEL, at the time of invoice submission.

Wherever the Trade Receivable is accepted by BHEL, the same shall be validated by the Unit on the respective TReDS platform selected by the supplier. The routing of invoices through the TReDS platform shall not be construed as mandating discounting of such invoices and the MSMEs supplier shall have the option to avail or not avail financing or discounting of its receivables on the TReDS platform.

In case discounting is not availed by the supplier on TReDS, the trade receivables will be paid through TReDS as per the payment timelines indicated in the contract.

43. All corrigenda, addenda, amendments, time extensions, clarifications, etc. to the tender will be hosted on BHEL website (www.bhel.com) & BHEL-PEM website (www.pem.bhel.com) and GePNIC portal. Suppliers should regularly visit websites to keep themselves updated.

44. If Supplier mentions Not Applicable/ Not required/ Not Quoted in BHEL price format, the same to be substantiated by the Supplier. If such item is required to be supplied for system completion in future, same will be supplied free of cost.

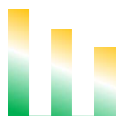
45. GeM Seller ID shall be mandatory before placement of order/award of Contract to the successful Supplier.

46. Supplier to quote non-zero Freight charges (anywhere in India) in percentage (%) of their quoted Total Ex-Works Prices of Supply.

47. All Suppliers to comply Govt. of India, Ministry of Power, order no-25-111612018-PG dtd 02/07/2020 regarding mandatory testing of all the imported items/equipment's/components.

48. Self-declarations/ Auditor's/ Accountant's Certificates submitted by the manufacturer/ Supplier may be verified randomly by the committee constituted as per MoP Order 28-07-2020. In case of false documents/misrepresentation of the facts requisite action against such manufacturer/ Supplier will be taken based on the recommendation of the Committee.

49. All Suppliers to declare that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Supplier(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 Supplier is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.

50. The offers of the Suppliers who are under suspension as also the offers of the Suppliers, who engage the services of the firms debarred across BHEL, shall be rejected. The list of firms debarred across BHEL is available on BHEL web site www.bhel.com.

1.0 Integrity commitment, performance of the Contract and punitive action thereof:

1.1 Commitment by BHEL: BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the Contract. BHEL will during the tender process treat all Supplier(s) in a transparent and fair manner, and with equity.

1.2 Commitment by Supplier/ Supplier/ Supplier:

1.2.1 The Supplier/ Supplier/ Supplier commits to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.

1.2.2 The Supplier/ Supplier/ Supplier will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.

1.2.3 The Supplier/ Supplier/ Supplier will perform/ execute the Contract as per the Contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any Supplier/ Supplier/ Supplier during pre-tendering/ tendering/ post tendering/ award/ execution/ post- execution stage indulges in malpractices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such Supplier/ Supplier/ Supplier as per extant guidelines of the company available on www.bhel.com and/or under applicable legal provisions”.

51. Conflict of interest: All Suppliers are required to submit the declaration regarding conflict of interest in the format enclosed with the NIT signed by the authorized signatory of the Supplier.

52. Conciliation & Arbitration shall be as per Annexure-IV to NIT.

53. All the above terms and conditions, post-bid agreements/MoMs (during Techno- Commercial evaluation) shall automatically become a part of the Order/Contract after its finalisation.

54. Suppliers to note that offers shall be submitted strictly in accordance with the requirements of tender documents. Suppliers shall upload their complete offer meeting the requirements of the tender documents on e-procurement portal <https://eprocurebhel.co.in/nicgep/app>.

Following documents need to be uploaded:

- Offer forwarding/ covering letter with Un-price bid along with Cost of Withdrawal, if any
- Documents required for meeting Technical PQR (Part of Tech. Spec.)
- Documents required for meeting Financial PQR
- Local Content Certificate in line with Make in India circular
- Land Border Certificate
- Integrity Pact
- Undertaking for Conflict of Interest
- Declaration by MSE Suppliers regarding ownership structure along with UDYAM certificate
- Price Bid on e-procurement portal - <https://eprocurebhel.co.in/nicgep/app>

55. It shall be the responsibility of the Supplier to ensure that the tender complete in all respects is uploaded on or before the due date and time. Incomplete/late offers shall not be considered.

56. Grievance Redressal Mechanism:

To promote transparency and ensure fair treatment of all Suppliers, a structured Grievance Redressal Mechanism is in place to address any concerns or issues arising during the tendering process or in subsequent business dealings with the company.

Suppliers/Suppliers are requested to follow the below escalation process for grievance resolution:

1. First Level: Any grievance should initially be addressed to the designated Dealing Officer, whose contact details are provided in the Notice Inviting Tender (NIT)/Contract. For POs, placed on basis of Framework agreement by Project Groups of PEM, designated dealing officer shall be PO issuing executive.
2. Second Level: If the issue remains unresolved, it may be escalated by lodging a formal grievance through the SUVIDHA Portal: <https://suvidha.bhel.in/suvidha/>. Responses will be provided in accordance with the defined escalation matrix, which shall be informed in project specific PO.

57. All Suppliers / Suppliers of BHEL are informed that the facility for **online invoice registration and document uploading** has been enabled in the **SUVIDHA Portal (<https://suvidha.bhel.in/suvidha/>)**. With effect from **01-October-2025**, it shall be mandatory for all Suppliers / Suppliers of BHEL to **register** their invoices to be **exclusively through the system** along with the requisite documents.

58. At Sl.no. 17 of ITB of GCC Rev.07, "Base rate of SBI on the date of bid opening, (Techno-commercial bid, in case of 2-part bids) + 6%" may be read as "Repo Rate on the date of bid opening, (Techno-commercial bid, in case of 2-part bids) + 4%".

59. All other correspondence (for the tender) thereof shall be addressed to the undersigned by name & designation and sent at the following address:

Kumar Suman Saurabh / Mgr-CMM
M/s Bharat Heavy Electricals Ltd.,
 Project Engineering Management,
 3rd Floor, BHEL SADAN
 Plot No 25, Sector-16 A, Noida-201301
 E-mail: sumansaurabh@bhel.in
 Contact No.: 9718771765

Manish Kumar Sinha / DGM-CMM
M/s Bharat Heavy Electricals Ltd.,
 Project Engineering Management,
 3rd Floor, BHEL SADAN
 Plot No 25, Sector-16 A, Noida-201301
 E-mail: manish.sinha@bhel.in
 Contact No.: 0120-2218541

60. Terms & Conditions: - The Terms & Conditions shall be as per enclosed Special Conditions of the Contract (copy enclosed), GCC Rev. 07 and Corrigendum 01, 02 & 03 to GCC Rev. 07 which is available on www.pem.bhel.com and other Terms and Conditions included in this Enquiry Letter.

61. Schedule of Pre-Bid discussion

Date of Meeting: 29.09.2026, Time :10:30 hrs.

Place: Bharat Heavy Electricals Limited, Power Sector - Project Engineering Management, 3rd Floor, BHEL Sadan, Plot No.25, Sector-16A, Noida-201301, Uttar Pradesh, India

Interested bidders are requested to confirm their participation for Pre-Bid Discussion (PBD) meeting either by physical meeting at above mentioned place or through Video Conferencing (VC) on 26.09.2026.

VC Link is given below:

Meeting link:

<https://bhel.webex.com/bhel/j.php?MTID=m3758048b6f14a216bdb0112982ec4ad8>

Meeting number:

2510 916 4361

Meeting password:

54321

Join from a video system or application

Dial 25109164361@bhel.webex.com

You can also dial 210.4.202.4 and enter your meeting number.

Meeting password for video system

54321

Join by phone

+65-6703-6949 Toll

Access code: 25109164361

Global call-in numbers

<https://bhel.webex.com/bhel/globalcallin.php?MTID=m38727b42a7166c80c10e6b7f1b5c323b>

Meeting password for audio

54321

Note - In case you are not making an offer against this enquiry, you are requested to send a regret letter so as to reach us on or before the due date

Thanking You.

For and on behalf of BHEL

Kumar Suman Saurabh

Manager/ CMM/ PEM Noida

FRAMEWORK AGREEMENT

TECHNICAL SPECIFICATION
FOR
ME BELLOWS

SPECIFICATION No. **PE-TS-020-100-M021**
ISSUE NO-01
REV NO-00



BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, INDIA



**TECHNICAL SPECIFICATION
ME BELLOWS
FRAMEWORK AGREEMENT**

PE-TS-020-100-M021

Issue No: 01

Rev. No. 00

Date : 24-08-2026

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	TECHNICAL SPECIFICATION ME BELLOWS FRAMEWORK AGREEMENT	PE-TS-020-100-M021 Issue No: 01 Rev. No. 00 Date : 24-08-2026
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PROJECT INFORMATION

1)- With reference to proposed execution of FRAMEWORK AGREEMENT of Metal Expansion Bellows, the following tentative projects have been considered:

Sl No.	Project	CUSTOMER	CONSULTANT	LOCATION	NEAREST RAILWAY STATION	NEAREST ROAD APPROACH	NEAREST AIRPORT
1	2X660 MW RAGHUNATHPUR TG	DVC	DCPL	Raghunathpur sub-division of Purulia District, West Bengal.	Sanka R.S. on Adra-Bhajudih Broad Gauge line of S.E. Railway - 11 Km.	Neamatpur-Purulia State Highway- 7 Km	Durgapur
2	2X800 MW DVC KODERMA	DVC	DCPL	Benjhidihi Village of Koderma District in	Koderma	The nearest National Highway NH- 20 is about 8 Km from the site.	Gaya
3	1X800 MW SINGARENI	SCCL	NTPC	Near Pegadapalli village, Jaipur Mandal, District Mancheria of Telangana.	Mancheria railway station on Nagpur-Kazipet main rail line of South Central Railway	4.6 Km from State Highway. Distance from NH-16 (Nirmal-Chinnur section) is 500M. The road distances of proposed site from major cities/towns are: Hyderabad City : 250 Kms., Nagpur City : 260 Kms.	Hyderabad
4	1X800 MW YAMUNANAGAR	HPGCL	DESEIN PVT. LT	Kalanaur, Yamunanagr Disst., Haryana	Kalanaur	National Highway - 344	Chandigarh
5	2X660 MW KORBA WEST	CSPGCL	NTPC	Korba Village in Korba District of Chhattisgarh.	Korba railway station	State Highway No. 39 from Raipur and Bilaspur.	Raipur
6	1X800 MW UKAI	GSECL	TCE	Ukai, Dist. Tapi, Gujarat	Ukai - Songadh Railway Station	Site is connected by roads from highway at a distance of 10 km from Songadh.	Surat
7	3X800 MW TALABIRA	NLC INDIA LTD.	DCPL	Near Kumbhari & Tareikela villages in Jharsuguda District, Odisha,	Jharsuguda Junction	Sambalpur-Jharsuguda Highway	Jharsuguda
8	1X660 MW AMARKANTAK	MPPGCL	NTPC	Chachai Village, Anuppur District, Madhya Pradesh.	Amlai railway station on Katni-Bilaspur rail line of South Eastern railway	The site distance from NH-78 (Katni-Gumla) is 10 KM. The road distances of proposed site from major cities/towns are: Jabalpur City: 220 Kms.	Jabalpur
9	1X660 MW SATPURA	MPPGCL	NTPC	Sarni, Betul District, Madhya Pradesh	Ghoradongri Railway Station.	Accessible via connecting roadways from Itarsi town and Betul district.	Bhopal
10	1X800 MW DARLIPALLI	NTPC LTD.	NOT APPLICABLE	Sundargarh District of Odisha	Brajarajnagar	The Project is located north of Raigarh - Jharsuguda National Highway, NH-200 and is approachable from Gandhi Chowk (near Brajarajnagar) through 15 Km long road.	Jharsuguda
11	3X800 MW MUNPL MEJA	MUNPL	NTPC	Meja Tehsil in Allahabad district of Uttar Pradesh	Meja Road RS on AllahabadMughal Sarai section of North Central Railway at about 20 Kms from the project site.	Allahabad- Mirzapur highway	Allahabad
12	3X800 MW NTPC TELANGANA	NTPC LTD.	NOT APPLICABLE	1 km near Ramagundam village, District Karimnagar of Telangana	Ramagundam	NH-07 and NH-16 through (Hyderabad-Mancheria Road popularly known as Rajiv Rahadari).	Hyderabad
13	2X660 MW KORADI TPS	MAHAGENCO	STEAG	Koradi of Nagpur District in Maharashtra	Nagpur	From Nagpur-Bhopal National Highway NH-69)	Nagpur
14	2X800 MW APL ASSAM PHASE 1	ADANI POWER LT	NOT APPLICABLE	Village- Chapar, District -Dhubri Assam	Bongaigaon	NH-27 & NH-17	Guwahati
15	2X800 MW APL ASSAM PHASE 2	ADANI POWER LT	NOT APPLICABLE	Village- Chapar, District -Dhubri Assam	Bongaigaon	NH-27 & NH-17	Guwahati
16	2X800 MW APL KAWAI PHASE III	ADANI POWER LT	NOT APPLICABLE	Village- Kawai, Taluka - Atru, District - Baran, Rajasthan	Salpura on Kota-Bina line	NH-90	Jaipur

2)- Based on BHEL requirement listed projects name and location may be changed.

3)- Basic information about the listed projects are mentioned above. However, The Bidder may acquire any additional information about site if required before submission of bid. Project specific other necessary information will be provided to manufacturer on their request.

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SCOPE

SCOPE OF THIS PACKAGE COVERS THE FOLLOWING:

SL.NO	PARAMETERS	REQUIREMENT
1	Supply Including Manufacturing Of ME Bellows	YES
a)	Main Supply	YES
b)	Commissioning Spares	NO
2	Painting	YES
3	Inspection & Testing	YES
4	Packing	YES
5	Transportation & Delivery To Site	YES
6	Erection & Commissioning	NO
7	Supervision of Erection & Commissioning	NO
8	Mandatory Spares	NO
9	O & M Service	NO
10	O & M Spares	NO

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TECHNICAL SPECIFICATION ME BELLOWS FRAMEWORK AGREEMENT		Issue No: 01	
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GENERAL TECHNICAL REQUIREMENT			
1	The Vendor shall manufacture the bellows strictly in accordance with the GA drawings provided along with this specification. Any ambiguity, discrepancy, or clarification required with respect to the constructional or dimensional details shall be brought to the attention of BHEL by the Bidder during the enquiry/bidding stage, prior to submission of the offer. In case any modification or change in the constructional or dimensional details is identified or proposed by the Bidder/Vendor during the manufacturing stage, the same shall be communicated to BHEL for review and approval and if accepted, same shall not have any additional cost implication on BHEL.		
2	The design, manufacturing, performance and testing of the expansion bellows shall conform to the latest editions of the relevant codes and standards inclusive of the stipulations in the latest editions of Expansion Joint Manufacturers Association Standards (EJMA) as well as ASME Section III, ASME Section VIII, ASTM E-165 and ASME- B31.1.		
3	Dimensional tolerance for the expansion bellows should be as per latest edition of EJMA.		
4	The equipment shall comply with all applicable safety codes and statutory regulations of India as well as of the locality where the equipment is to be installed.		
5	In the event of any conflict between the requirements of two clauses of this specification, documents or requirements of different codes and standards specified, the more stringent requirement as per the interpretation of the owner shall apply.		
6	Drawing/document submission shall be through web based Document Management System(DMS) of BHEL. Bidder would be provided access to the DMS for drawing/document submission. Bidder to ensure internet connectivity of min speed of 2Mbps at their end.		
7	Drawings/ documents submitted by vendor at any stage shall be complete in all respects. Any incomplete drawing submitted shall be treated as non- submission with delays attributable to vendor. For any clarification/ discussion required to complete the drawings, the bidder shall depute his personnel to BHEL / Customer's Office as per the requirement for across the table submission/ finalizations of drawings.		
8	Latest codes and standards shall be applicable as on date of bid submission.		
9	Painting Requirement		
9.1	The painting details specified here are tentative and based on past practices. Any project-specific changes or additional requirements with respect to the painting system, surface preparation, coating scheme, or other related details shall be communicated to the Vendor at the time of placement of the Purchase Order for the respective project. The Bidder/Vendor shall accept and comply with such project-specific painting requirements, and the same shall not have any additional cost implication on BHEL.		
9.2	Painting Details for Adani Power Ltd. Projects: i)- Surface Preparation: SP3, Power Tool Cleaning. ii)- Primer cum top coat: Two coat of DTM - Direct to metal epoxy primer cum finish with optimum loading of zinc silicate anti corrosive pigments at 75 microns DFT/coat to be applied by airless/pressure pot. The total thickness of the system will be 225 microns. Volume solids of the DTM coating must be 70%. iii)- Total DFT minimum: 225 microns. iv)- Colour Shade: Aluminium (For Steam System) and Sea Green Shed No. 217(For Condensate System) v)- This paint system is equivalent to the protective paint system no. S3.18 recommended for corrosion category C-3- in iso 12944-5. vi)- Material containing cadmium, lead or any other toxic material to environment/personnel shall not be used.		
9.3	Painting Details for other Projects: i)- Surface Preparation: SP3, Power Tool Cleaning. ii)- For Steam System: a)- Heat resistant Aluminum paint to IS-13183 Gr.-II b)- 2 coats of 20 µm each (Total DFT 40 µm). iii)- For Condensate System: a)- Bellows first shall be painted with two coats of Red Oxide Zinc Phosphate primer (Alkyd base) to IS 12744 with each coat of DFT equal to 25 microns. Finish paint shall be three shop coats (DFT 35 microns each coat) of synthetic enamel paint (long oil alkyd) as per IS: 2932. Total DFT of primer and paint shall be 155 microns.		
10 TYPE TEST REQUIREMENTS:			
10.1	Type tests as per EJMA are required to be carried out for bellows. These shall be done as per classification given below: Based on Diameter of Bellows: The categories are as follows: a)- Nominal dia upto 800mm NB. b)- Nominal dia greater than 800mm NB upto 1600 NB. c)- Each size above 1600mm NB shall be a separate category		
10.2	From each group of bellows, as per clause 10.1 above, Type tests shall be carried out on two nos. of bellows as per EJMA among the bellows of the same group. One bellow (consisntg 2 unit of bellows to maintain the test pressure constant) shall be used for life cycle test and the other for Squirm & Yield rupture test. Other bellows of this group shall be qualified on the basis of this test.		
10.3	If type test has been successfully done for earlier BHEL's project for bellows of same type (same dia. height, pitch, shape of convolution, ply thickness, bellow material and max. movement per convolution) then only test report/certificates (not older than 5 years from date of award of this framework agreement) of same shall be reviewed and no type test needs to be carried out. Type test clearance shall be taken from BHEL prior to offering to routine test. In case type test is to be done, type test procedure approval shall be taken from BHEL/Customer.		
11	Material required for the manufacturing of ME Bellows shall be procured only from reputed and established manufacturers/makes.		
12	Project specific details will be provided at the time of placement of purchase order for individual project.		



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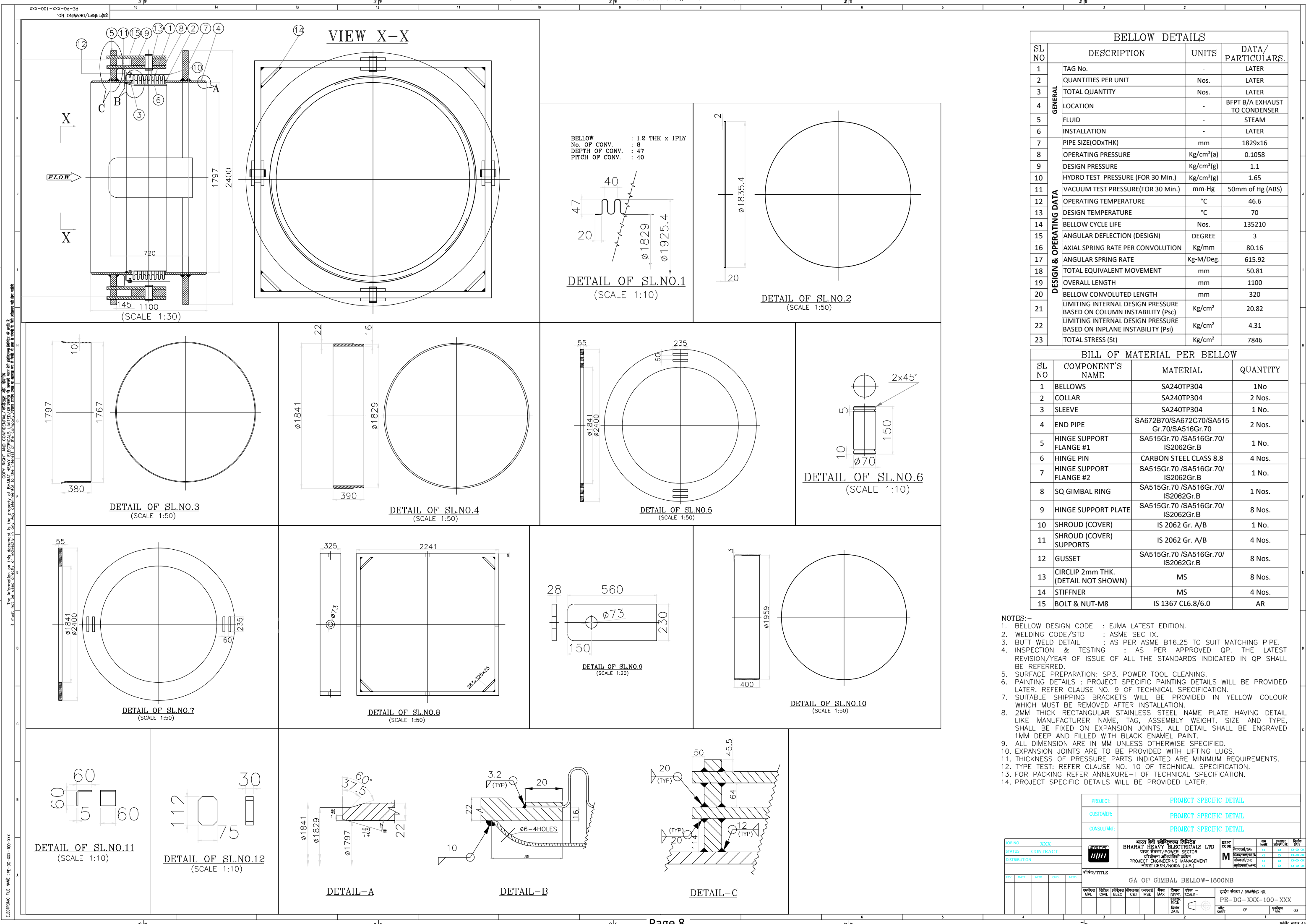
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COMPLIANCE DRAWING

1.0	GA DRAWINGS WITH DETAIL OF DESIGN CODES, STANDARDS, DESIGN/SYSTEM PARAMETRS, CONSTRUCTIONAL FEATURES AND PAINTING	
	1.1	GA OF GIMBAL BELLOW-2000NB
	1.2	GA OF HINGED BELLOW-2000NB
	1.3	GA OF GIMBAL BELLOW-1800NB
	1.4	GA OF HINGED BELLOW-1800NB
	1.5	GA OF GIMBAL BELLOW-1600NB
	1.6	GA OF HINGED BELLOW-1600NB
	1.7	GA OF GIMBAL BELLOW-1200NB
	1.8	GA OF HINGED BELLOW-1200NB
	1.9	GA OF GIMBAL BELLOW-1100NB
	1.1	GA OF HINGED BELLOW-1100NB
	1.11	GA OF HINGED BELLOW-900NB
	1.12	GA OF HINGED BELLOW-800NB
	1.13	GA OF TIED LATERAL BELLOW-800NB
	1.14	GA OF UNTIED BELLOW-550NB
	1.15	GA OF UNTIED BELLOW-500NB
	1.16	GA OF UNTIED BELLOW-450NB
	1.17	GA OF UNTIED BELLOW-300NB

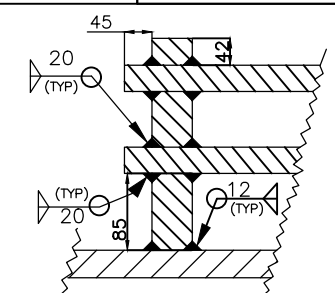


BELLOW DETAILS			
SL NO	DESCRIPTION	UNITS	DATA/PARTICULARS.
1	TAG No.	-	LATER
2	QUANTITIES PER UNIT	Nos.	LATER
3	TOTAL QUANTITY	Nos.	LATER
4	LOCATION	-	BFPT B/A EXHAUST TO CONDENSER
5	FLUID	-	STEAM
6	INSTALLATION	-	LATER
7	PIPE SIZE(ODxTHK)	mm	1829x16
8	OPERATING PRESSURE	Kg/cm ² (a)	0.1058
9	DESIGN PRESSURE	Kg/cm ² (g)	1.1
10	HYDRO TEST PRESSURE (FOR 30 Min.)	Kg/cm ² (g)	1.65
11	VACUUM TEST PRESSURE(FOR 30 Min.)	mm-Hg	50mm of Hg (ABS)
12	OPERATING TEMPERATURE	°C	46.6
13	DESIGN TEMPERATURE	°C	70
14	BELLOW CYCLE LIFE	Nos.	135210
15	ANGULAR DEFLECTION (DESIGN)	DEGREE	3
16	AXIAL SPRING RATE PER CONVOLUTION	Kg/mm	80.16
17	ANGULAR SPRING RATE	Kg-M/Deg.	615.92
18	TOTAL EQUIVALENT MOVEMENT	mm	50.81
19	OVERALL LENGTH	mm	1100
20	BELLOW CONVOLUTED LENGTH	mm	320
21	LIMITING INTERNAL DESIGN PRESSURE BASED ON COLUMN INSTABILITY (P _{sc})	Kg/cm ²	20.82
22	LIMITING INTERNAL DESIGN PRESSURE BASED ON INPLANE INSTABILITY (P _{si})	Kg/cm ²	4.31
23	TOTAL STRESS (St)	Kg/cm ²	7846

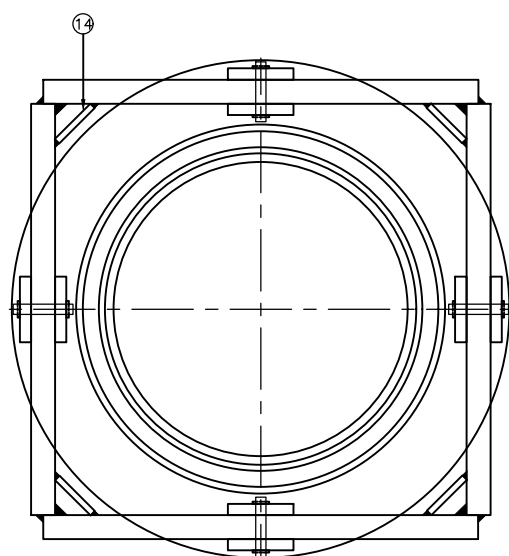
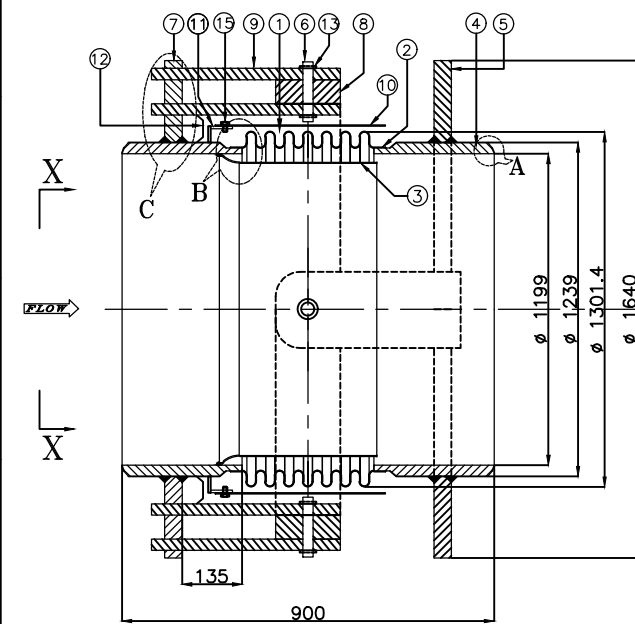
BILL OF MATERIAL PER BELLOW			
SL NO	COMPONENT'S NAME	MATERIAL	QUANTITY
1	BELLOWS	SA240TP304	1No
2	COLLAR	SA240TP304	2 Nos.
3	SLEEVE	SA240TP304	1 No.
4	END PIPE	SA672B70/SA672C70/SA515 Gr.70/SA516Gr.70	2 Nos.
5	HINGE SUPPORT FLANGE #1	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 No.
6	HINGE PIN	CARBON STEEL CLASS 8.8	4 Nos.
7	HINGE SUPPORT FLANGE #2	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 No.
8	SQ GIMBAL RING	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 Nos.
9	HINGE SUPPORT PLATE	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	8 Nos.
10	SHROUD (COVER)	IS 2062 Gr. A/B	1 No.
11	SHROUD (COVER) SUPPORTS	IS 2062 Gr. A/B	4 Nos.
12	GUSSET	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	8 Nos.
13	CIRCLIP 2mm THK. (DETAIL NOT SHOWN)	MS	8 Nos.
14	STIFFNER	MS	4 Nos.
15	BOLT & NUT-M8	IS 1367 CL6.8/6.0	AR

- NOTES:-
1. BELLOW DESIGN CODE : EJMA LATEST EDITION.
 2. WELDING CODE/STD : ASME SEC IX.
 3. BUTT WELD DETAIL : AS PER ASME B16.25 TO SUIT MATCHING PIPE.
 4. INSPECTION & TESTING : AS PER APPROVED QP. THE LATEST REVISION/YEAR OF ISSUE OF ALL THE STANDARDS INDICATED IN QP SHALL BE REFERRED.
 5. SURFACE PREPARATION: SP3, POWER TOOL CLEANING.
 6. PAINTING DETAILS : PROJECT SPECIFIC PAINTING DETAILS WILL BE PROVIDED LATER. REFER CLAUSE NO. 9 OF TECHNICAL SPECIFICATION.
 7. SUITABLE SHIPPING BRACKETS WILL BE PROVIDED IN YELLOW COLOUR WHICH MUST BE REMOVED AFTER INSTALLATION.
 8. 2MM THICK RECTANGULAR STAINLESS STEEL NAME PLATE HAVING DETAIL LIKE MANUFACTURER NAME, TAG, ASSEMBLY WEIGHT, SIZE AND TYPE, SHALL BE FIXED ON EXPANSION JOINTS. ALL DETAIL SHALL BE ENGRAVED 1MM DEEP AND FILLED WITH BLACK ENAMEL PAINT.
 9. ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED.
 10. EXPANSION JOINTS ARE TO BE PROVIDED WITH LIFTING LUGS.
 11. THICKNESS OF PRESSURE PARTS INDICATED ARE MINIMUM REQUIREMENTS.
 12. TYPE TEST: REFER CLAUSE NO. 10 OF TECHNICAL SPECIFICATION.
 13. FOR PACKING REFER ANNEXURE-I OF TECHNICAL SPECIFICATION.
 14. PROJECT SPECIFIC DETAILS WILL BE PROVIDED LATER.

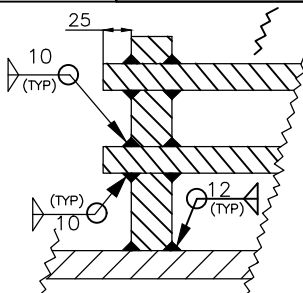
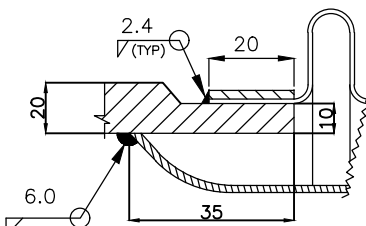
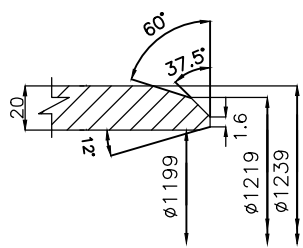
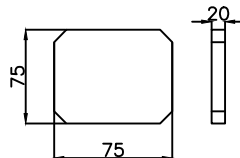
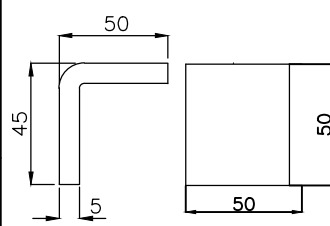
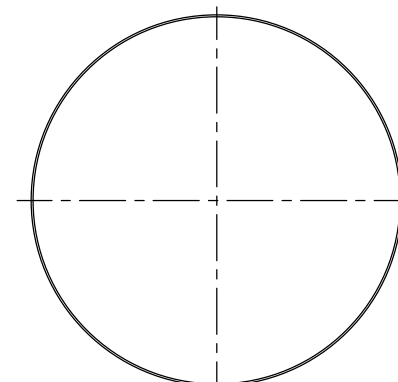
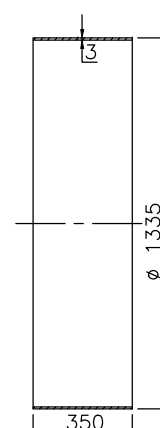
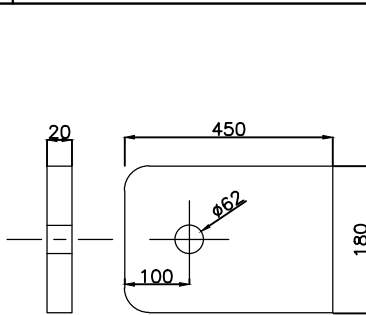
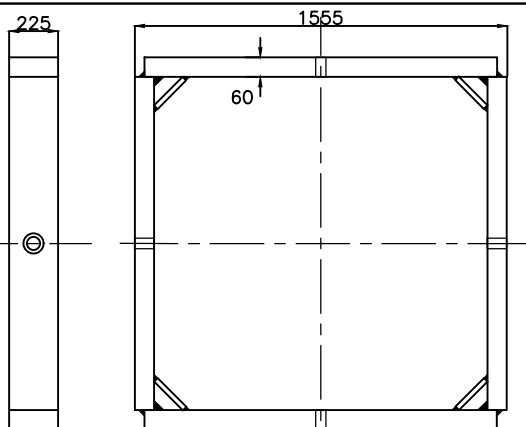
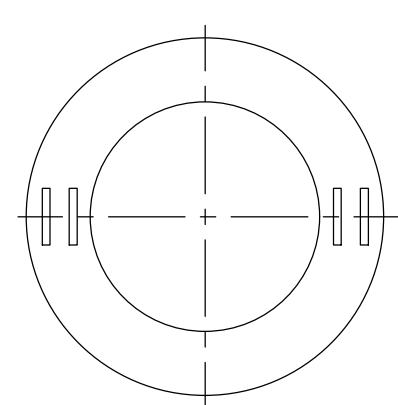
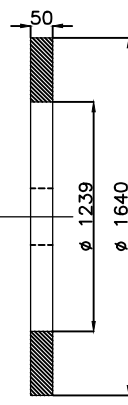
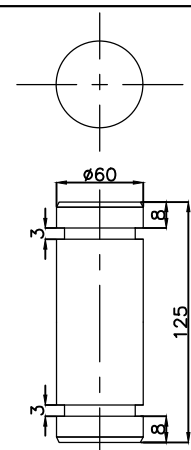
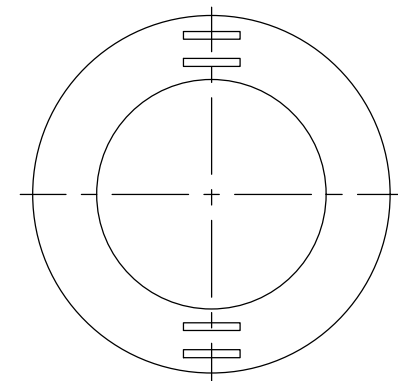
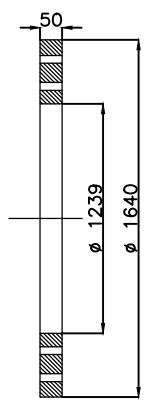
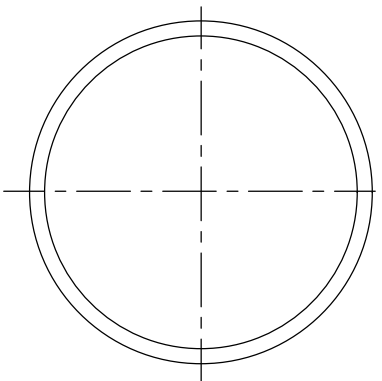
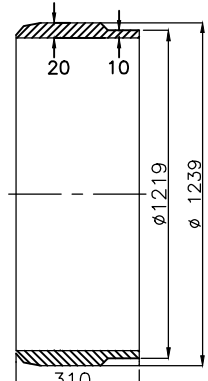
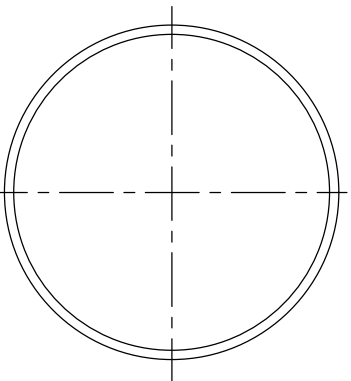
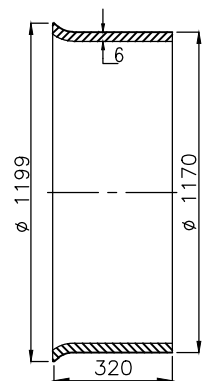
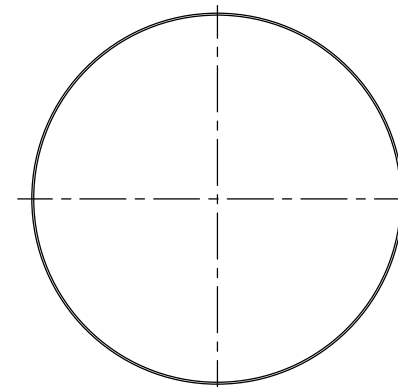
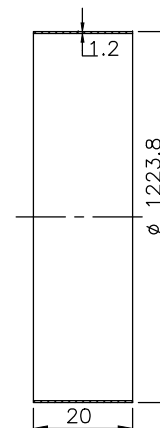
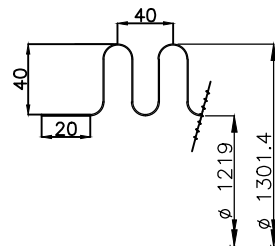
PROJECT:	PROJECT SPECIFIC DETAIL		
CUSTOMER:	PROJECT SPECIFIC DETAIL		
CONSULTANT:	PROJECT SPECIFIC DETAIL		
JOB NO. XXX	भारत हवी इलेक्ट्रिकल्स लिमिटेड BHARAT HEAVY ELECTRICALS LTD	DEPT. CIVIL	डिज़ाइनर/DRN
STATUS CONTRACT	पावर सेक्टर/POWER SECTOR	डिज़ाइनर/DRN	21
DISTRIBUTION	PROJECT ENGINEERING MANAGEMENT	डिज़ाइनर/DRN	22
	नोएडा (उ.प्र.)/NOIDA (U.P.)	डिज़ाइनर/DRN	23
ड्राफ्ट/TITLE	GA OF GIMBAL BELLOW-1800NB		
ड्राफ्ट/SCALE	ड्राफ्ट/SCALE		
ड्राफ्ट/DATE	ड्राफ्ट/DATE		
ड्राफ्ट/REV.	ड्राफ्ट/REV.		

DETAIL-C

CUSTOMER:		PROJECT SPECIFIC DETAIL				
OWNER'S CONSULTANT:		PROJECT SPECIFIC DETAIL				
MANUFACTURER:		PROJECT SPECIFIC DETAIL				
 BHARAT HEAVY ELECTRICALS LTD POWER SECTOR PROJECT ENGINEERING MANAGEMENT NOIDA		DEPT CODE	NAME	SIGN	DATE	
		M	DRN	XX	-XX	XX-XX-XX
			DESN	XX	-XX	XX-XX-XX
			CHD	XX	-XX	XX-XX-XX
			APPD	XX	-XX	XX-XX-XX
TITLE		GIMBAL BELLOW SIZE-1600 NB				
ASSEMBLY WEIGHT :		DEPT.	MPL	DRAWING NO.		
TECH. SPEC.No. : PE-TS-XXX-100-XXX		SIGN		PE-VO-XXX-100-XXX		
14	15			SHEET	1 OF 5	REV. 00



BELLOW : 1.2 THK x 1PLY
No. OF CONV. : 7
DEPTH OF CONV. : 40
PITCH OF CONV. : 40

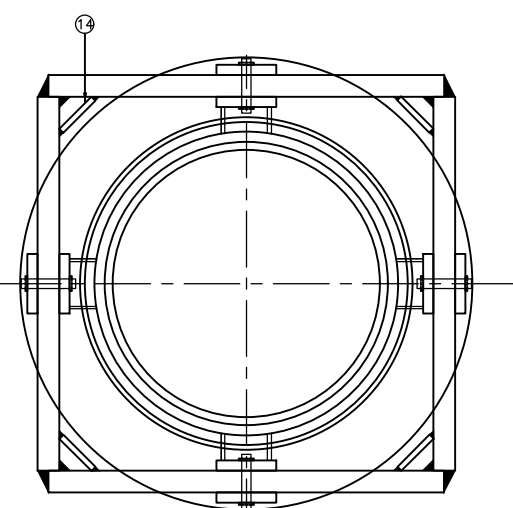
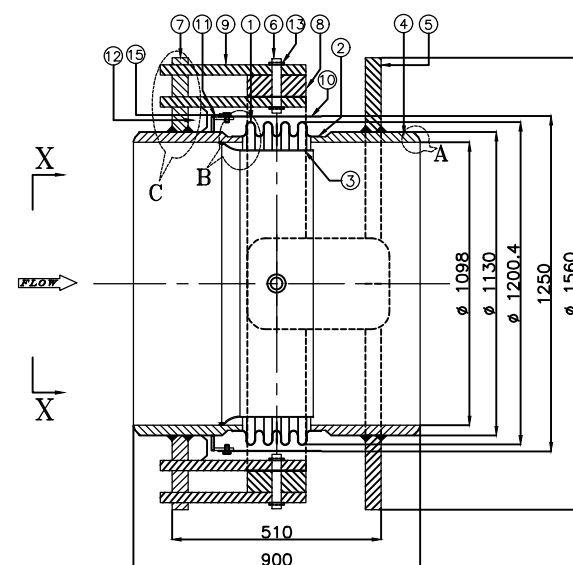


BELLOW DETAILS				
SL NO	M		UNITS	DATA/ PARTICULARS.
1	GENERAL	TAG No.	-	LATER
2		QUANTITIES PER UNIT	Nos.	LATER
3		TOTAL QUANTITY	Nos.	LATER
4		LOCATION	-	LATER
5		FLUID	-	STEAM
6		INSTALLATION	-	LATER
7		PIPE SIZE(ODxTHK)	mm	1219x10
8		OPERATING PRESSURE	Kg/cm ² (g)	0.11
9	DESIGN & OPERATING DATA	DESIGN PRESSURE	Kg/cm ² (g)	1.5
10		HYDRO TEST PRESSURE (FOR 30 Min.)	Kg/cm ² (g)	2.25
11		VACUUM TEST PRESSURE(FOR 30 Min.)	mm-Hg	50 mm of Hg (ABS)
12		OPERATING TEMPERATURE	°C	46.73
13		DESIGN TEMPERATURE	°C	120
14		BELLOW CYCLE LIFE	Nos.	36110
15		ANGULAR DEFLECTION (DESIGN)	DEGREE	4
16		AXIAL SPRING RATE	Kg/mm	86.84
17		ANGULAR SPRING RATE	Kg-M/Deg.	300.66
18		TOTAL EQUIVALENT MOVEMENT	mm	45.63
19		OVERALL LENGTH	mm	900
20		BELLOW CONVOLUTED LENGTH	mm	280
21		LIMITING INTERNAL DESIGN PRESSURE BASED ON COLUMN INSTABILITY (Psc)	Kg/cm ²	25.2
22		LIMITING INTERNAL DESIGN PRESSURE BASED ON INPLANE INSTABILITY (Psi)	Kg/cm ²	4.76
23		TOTAL STRESS (St)	Kg/cm ²	9767.3

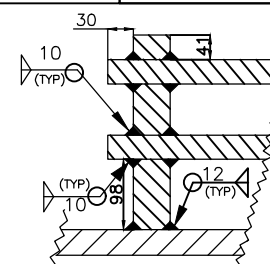
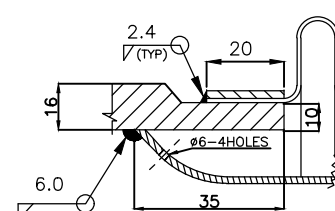
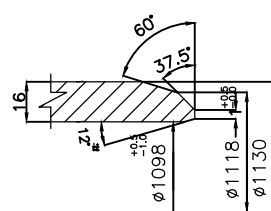
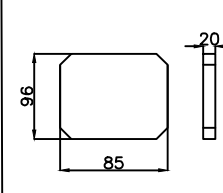
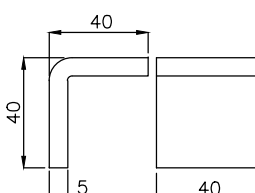
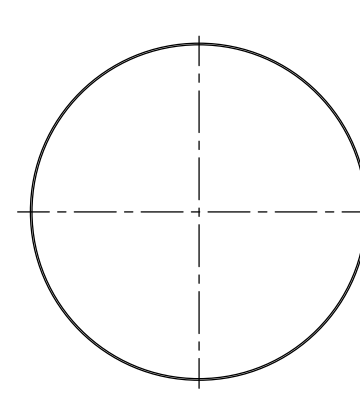
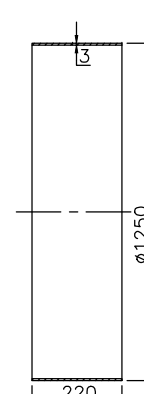
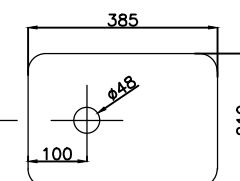
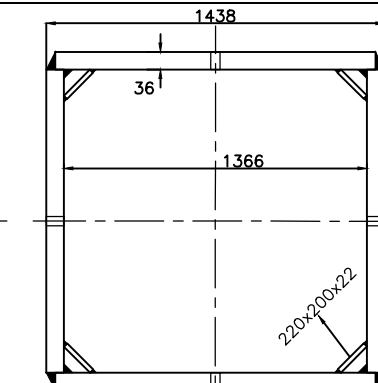
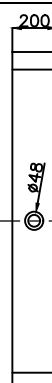
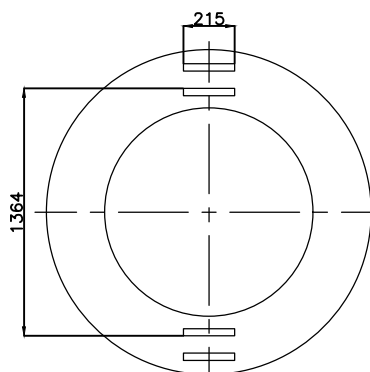
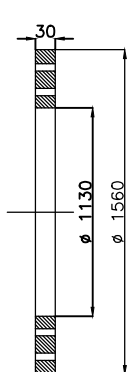
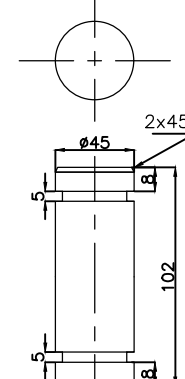
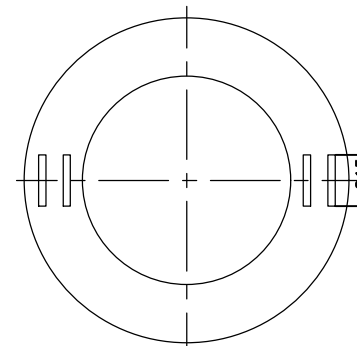
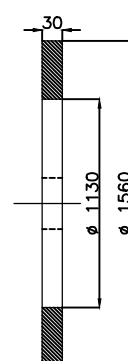
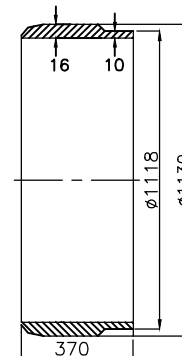
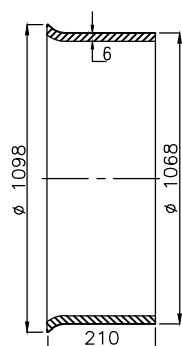
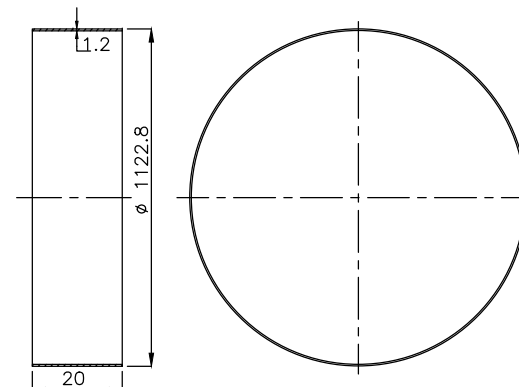
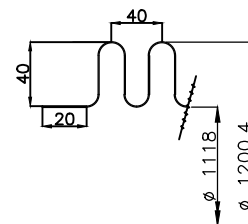
BILL OF MATERIAL			
SL NO	COMPONENT'S NAME	MATERIAL	QUANTITY
1	BELLOWS	SA240TP304	1No
2	COLLAR	SA240TP304	2 Nos.
3	SLEEVE	SA240TP304	1 No.
4	END PIPE	SA672B70/SA515Gr.70/ SA516Gr.70	2 Nos.
5	HINGE SUPPORT FLANGE #1	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 No.
6	HINGE PIN	CARBON STEEL CLASS 8.8	4 Nos.
7	HINGE SUPPORT FLANGE #2	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 No.
8	SQ GIMBAL RING	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 Nos.
9	HINGE SUPPORT PLATE	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	8 Nos.
10	SHROUD (COVER)	IS 2062 Gr. A/B	1 No.
11	SHROUD (COVER) SUPPORTS	IS 2062 Gr. A/B	4 Nos.
12	GUSSET	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	8 Nos.
13	CIRCLIP 2mm THK. (DETAIL NOT SHOWN)	MS	8 Nos.
14	STIFFNER	MS	4 Nos.
15	BOLT & NUT-M8	IS 1367 CL6.8/6.0	12 Nos.

- NOTES:-**
1. BELLOW DESIGN CODE : EJMA LATEST EDITION.
 2. WELDING CODE/STD : ASME SEC IX.
 3. BUTT WELD DETAIL : AS PER ASME B16.20 TO SUIT MATCHING PIPE.
 4. INSPECTION & TESTING : AS PER APPROVED OF THE LATEST REVISION/YEAR OF ISSUE OF ALL THE STANDARDS INDICATED IN OP SHALL BE REFERRED.
 5. SURFACE PREPARATION: SP3, POWER TOOL CLEANING.
 6. PAINTING DETAILS : PROJECT SPECIFIC PAINTING DETAILS WILL BE PROVIDED LATER. REFER CLAUSE NO. 9 OF TECHNICAL SPECIFICATION.
 7. SUITABLE SHIPPING BRACKETS WILL BE PROVIDED IN YELLOW COLOUR WHICH MUST BE REMOVED AFTER INSTALLATION.
 8. 2MM THICK RECTANGULAR STAINLESS STEEL NAME PLATE HAVING DETAIL LIKE MANUFACTURER NAME, TAG, ASSEMBLY WEIGHT, SIZE AND TYPE, SHALL BE FIXED ON EXPANSION JOINTS. ALL DETAIL SHALL BE ENGRAVED 1MM DEEP AND FILLED WITH BLACK ENAMEL PAINT.
 9. ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED.
 10. EXPANSION JOINTS ARE TO BE PROVIDED WITH LIFTING LUGS.
 11. THICKNESS OF PRESSURE PARTS INDICATED ARE MINIMUM REQUIREMENTS.
 12. TYPE TEST: REFER CLAUSE NO. 10 OF TECHNICAL SPECIFICATION.
 13. FOR PACKING REFER ANNEXURE-I OF TECHNICAL SPECIFICATION.
 14. PROJECT SPECIFIC DETAILS WILL BE PROVIDED LATER.

PROJECT:					PROJECT SPECIFIC DETAIL					K																					
CUSTOMER:					PROJECT SPECIFIC DETAIL																										
CONSULTANT:					PROJECT SPECIFIC DETAIL																										
JOB NO. XXX						BHARAT HEAVY ELECTRICALS LTD																									
STATUS CONTRACT						POWER SECTOR																									
DISTRIBUTION						PROJECT ENGINEERING MANAGEMENT NOIDA																									
COPY RIGHT 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.					<table><tr><td>DEPT</td><td>CODE</td><td>NAME</td><td>SIGN</td><td>DATE</td></tr><tr><td rowspan="4">M</td><td>DRN</td><td>XX</td><td>XX</td><td>XX-XX-XX</td></tr><tr><td>CHD</td><td>XX</td><td>XX</td><td>XX-XX-XX</td></tr><tr><td>CHD</td><td>XX</td><td>XX</td><td>XX-XX-XX</td></tr><tr><td>APPD</td><td>XX</td><td>XX</td><td>XX-XX-XX</td></tr></table>					DEPT	CODE	NAME	SIGN	DATE	M	DRN	XX	XX	XX-XX-XX	CHD	XX	XX	XX-XX-XX	CHD	XX	XX	XX-XX-XX	APPD	XX	XX	XX-XX-XX
DEPT	CODE	NAME	SIGN	DATE																											
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	CHD	XX	XX	XX-XX-XX																											
	CHD	XX	XX	XX-XX-XX																											
	APPD	XX	XX	XX-XX-XX																											
REV.	DATE	ALTO	CHD	APPD	TITLE																										
					GA OF GIMBAL BELLOW- SIZE 1200NB																										
					DRAWING NO.																										
					PE-DG-XXX-100-XXX																										
					SHEET OF REV. 00																										



BELLOW : 1.2 THK x 1PLY
No. OF CONV. : 4
DEPTH OF CONV. : 40
PITCH OF CONV. : 40



BELLOW DETAILS			DATE
SL NO	DESCRIPTION	UNITS	DATA/ PARTICULARS
1	TAG No.	-	LATER
2	QUANTITIES PER UNIT	Nos.	LATER
3	TOTAL QUANTITY	Nos.	LATER
4	LOCATION	-	FLASH TANK-A VENT & FLASH TANK-B VENT
5	FLUID	-	STEAM
6	INSTALLATION	-	LATER
7	PIPE SIZE(ODxTHK)	mm	1118x10
8	OPERATING PRESSURE	Kg/cm ² (A)	-
9	DESIGN PRESSURE	Kg/cm ² (G)	1.1
10	HYDRO TEST PRESSURE (FOR 30 Min.)	Kg/cm ² (G)	1.65
11	VACUUM TEST PRESSURE(FOR 30 Min.)	mm-Hg	50mm of Hg (Abs)
12	OPERATING TEMPERATURE	°C	-
13	DESIGN TEMPERATURE	°C	120
14	BELLOW CYCLE LIFE	Nos.	14068
15	ANGULAR DEFLECTION (DESIGN)	DEGREE	3
16	AXIAL SPRING RATE PER CONVOLUTION	Kg/mm	151.20
17	ANGULAR SPRING RATE	Kg-M/ Deg.	443.43
18	TOTAL EQUIVALENT MOVEMENT	mm	30.64
19	OVERALL LENGTH	mm	900
20	BELLOW CONVOLUTED LENGTH	mm	160
21	LIMITING INTERNAL DESIGN PRESSURE BASED ON COLUMN INSTABILITY (P _{sc})	Kg/cm ²	63.58
22	LIMITING INTERNAL DESIGN PRESSURE BASED ON INPLANE INSTABILITY (P _{si})	Kg/cm ²	5.86
23	TOTAL STRESS (St)	Kg/cm ²	11675

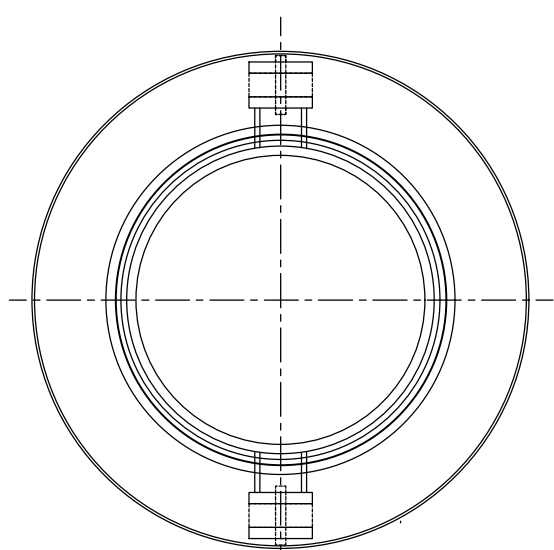
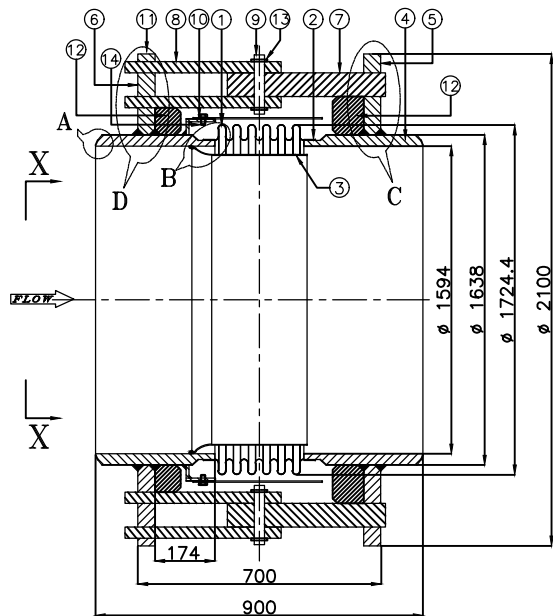
BILL OF MATERIAL FOR SINGLE BELLOW			
SL NO	COMPONENT'S NAME	MATERIAL	QUANTITY
1	BELLOWS	SA240TP304	1No
2	COLLAR	SA240TP304	2 Nos.
3	SLEEVE	SA240TP304	1 No.
4	END PIPE	SA672B70/SA672C70/SA515 Gr.70/SA516Gr.70	2 Nos.
5	HINGE SUPPORT FLANGE #1	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 No.
6	HINGE PIN	CARBON STEEL CLASS 8.8	4 Nos.
7	HINGE SUPPORT FLANGE #2	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 No.
8	SQ GIMBAL RING	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 Nos.
9	HINGE SUPPORT PLATE	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	8 Nos.
10	SHROUD (COVER)	IS 2062 Gr. A/B	1 No.
11	SHROUD (COVER) SUPPORTS	IS 2062 Gr. A/B	4 Nos.
12	GUSSET	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	8 Nos.
13	CIRCLIP 2mm THK. (DETAIL NOT SHOWN)	MS	8 Nos.
14	STIFFENER	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	4 Nos.
15	BOLT & NUT-M8	IS 1367 C16.8/6.0	AR

NOTES:-

1. BELLOW DESIGN CODE : EJMA LATEST EDITION.
2. WELDING CODE/STD : ASME SEC. IX.
3. BUTT WELD TEST : AS PER ASME B16.25 TO SUIT MATCHING PIPE.
4. INSPECTION & TESTING : AS PER APPROVED QP. THE LATEST REVISION/YEAR OF ISSUE OF ALL THE STANDARDS INDICATED IN QP SHALL BE REFERRED.
5. SURFACE PREPARATION: SP3, POWER TOOL CLEANING.
6. PAINTING DETAILS : PROJECT SPECIFIC PAINTING DETAILS WILL BE PROVIDED LATER. REFER CLAUSE NO. 9 OF TECHNICAL SPECIFICATION.
7. SUITABLE SHIPPING BRACKETS WILL BE PROVIDED IN YELLOW COLOUR WHICH MUST BE IDENTICAL TO THE MATERIAL ATTACHED TO THE BRACKET.
8. 2MM THICK RECTANGULAR STAINLESS STEEL NAME PLATE HAVING DETAIL LIKE MANUFACTURER NAME, TAG, ASSEMBLY WEIGHT, SIZE AND TYPE, SHALL BE FIXED ON EXPANSION JOINTS. ALL DETAIL SHALL BE ENGRAVED 1MM DEEP AND FILLED WITH BLACK ENAMEL PAINT.
9. ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED.
10. EXPANSION JOINTS ARE TO BE PROVIDED WITH LIFTING LUGS.
11. THICKNESS OF PRESSURE PARTS INDICATED ARE MINIMUM REQUIREMENTS.
12. TYPE TEST: REFER CLAUSE NO. 10 OF TECHNICAL SPECIFICATION.
13. FOR PACKING REFER ANNEXURE-I OF TECHNICAL SPECIFICATION.
14. PROJECT SPECIFIC DETAILS WILL BE PROVIDED LATER.

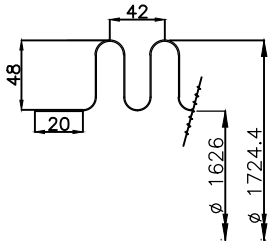
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CUSTOMER:					PROJECT SPECIFIC DETAIL	
CONSULTANT:					PROJECT SPECIFIC DETAIL	



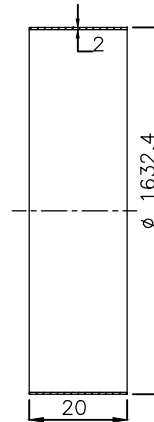
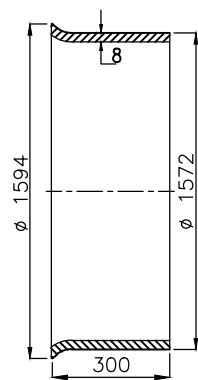


VIEW X-X

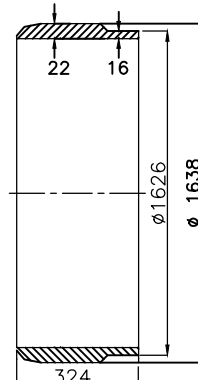
BELLOW : 1.2 THK x 1PLY
No. OF CONV. : 6
DEPTH OF CONV. : 48
PITCH OF CONV. : 42



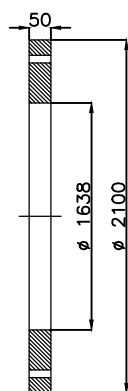
DETAIL OF SL.NO.1

DETAIL OF SL.NO.2

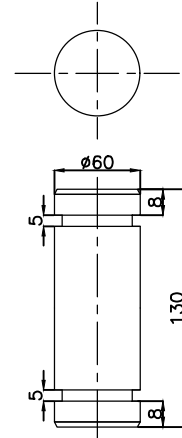
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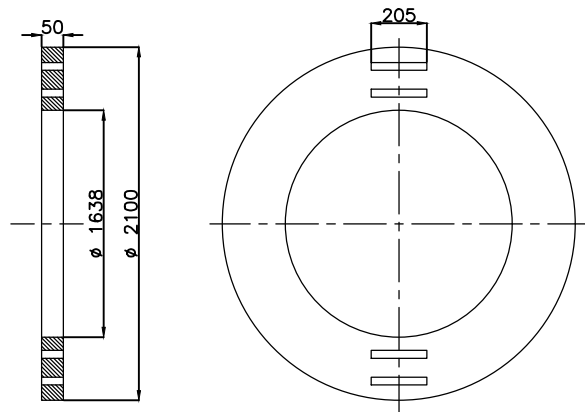
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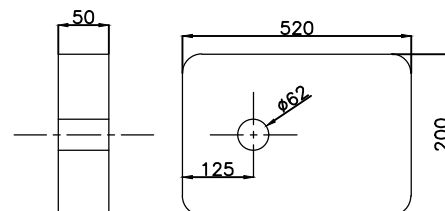
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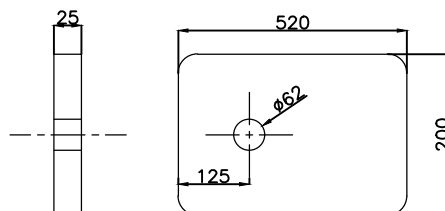
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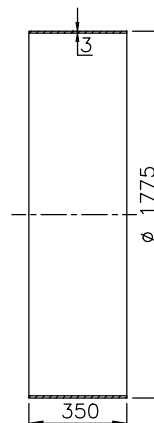
DETAIL OF SL.NO.7



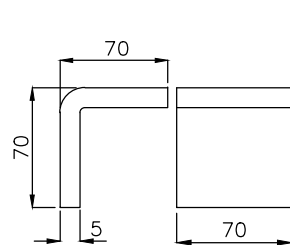
DETAIL OF SL.NO.8



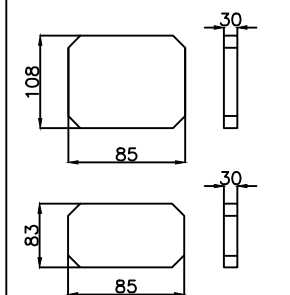
DETAIL OF SL.NO.9



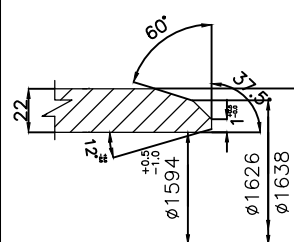
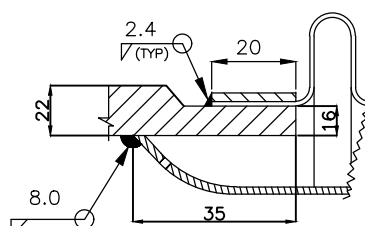
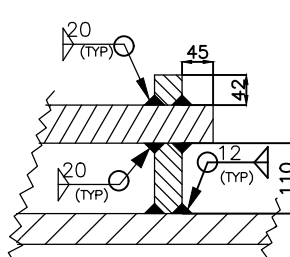
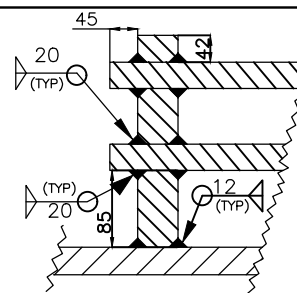
DETAIL OF SL.NO.10



DETAIL OF SL.NO.11



DETAIL OF SL.NO.12

DETAIL-ADETAIL-BDETAIL-C

DETAIL-D

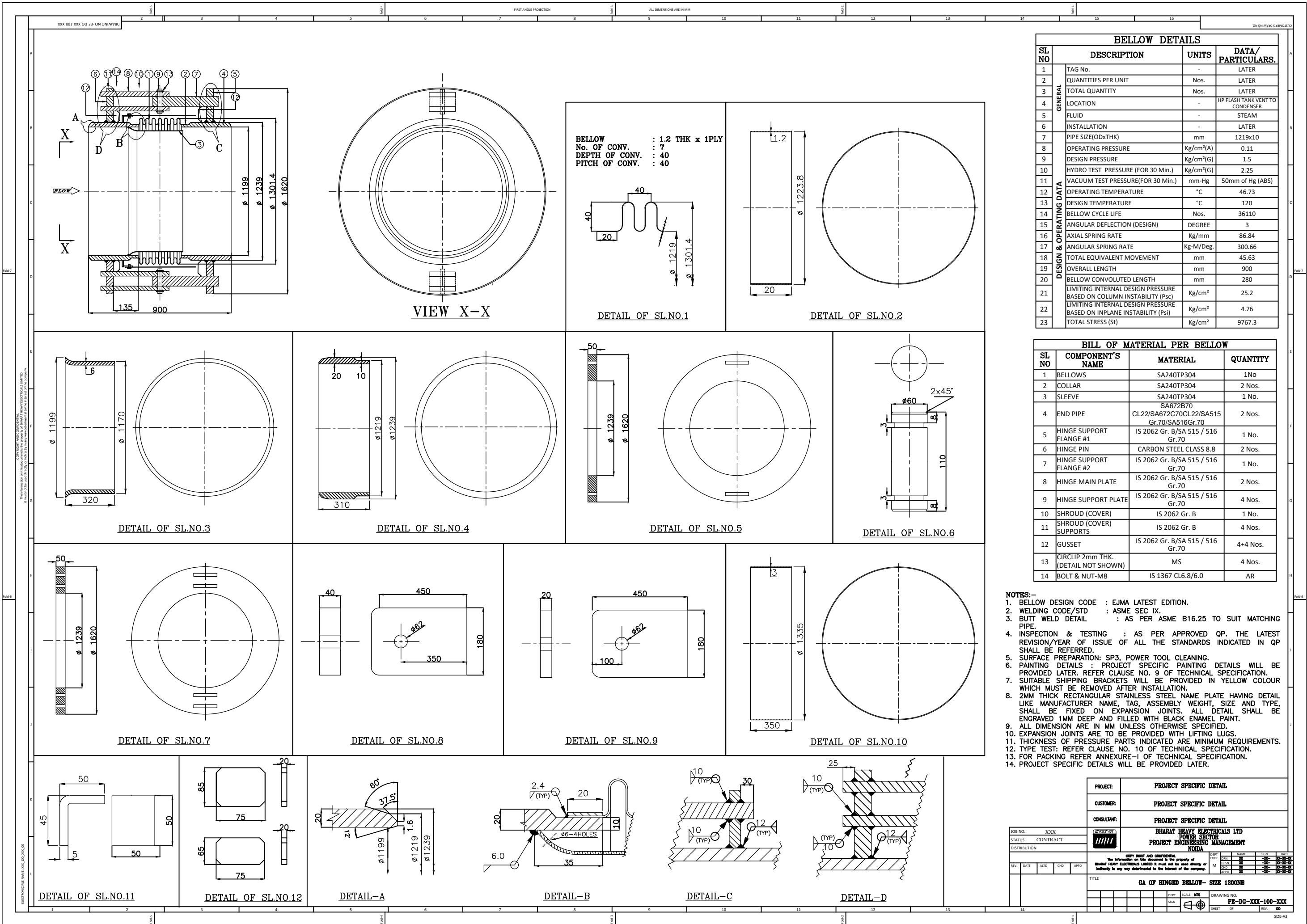
BELLOW DETAILS			
SL NO	DESCRIPTION	UNITS	DATA/ PARTICULARS.
1	TAG No.	-	LATER
2	QUANTITIES PER UNIT	Nos.	LATER
3	TOTAL QUANTITY	Nos.	LATER
4	LOCATION	-	BFFT EXHAUST TO HOTBOX
5	FLUID	-	STEAM
6	INSTALLATION	-	LATER
7	PIPE SIZE(ODxTHK)	mm	1626x16
8	OPERATING PRESSURE	Kg/cm ² (A)	0.2271
9	DESIGN PRESSURE	Kg/cm ² (g)	1.1
10	HYDRO TEST PRESSURE (FOR 30 Min.)	Kg/cm ² (g)	1.65
11	VACUUM TEST PRESSURE(FOR 30 Min.)	mm-Hg	50 mm of Hg(Abs)
12	OPERATING TEMPERATURE	°C	62.44
13	DESIGN TEMPERATURE	°C	70
14	BELLOW CYCLE LIFE	Nos.	71989
15	ANGULAR DEFLECTION (DESIGN)	DEGREE	3
16	AXIAL SPRING RATE PER CONVOLUTION	Kg/mm	89.19
17	ANGULAR SPRING RATE	Kg-M/Deg.	546.12
18	TOTAL EQUIVALENT MOVEMENT	mm	44.93
19	OVERALL LENGTH	mm	900
20	BELLOW CONVOLUTED LENGTH	mm	252
21	LIMITING INTERNAL DESIGN PRESSURE BASED ON COLUMN INSTABILITY (Psc)	Kg/cm ²	25.96
22	LIMITING INTERNAL DESIGN PRESSURE BASED ON INPLANE INSTABILITY (Psi)	Kg/cm ²	4.52
23	TOTAL STRESS (St)	Kg/cm ²	8670.79

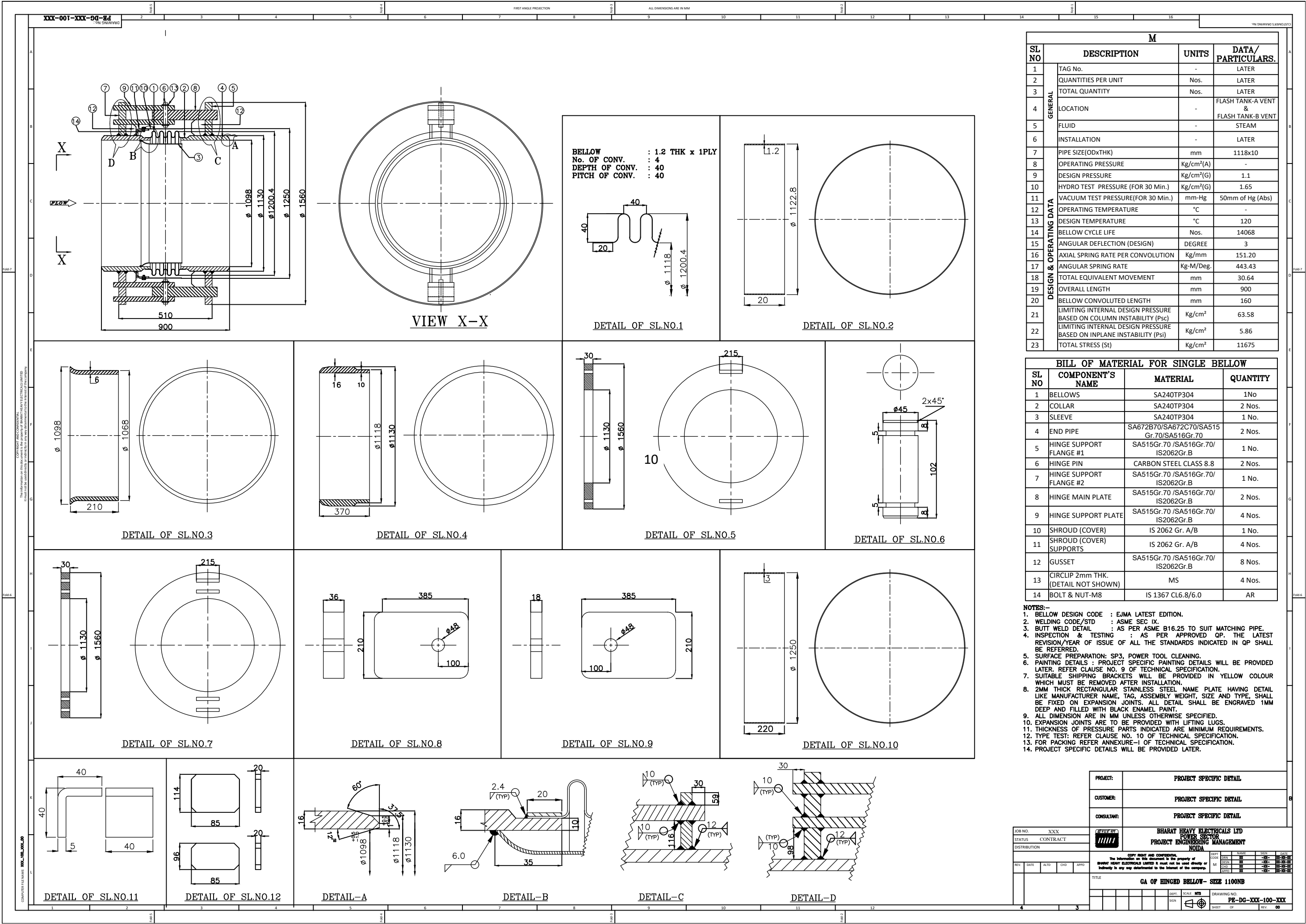
BILL OF MATERIAL FOR SINGLE BELLOW			
SL NO	COMPONENT'S NAME	MATERIAL	QUANTITY
1	BELLOWS	SA240TP304	1No
2	COLLAR	SA240TP304	2 Nos.
3	SLEEVE	SA240TP304	1 No.
4	END PIPE	SA672B70/SA672C70/SA515Gr.70 /SA516Gr.70	2 Nos.
5	HINGE SUPPORT FLANGE #1	IS 2062 Gr. B/SA 515 / 516 Gr.70	1 No.
6	HINGE PIN	CARBON STEEL CLASS 8.8	2 Nos.
7	HINGE SUPPORT FLANGE #2	IS 2062 Gr. B/SA 515 / 516 Gr.70	1 No.
8	HINGE MAIN PLATE	IS 2062 Gr. B/SA 515 / 516 Gr.70	2 Nos.
9	HINGE SUPPORT PLATE	IS 2062 Gr. B/SA 515 / 516 Gr.70	4 Nos.
10	SHROUD (COVER)	IS 2062 Gr. A/B	1 No.
11	SHROUD (COVER) SUPPORTS	IS 2062 Gr. A/B	4 Nos.
12	GUSSET	IS 2062 Gr. B/SA 515 / 516 Gr.70	8 Nos.
13	CIRCLIP 2mm THK. (DETAIL NOT SHOWN)	MS	8 Nos.
14	BOLT & NUT-M8	IS 1367 CL6.8/6.0	AR

NOTES:-

1. BELLOW DESIGN CODE : EJMA LATEST EDITION.
2. WELDING CODE/STD : ASME SEC IX.
3. BUTT WELD DETAIL : AS PER ASME B16.25 TO SUIT MATCHING PIPE.
4. INSPECTION & TESTING : AS PER APPROVED QP. THE LATEST REVISION/YEAR OF ISSUE OF ALL THE STANDARDS INDICATED IN QP SHALL BE REFERRED.
5. SURFACE PREPARATION: SP3, POWER TOOL CLEANING.
6. PAINTING DETAILS : PROJECT SPECIFIC PAINTING DETAILS WILL BE PROVIDED LATER. REFER CLAUSE NO. 9 OF TECHNICAL SPECIFICATION.
7. SUITABLE SHIPPING BRACKETS WILL BE PROVIDED IN YELLOW COLOUR WHICH MUST BE REMOVED AFTER INSTALLATION.
8. 2MM THICK RECTANGULAR STAINLESS STEEL NAME PLATE HAVING DETAIL LIKE MANUFACTURER NAME, TAG, ASSEMBLY WEIGHT, SIZE AND TYPE, SHALL BE FIXED ON EXPANSION JOINTS. ALL DETAIL SHALL BE ENGRAVED 1MM DEEP AND FILLED WITH BLACK ENAMEL PAINT.
9. ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED.
10. EXPANSION JOINTS ARE TO BE PROVIDED WITH LIFTING LUGS.
11. THICKNESS OF PRESSURE PARTS INDICATED ARE MINIMUM REQUIREMENTS.
12. TYPE TEST: REFER CLAUSE NO. 10 OF TECHNICAL SPECIFICATION.
13. FOR PACKING REFER ANNEXURE-I OF TECHNICAL SPECIFICATION.
14. PROJECT SPECIFIC DETAILS WILL BE PROVIDED LATER.

CUSTOMER:	PROJECT SPECIFIC DETAIL					
OWNER'S CONSULTANT:	PROJECT SPECIFIC DETAIL					
MANUFACTURER:	PROJECT SPECIFIC DETAIL					
	BHARAT HEAVY ELECTRICALS LTD		DEPT CODE	NAME	SIGN	DATE
	POWER SECTOR		M	XX	-XX-	XX-XX-XX
	PROJECT ENGINEERING MANAGEMENT		CHD	XX	-XX-	XX-XX-XX
	NOIDA		CHD	XX	-XX-	XX-XX-XX
			APPD	XX	-XX-	XX-XX-XX
TITLE	HINGED ANGULAR BELLOWS SIZE-1600 NB					
ASSEMBLY WEIGHT :	DEPT.		MPL		DRAWING NO.	
TECH. SPEC.No. : PE-TS-XXX-100-XXX	SIGN				PE-V0-XXX-100-XXX	
			SHEET		OF	REV.00



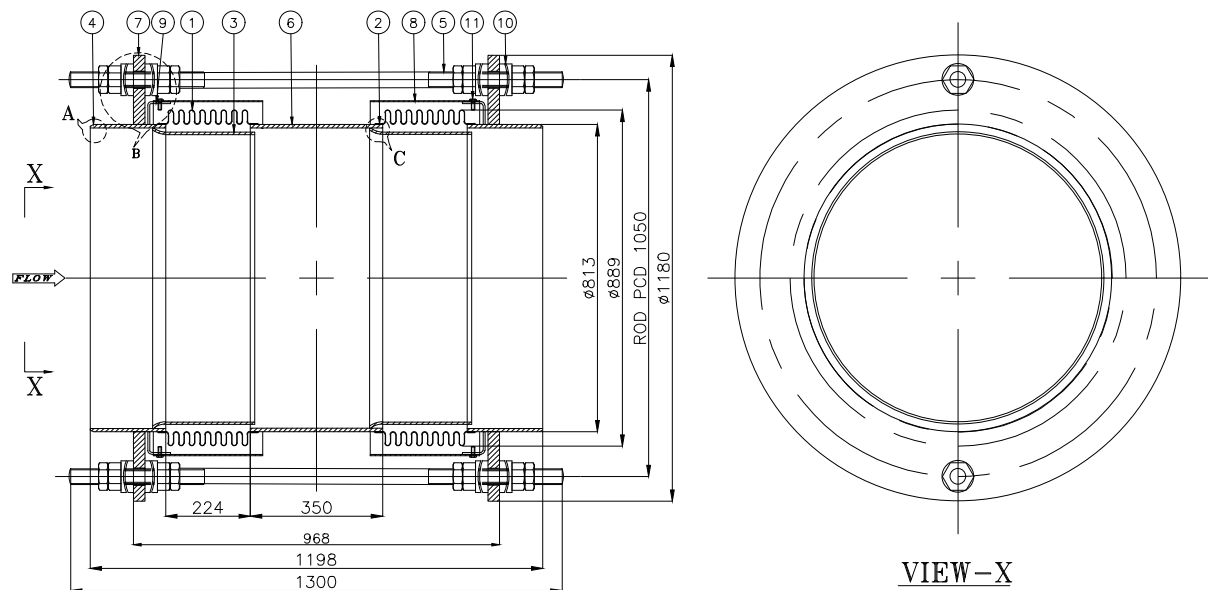


M			
SL NO	DESCRIPTION	UNITS	DATA/PARTICULARS.
1	TAG No.	-	LATER
2	QUANTITIES PER UNIT	Nos.	LATER
3	TOTAL QUANTITY	Nos.	LATER
4	LOCATION	-	FLASH TANK-A VENT & FLASH TANK-B VENT
5	FLUID	-	STEAM
6	INSTALLATION	-	LATER
7	PIPE SIZE(ODxTHK)	mm	1118x10
8	OPERATING PRESSURE	Kg/cm ² (A)	-
9	DESIGN PRESSURE	Kg/cm ² (G)	1.1
10	HYDRO TEST PRESSURE (FOR 30 Min.)	Kg/cm ² (G)	1.65
11	VACUUM TEST PRESSURE(FOR 30 Min.)	mm-Hg	50mm of Hg (Abs)
12	OPERATING TEMPERATURE	°C	-
13	DESIGN TEMPERATURE	°C	120
14	BELLOW CYCLE LIFE	Nos.	14068
15	ANGULAR DEFLECTION (DESIGN)	DEGREE	3
16	AXIAL SPRING RATE PER CONVOLUTION	Kg/mm	151.20
17	ANGULAR SPRING RATE	Kg-M/Deg.	443.43
18	TOTAL EQUIVALENT MOVEMENT	mm	30.64
19	OVERALL LENGTH	mm	900
20	BELLOW CONVOLUTED LENGTH	mm	160
21	LIMITING INTERNAL DESIGN PRESSURE BASED ON COLUMN INSTABILITY (Psc)	Kg/cm ²	63.58
22	LIMITING INTERNAL DESIGN PRESSURE BASED ON INPLANE INSTABILITY (Psi)	Kg/cm ²	5.86
23	TOTAL STRESS (St)	Kg/cm ²	11675

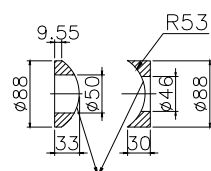
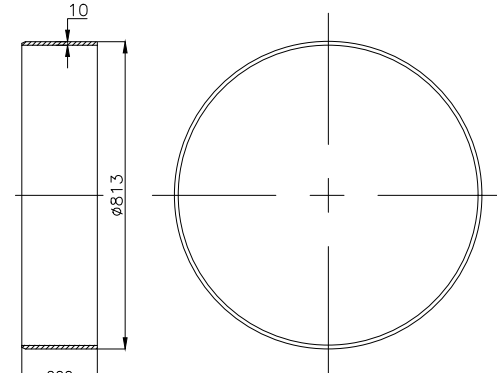
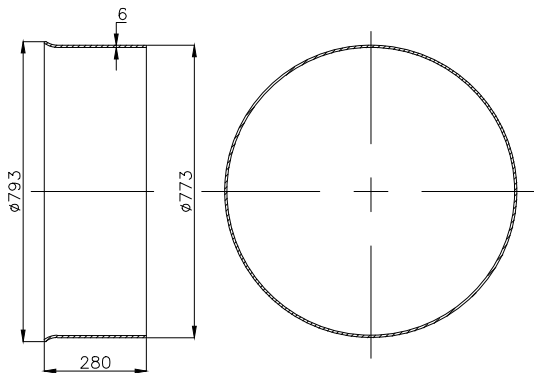
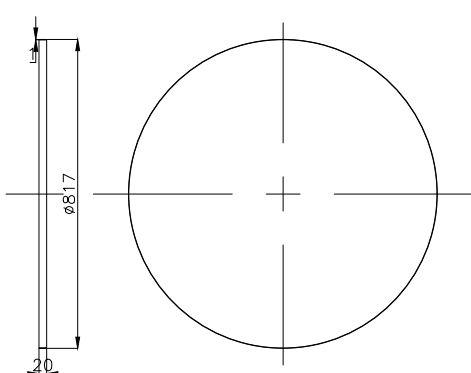
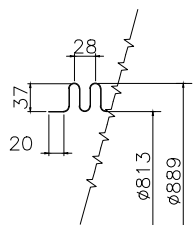
BILL OF MATERIAL FOR SINGLE BELLOW			
SL NO	COMPONENT'S NAME	MATERIAL	QUANTITY
1	BELLOWS	SA240TP304	1No
2	COLLAR	SA240TP304	2 Nos.
3	SLEEVE	SA240TP304	1 No.
4	END PIPE	SA672B70/SA672C70/SA515 Gr.70/SA516Gr.70	2 Nos.
5	HINGE SUPPORT FLANGE #1	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 No.
6	HINGE PIN	CARBON STEEL CLASS 8.8	2 Nos.
7	HINGE SUPPORT FLANGE #2	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	1 No.
8	HINGE MAIN PLATE	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	2 Nos.
9	HINGE SUPPORT PLATE	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	4 Nos.
10	SHROUD (COVER)	IS 2062 Gr. A/B	1 No.
11	SHROUD (COVER) SUPPORTS	IS 2062 Gr. A/B	4 Nos.
12	GUSSET	SA515Gr.70 /SA516Gr.70/ IS2062Gr.B	8 Nos.
13	CIRCLIP 2mm THK. (DETAIL NOT SHOWN)	MS	4 Nos.
14	BOLT & NUT-M8	IS 1367 CL6.8/6.0	AR

- NOTES:-
1. BELLOW DESIGN CODE : EJMA LATEST EDITION.
 2. WELDING CODE/STD : ASME SEC IX.
 3. BUTT WELD DETAIL : AS PER ASME B16.25 TO SUIT MATCHING PIPE.
 4. INSPECTION & TESTING : AS PER APPROVED QP. THE LATEST REVISION/YEAR OF ISSUE OF ALL THE STANDARDS INDICATED IN QP SHALL BE REFERRED.
 5. SURFACE PREPARATION: SP3, POWER TOOL CLEANING.
 6. PAINTING DETAILS : PROJECT SPECIFIC PAINTING DETAILS WILL BE PROVIDED LATER. REFER CLAUSE NO. 9 OF TECHNICAL SPECIFICATION.
 7. SUITABLE SHIPPING BRACKETS WILL BE PROVIDED IN YELLOW COLOUR WHICH MUST BE REMOVED AFTER INSTALLATION.
 8. 2MM THICK RECTANGULAR STAINLESS STEEL NAME PLATE HAVING DETAIL LIKE MANUFACTURER NAME, TAG, ASSEMBLY WEIGHT, SIZE AND TYPE, SHALL BE FIXED ON EXPANSION JOINTS. ALL DETAIL SHALL BE ENGRAVED 1MM DEEP AND FILLED WITH BLACK ENAMEL PAINT.
 9. ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED.
 10. EXPANSION JOINTS ARE TO BE PROVIDED WITH LIFTING LUGS.
 11. THICKNESS OF PRESSURE PARTS INDICATED ARE MINIMUM REQUIREMENTS.
 12. TYPE TEST- REFER CLAUSE NO. 10 OF TECHNICAL SPECIFICATION.
 13. FOR PACKING REFER ANNEXURE-I OF TECHNICAL SPECIFICATION.
 14. PROJECT SPECIFIC DETAILS WILL BE PROVIDED LATER.

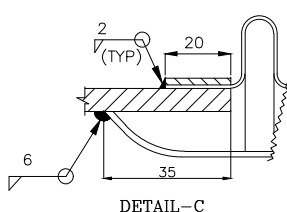
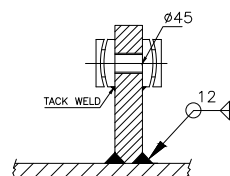
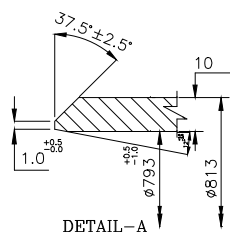
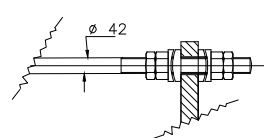
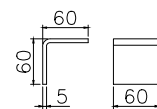
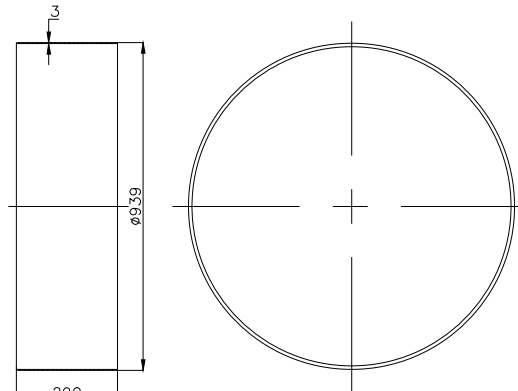
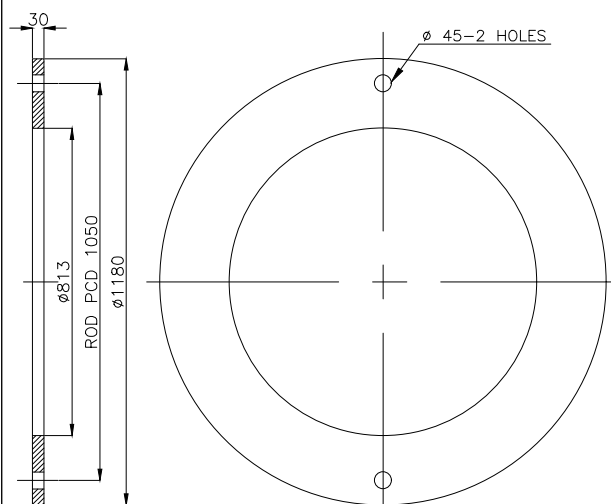
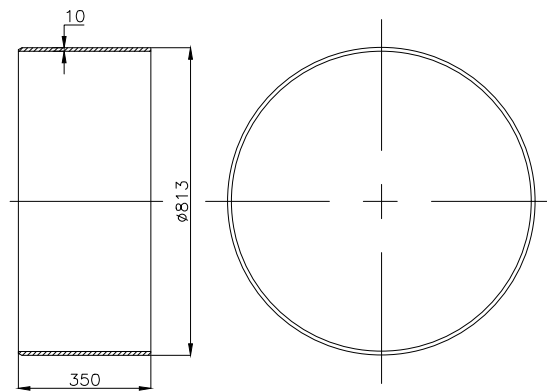
PROJECT:	PROJECT SPECIFIC DETAIL																
CUSTOMER:	PROJECT SPECIFIC DETAIL																
CONSULTANT:	PROJECT SPECIFIC DETAIL																
JOB NO. XXXX STATUS CONTRACT DISTRIBUTION	 BHARAT HEAVY ELECTRICALS LTD POWER SECTOR PROJECT ENGINEERING MANAGEMENT NOIDA																
REV. DATE ALTD. CHD. APPD.	<table><tr><td>DEPT.</td><td>SCALE</td><td>NTS</td><td>DRAWING NO.</td></tr><tr><td>DESIGN</td><td>1:1</td><td>1:1</td><td>PE-DG-XXX-100-XXX</td></tr><tr><td>CHKD.</td><td>1:1</td><td>1:1</td><td></td></tr><tr><td>APPD.</td><td>1:1</td><td>1:1</td><td></td></tr></table>	DEPT.	SCALE	NTS	DRAWING NO.	DESIGN	1:1	1:1	PE-DG-XXX-100-XXX	CHKD.	1:1	1:1		APPD.	1:1	1:1	
DEPT.	SCALE	NTS	DRAWING NO.														
DESIGN	1:1	1:1	PE-DG-XXX-100-XXX														
CHKD.	1:1	1:1															
APPD.	1:1	1:1															
TITLE GA OF HINGED BELLOW- SIZE 1100NB																	
SHEET OF REV. 00																	



BELLOW : 1.0 THK x 1PLY
No. OF CONV. : 8 + 8
DEPTH OF CONV. : 37
PITCH OF CONV. : 28



SURFACE FINISH 02 TO 0.4 MICRON,
CASE HARDENED HRC-55-65



BELLOW DETAILS			
SL NO	DESCRIPTION	UNITS	DATA/ PARTICULARS.
1	TAG No.	-	LATER
2	QUANTITIES PER SET	Nos.	LATER
3	TOTAL QUANTITY	Nos.	LATER
4	LOCATION	-	FLASH TANK-A/B VENT
5	FLUID	-	STEAM
6	INSTALLATION	-	LATER
7	PIPE SIZE(ODxTHK)	mm	813 x 10
8	OPERATING PRESSURE	Kg/cm ² (A)	-
9	DESIGN PRESSURE	Kg/cm ² (G)	1.1
10	HYDRO TEST PRESSURE (FOR 30 Min.)	Kg/cm ² (G)	1.65
11	VACUUM TEST PRESSURE(FOR 30 Min.)	mm-Hg	50 mm of Hg (ABS)
12	OPERATING TEMPERATURE	°C	102
13	DESIGN TEMPERATURE	°C	120
14	BELLOW CYCLE LIFE	Nos.	682782
15	LATERAL DEFLECTION (DESIGN)	mm	30
16	AXIAL SPRING RATE PER CONVOLUTION	Kg/mm	21.74
17	LATERAL SPRING RATE	Kg/mm	22.74
18	ANGULAR SPRING RATE AT EACH END	Kg-M/Deg.	47.74
19	ANGULAR SPRING RATE FOR FULL ASSEMBLY	Kg-M/Deg.	95.47
20	TOTAL EQUIVALENT MOVEMENT (FOR ASSEMBLY)	mm	58.84
21	TOTAL EQUIVALENT MOVEMENT (PER BELLOW)	mm	29.42
22	OVERALL LENGTH	mm	1198
23	BELLOW CENTER DISTANCE	mm	574
24	BELLOW CONVOLUTED LENGTH	mm	224
25	LIMITING INTERNAL DESIGN PRESSURE BASED ON COLUMN INSTABILITY (Psc)	Kg/cm ²	5.18
26	LIMITING INTERNAL DESIGN PRESSURE BASED ON INPLANE INSTABILITY (Psi)	Kg/cm ²	5.91
27	TOTAL STRESS (St)	Kg/cm ²	6311.62

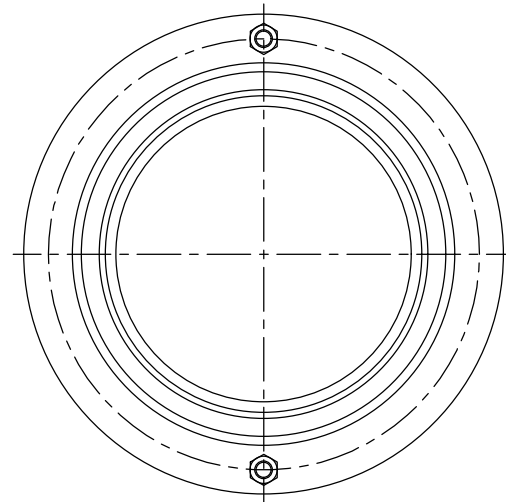
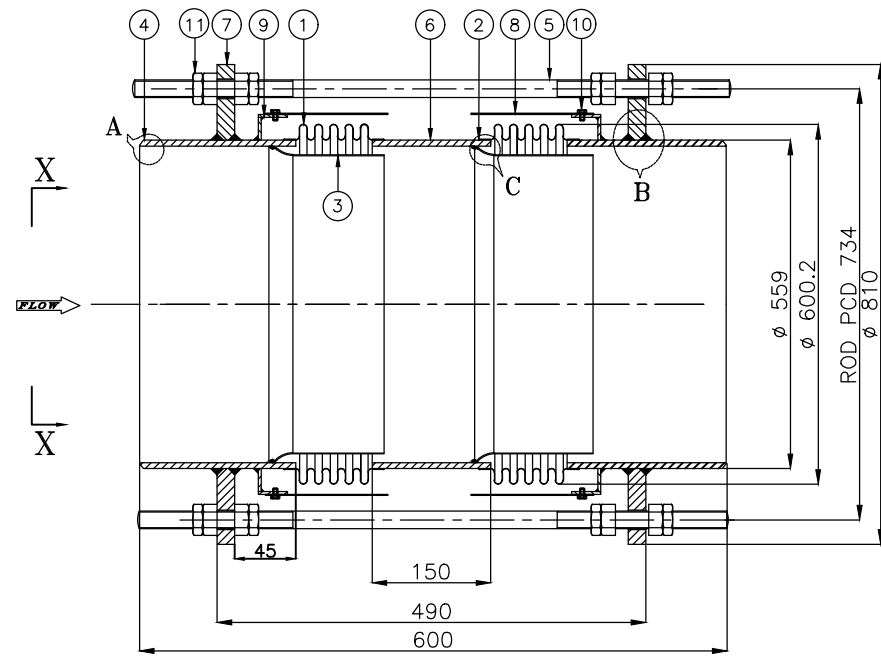
BILL OF MATERIAL PER BELLOW			
SL NO	COMPONENT'S NAME	MATERIAL	QUANTITY
1	BELLOWS	SA240TP304	2 Nos.
2	COLLAR	SA240TP304	4 Nos.
3	SLEEVE	SA240TP304	2 Nos.
4	END PIPE	SA672B70/SA672C70/ SA515GR.70/SA516GR.70	2 Nos.
5	SPHERICAL WASHER	SA515GR.60	8 Nos.
6	SPOOL PIPE	SA672B70/SA672C70/ SA515GR.70/SA516GR.70	1 No.
7	ROUND FLANGE	IS 2062 Gr. B/SA 515 / 516 Gr.70	2 Nos.
8	SHROUD (COVER)	IS 2062 Gr. A/B	2 Nos.
9	SHROUD (COVER) SUPPORTS	IS 2062 Gr. A/B	4 Nos.
10	LIMIT ROD WITH NUTS	IS 1367 (CL. 6.8 & 6.0)	2 Nos.
11	M8 BOLT & NUT	IS 1367 CL.4.6/4.0	AR

NOTES:—

1. BELLOW DESIGN CODE : EJMA LATEST EDITION.
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6. PAINTING DETAILS : PROJECT SPECIFIC PAINTING DETAILS WILL BE PROVIDED LATER. REFER CLAUSE NO. 9 OF TECHNICAL SPECIFICATION.
7. SUITABLE SHIPPING BRACKETS WILL BE PROVIDED IN YELLOW COLOUR WHICH MUST BE REMOVED AFTER INSTALLATION.
8. 2MM THICK RECTANGULAR STAINLESS STEEL NAME PLATE HAVING DETAIL LIKE MANUFACTURER NAME, TAG, ASSEMBLY WEIGHT, SIZE AND TYPE, SHALL BE FIXED ON EXPANSION JOINTS. ALL DETAIL SHALL BE ENGRAVED 1MM DEEP AND FILLED WITH BLACK ENAMEL PAINT.
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11. THICKNESS OF PRESSURE PARTS INDICATED ARE MINIMUM REQUIREMENTS.
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13. FOR PACKING REFER ANNEXURE-I OF TECHNICAL SPECIFICATION.
14. PROJECT SPECIFIC DETAILS WILL BE PROVIDED LATER.

PROJECT:	PROJECT SPECIFIC DETAIL
CUSTOMER:	PROJECT SPECIFIC DETAIL
CONSULTANT:	PROJECT SPECIFIC DETAIL

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VIEW X-X

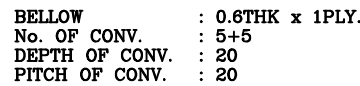
BELLOW DETAILS			
SL NO	DESCRIPTION	UNITS	DATA/ PARTICULARS.
1	TAG No.	-	LATER
2	QUANTITIES PER UNIT	Nos.	LATER
3	TOTAL QUANTITY	Nos.	LATER
4	LOCATION	-	MAIN CONDENSATE SUCTION
5	FLUID	-	CONDENSATE
6	INSTALLATION	-	HORIZONTAL
7	PIPE SIZE(ODxTHK)	mm	559 x 10
8	OPERATING PRESSURE	Kg/cm ² (A)	0.26
9	DESIGN PRESSURE	Kg/cm ² (G)	2.0
10	HYDRO TEST PRESSURE (FOR 30 Min.)	Kg/cm ² (G)	3.0
11	VACUUM TEST PRESSURE(FOR 30 Min.)	mm-Hg	50 mm of Hg (Abs)
12	OPERATING TEMPERATURE	°C	65
13	DESIGN TEMPERATURE	°C	75
14	BELLOW CYCLE LIFE	Nos.	14474
15	AXIAL COMPRESSION (DESIGN)	mm	15
16	LATERAL DEFLECTION (DESIGN)	mm	7
17	AXIAL SPRING RATE/CONVOLUTION	Kg/mm	30.60
18	LATERAL SPRING RATE PER ASSEMBLY	Kg/mm	84.1
19	ANGULAR SPRING RATE	Kg-M/Deg.	NA
20	TOTAL EQUIVALENT MOVEMENT (FOR ASSEMBLY)	mm	37.23
21	TOTAL EQUIVALENT MOVEMENT (PER BELLOW)	mm	18.61
22	OVERALL LENGTH	mm	600
23	BELLOW CENTER DISTANCE	mm	250
24	BELLOW CONVOLUTED LENGTH	mm	100
25	LIMITING INTERNAL DESIGN PRESSURE BASED ON COLUMN INSTABILITY (Psc)	Kg/cm ²	16.34
26	LIMITING INTERNAL DESIGN PRESSURE BASED ON INPLANE INSTABILITY (Psi)	Kg/cm ²	6.54
27	TOTAL STRESS (St)	Kg/cm ²	11609

BILL OF MATERIAL			
SL NO	COMPONENT'S NAME	MATERIAL	QUANTITY
PR	BELLOWS	SA240TP304	2 Nos.
2	COLLAR	SA240TP304	4 Nos.
3	SLEEVE	SA240TP304	2 Nos.
4	END PIPE	SA672B70/SA672C70/SA515Gr.70/SA516Gr.70	2 Nos.
5	LIMIT ROD	CS (CL. 6.8 & 6.0)	2 Nos..
6	SPOOL PIPE	SA672B70/SA672C70/SA515Gr.70/SA516Gr.70	1 No.
7	ROUND FLANGE	SA515Gr.70 /SA516Gr.70/IS2062Gr.B	2 Nos.
8	SHROUD (COVER)	IS 2062 Gr. A/B	2 Nos.
9	SHROUD (COVER) SUPPORTS	IS 2062 Gr. A/B	4 Nos.
10	BOLT & NUT-M8	IS 1367 CL6.8/6.0	As Required
11	NUT, LOCKNUT & WASHER	IS 1367 CL6.8/6.0	8 SET

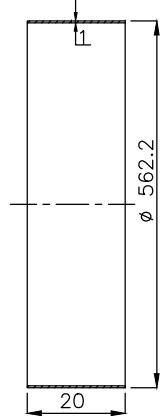
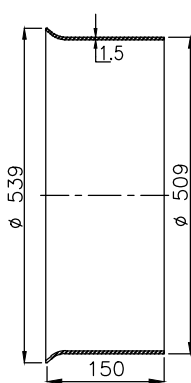
NOTES:-

1. BELLOW DESIGN CODE : EJMA LATEST EDITION.
2. WELDING CODE/STD : ASME SEC IX.
3. BUTT WELD DETAIL : AS PER ASME B16.25 TO SUIT MATCHING PIPE.
4. INSPECTION & TESTING : AS PER APPROVED QP, THE LATEST REVISION/YEAR OF ISSUE OF ALL THE STANDARDS INDICATED IN QP SHALL BE REFERRED.
5. SURFACE PREPARATION: SP3, POWER TOOL CLEANING.
6. PAINTING DETAILS : PROJECT SPECIFIC PAINTING DETAILS WILL BE PROVIDED LATER. REFER CLAUSE NO. 9 OF TECHNICAL SPECIFICATION.
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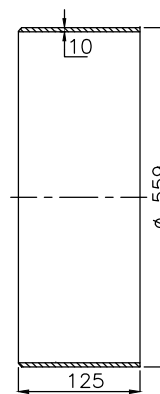
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CUSTOMER		PROJECT SPECIFIC DETAIL					
CONSULTANT		PROJECT SPECIFIC DETAIL					
	BHARAT HEAVY ELECTRICALS LTD POWER GROUP PROJECTS ENGINEERING MANAGEMENT NOIDA		DEPT CODE	NAME	SIGN	DATE	
			M	DRN	-XX-	-XX-	XX-XX-XX
				DES	-XX-	-XX-	XX-XX-XX
				CHD	-XX-	-XX-	XX-XX-XX
				APPD	-XX-	-XX-	XX-XX-XX
					-XX-	-XX-	XX-XX-XX
TITLE		GA OF UNITED BELLOWES SIZE-550NB					
ASSEMBLY WEIGHT		DEPT.	SCALE : NTS	DRAWING NO.			
TECH. SPEC. No.		SIGN		PE- V0- XXX-100- MXXX			
		DATE		SHEET 1 OF 1	REV	00	



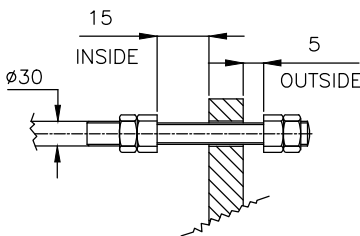
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DETAIL OF SL.NO.2

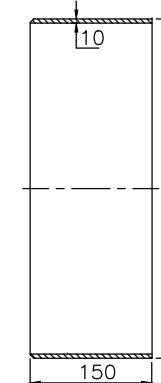
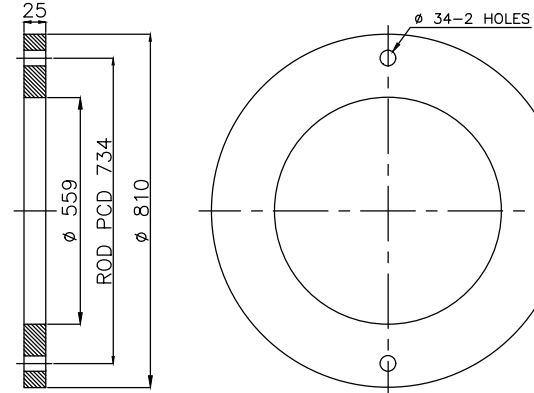
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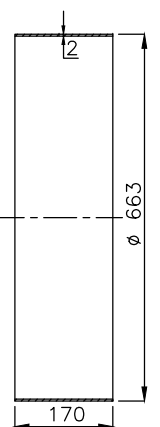
DETAIL OF SL.NO.4



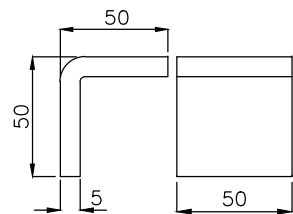
DETAIL OF SL.NO.5

DETAIL OF SL.NO.6

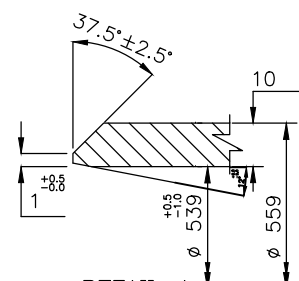
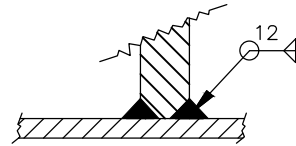
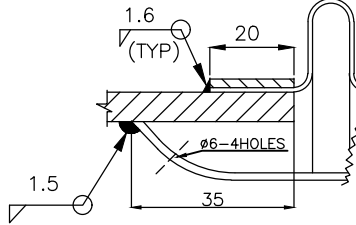
DETAIL OF SL.NO.7

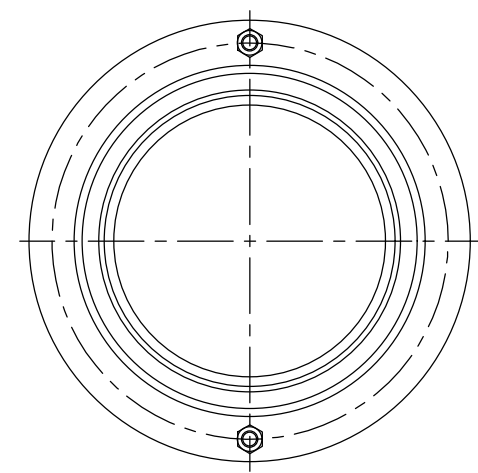


DETAIL OF SL.NO.8



DETAIL OF SL.NO.9

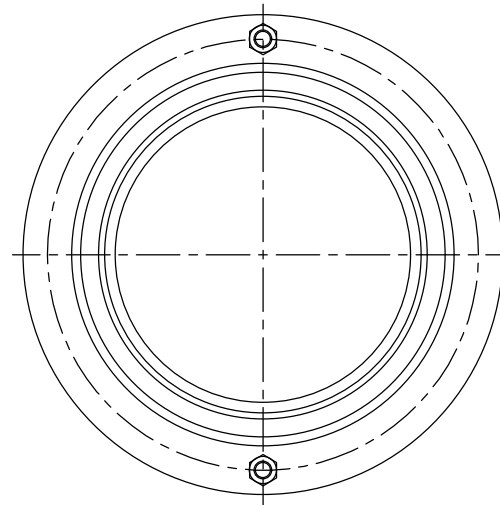
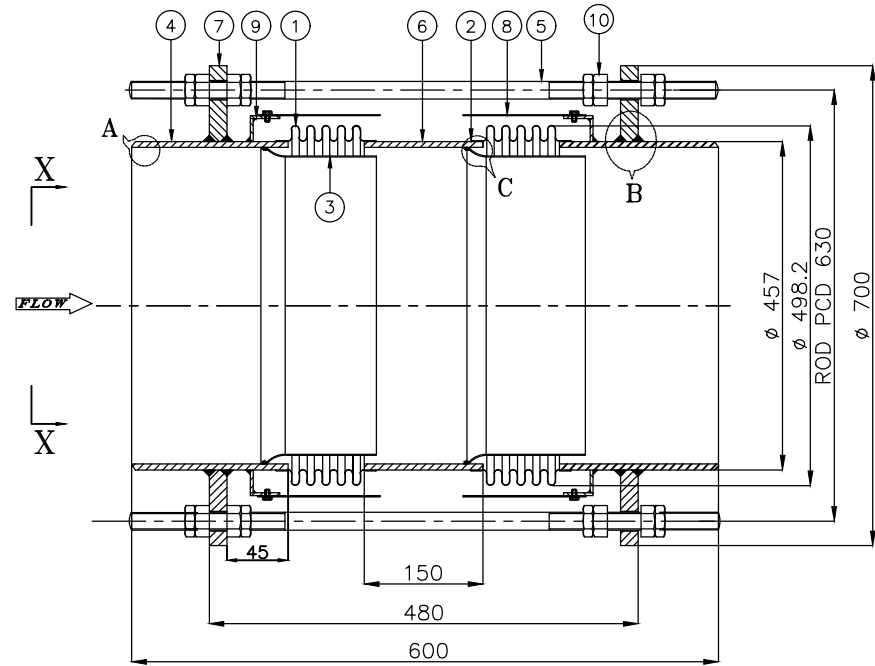
DETAIL-ADETAIL-BDETAIL-C



VIEW X-X

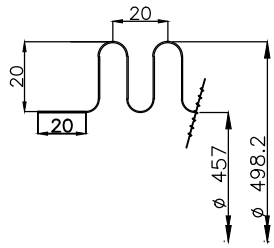
BILL OF MATERIAL FOR SINGLE BELLOW			
SL NO	COMPONENT'S NAME	MATERIAL	QUANTITY
1	BELLOWS	SA240TP304	2 Nos.
2	COLLAR	SA240TP304	4 Nos.
3	SLEEVE	SA240TP304	2 Nos.
4	END PIPE	SA106Gr.B	2 Nos.
5	LIMIT ROD WITH NUTS	CS (CL. 6.8 & 6.0)	2 Nos.
6	SPOOL PIPE	SA106Gr.B	1 No.
7	ROUND FLANGE	IS 2062 Gr. B/SA 515 / 516 Gr.70	2 Nos.
8	SHROUD (COVER)	IS 2062 Gr. B	2 Nos.
9	SHROUD (COVER) SUPPORTS	IS 2062 Gr. B	8 Nos.
10	NUT, LOCKNUT & WASHER	IS 1367 CL6.8/6.0	8 SET

JOB NO. XXX					PROJECT: PROJECT SPECIFIC DETAIL			
STATUS CONTRACT					PROJECT: PROJECT SPECIFIC DETAIL			
DISTRIBUTION					PROJECT: PROJECT SPECIFIC DETAIL			
				BHARAT HEAVY ELECTRICALS LTD POWER SECTION PROJECT ENGINEERING MANAGEMENT NOIDA				
				COPY RIGHT AND CONFIDENTIAL The information in 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.				
REV.	DATE	ALT.	CHG.	APPR.	DEPT.	SCALE	NAME	SIGN.
					GA OF UNDO BELLOW-SIZE 500NB	NTS	DRN.	XXX
							DSGN.	XXX
							CHD.	XXX
							APPR.	XXX
								XXX
TITLE					DRAWING NO.			
					DEPT.			
					SCALE			
					SIGN.			
							PE-DG-XXX-100	
					SHEET		OF	REV.
A				X				

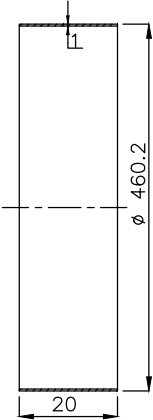


VIEW X-X

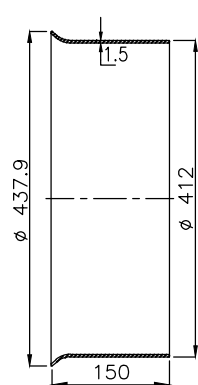
BELLOW : 0.6THK x 1PLY.
No. OF CONV. : 5+5
DEPTH OF CONV. : 20
PITCH OF CONV. : 20



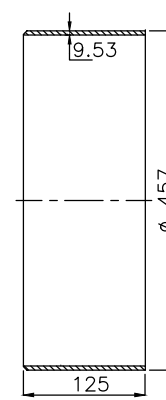
DETAIL OF SL.NO.1



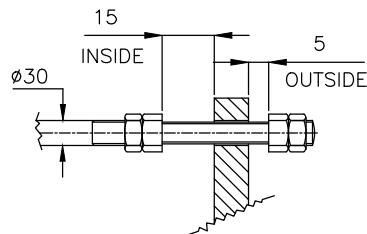
DETAIL OF SL.NO.2



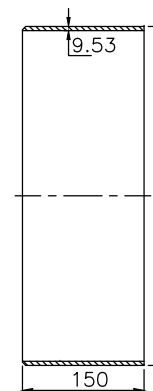
DETAIL OF SL.NO.3



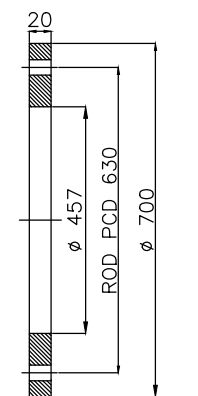
DETAIL OF SL.NO.4



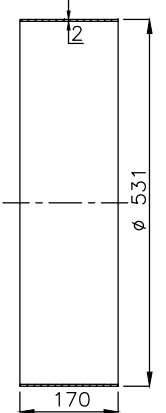
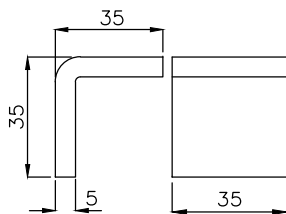
DETAIL OF SL.NO.5



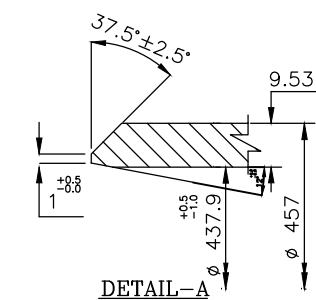
DETAIL OF SL.NO.6



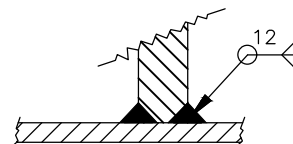
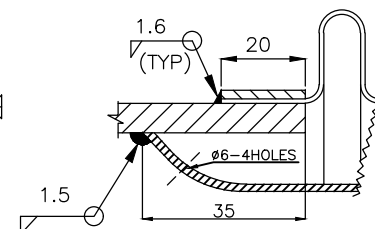
DETAIL OF SL.NO.7

DETAIL OF SL.NO.8

DETAIL OF SL.NO.9



DETAIL-A

DETAIL-B

DETAIL-C

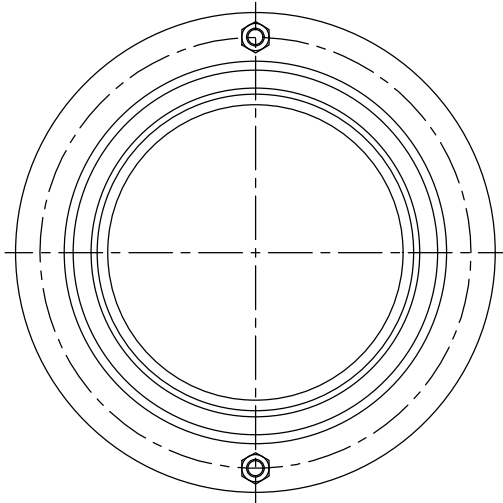
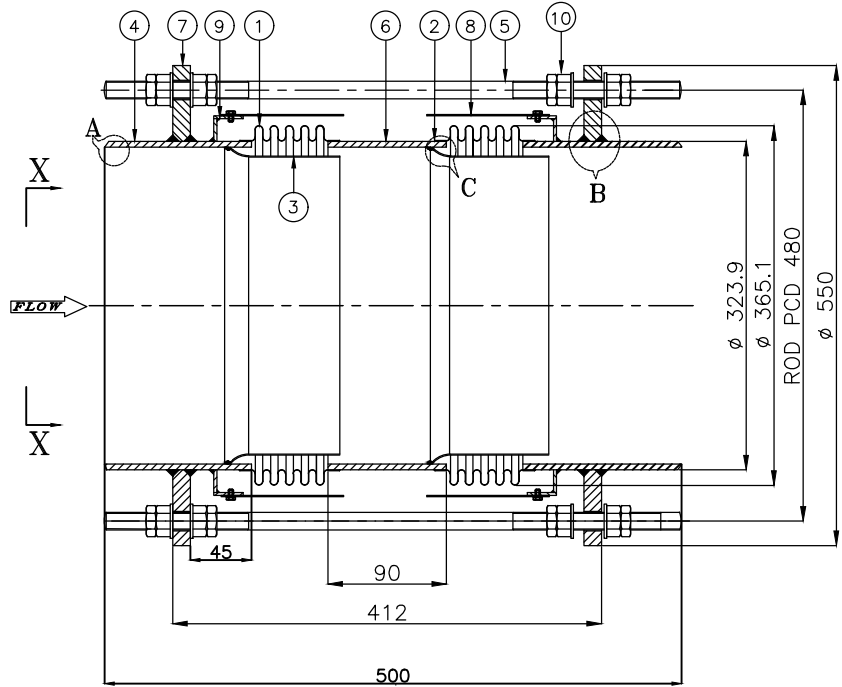
BELLOW DETAILS			
SL NO	DESCRIPTION	UNITS	DATA/ PARTICULARS.
1	TAG No.	-	LATER
2	QUANTITIES PER SET	Nos.	LATER
3	TOTAL QUANTITY	Nos.	LATER
4	LOCATION	-	MAIN CONDENSATE SUCTION
5	FLUID	-	CONDENSATE
6	INSTALLATION	-	LATER
7	PIPE SIZE(ODxTHK)	mm	457 x 9.53
8	OPERATING PRESSURE	Kg/cm ² (A)	0.10
9	DESIGN PRESSURE	Kg/cm ² (G)	2.0
10	HYDRO TEST PRESSURE (FOR 30 Min.)	Kg/cm ² (G)	3.0
11	VACUUM TEST PRESSURE(FOR 30 Min.)	mm-Hg	50mm of Hg (Abs)
12	OPERATING TEMPERATURE	°C	46
13	DESIGN TEMPERATURE	°C	55
14	BELLOW CYCLE LIFE	Nos.	26585
15	AXIAL COMPRESSION (DESIGN)	mm	15
16	LATERAL DEFLECTION (DESIGN)	mm	7
17	AXIAL SPRING RATE PER CONVOLUTION	Kg/mm	25.42
18	LATERAL SPRING RATE	Kg/mm	47.43
19	ANGULAR SPRING RATE	Kg-M/Deg.	NA
20	TOTAL EQUIVALENT MOVEMENT (FOR ASSEMBLY)	mm	33.32
21	TOTAL EQUIVALENT MOVEMENT (PER BELLOW)	mm	16.66
22	OVERALL LENGTH	mm	600
23	BELLOW CENTER DISTANCE	mm	250
24	BELLOW CONVOLUTED LENGTH	mm	100
25	LIMITING INTERNAL DESIGN PRESSURE BASED ON COLUMN INSTABILITY (Psc)	Kg/cm ²	13.56
26	LIMITING INTERNAL DESIGN PRESSURE BASED ON INPLANE INSTABILITY (Psi)	Kg/cm ²	8.24
27	TOTAL STRESS (St)	Kg/cm ²	10330

BILL OF MATERIAL PER BELOW			
SL NO	COMPONENT'S NAME	MATERIAL	QUANTITY
1	BELLOWS	SA240TP304	2 Nos.
2	COLLAR	SA240TP304	4 Nos.
3	SLEEVE	SA240TP304	2 Nos.
4	END PIPE	SA106Gr.B	2 Nos.
5	LIMIT ROD WITH NUTS	CS (CL. 6.8 & 6.0)	2 Nos.
6	SPOOL PIPE	SA106Gr.B	1 No.
7	ROUND FLANGE	IS 2062 Gr. B/SA 515 / 516 Gr.70	2 Nos.
8	SHROUD (COVER)	IS 2062 Gr. B	2 Nos.
9	SHROUD (COVER) SUPPORTS	IS 2062 Gr. B	4 Nos.
10	NUT, LOCKNUT & WASHER	IS 1367 CL6.8/6.0	8 SET

NOTES:-

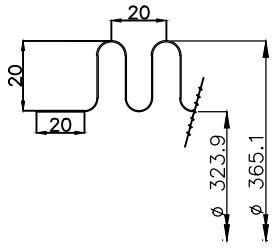
1. BELLOW DESIGN CODE : EJMA LATEST EDITION.
2. WELDING CODE/STD : ASME SEC IX.
3. BUTT WELD DETAIL : AS PER ASME B16.25 TO SUIT MATCHING PIPE.
4. INSPECTION & TESTING : AS PER APPROVED QP, THE LATEST REVISION/YEAR OF ISSUE OF ALL THE STANDARDS INDICATED, IF ANY, SHALL BE REFERRED.
5. SURFACE PREPARATION: SP3 POWER TOOL CLEANING.
6. PAINTING DETAILS : PROJECT SPECIFIC PAINTING DETAILS WILL BE PROVIDED LATER. REFER CLAUSE NO. 9 OF TECHNICAL SPECIFICATION.
7. SUITABLE SHIPPING BRACKETS WILL BE PROVIDED IN YELLOW COLOUR WHICH MUST BE REMOVED AFTER INSTALLATION.
8. 2MM THICK RECTANGULAR STAINLESS STEEL NAME PLATE HAVING DETAIL LIKE MANUFACTURER NAME, TAG, ASSEMBLY WEIGHT, SIZE AND TYPE, SHALL BE FIXED ON EXPANSION JOINTS. ALL DETAIL SHALL BE ENGRAVED 1MM DEEP AND FILLED WITH BLACK ENAMEL PAINT.
9. ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED.
10. EXPANSION JOINTS ARE TO BE PROVIDED WITH LIFTING LUGS.
11. THICKNESS OF PRESSURE PARTS INDICATED ARE MINIMUM REQUIREMENTS.
12. TYPE TEST: REFER CLAUSE NO. 10 OF TECHNICAL SPECIFICATION.
13. FOR PACKING REFER ANNEXURE-I OF TECHNICAL SPECIFICATION.
14. PROJECT SPECIFIC DETAILS WILL BE PROVIDED LATER.

CUSTOMER:	PROJECT SPECIFIC DETAILS						
OWNER'S CONSULTANT:	PROJECT SPECIFIC DETAILS						
MANUFACTURER:	PROJECT SPECIFIC DETAILS						
	BHARAT HEAVY ELECTRICALS LTD POWER SECTOR PROJECT ENGINEERING MANAGEMENT NOIDA		DEPT CODE	NAME	SIGN	DATE	
			M	DRN	XX	-XX-	XX-XX-XX
				DESN	XX	-XX-	XX-XX-XX
				CHD	XX	-XX-	XX-XX-XX
				APPD	XX	-XX-	XX-XX-XX
TITLE			UNITED BELLOWS SIZE-450 NB				
ASSEMBLY WEIGHT :		DEPT.	MPL	DRAWING NO.			
TECH. SPEC. NO. :		SIGN		PE-V0-XXX-100-XXX			
				SHEET	OF	REV. 00	

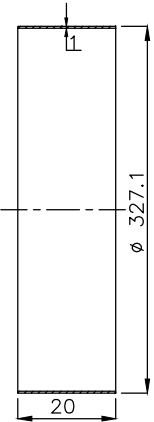


VIEW X-X

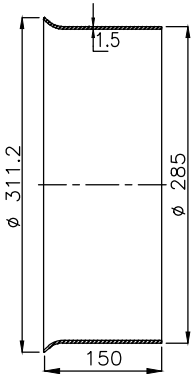
BELLOW : 0.6THK x 1PLY
No. OF CONV. : 5+5
DEPTH OF CONV. : 20
PITCH OF CONV. : 20



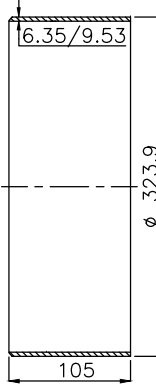
DETAIL OF SL.NO.1



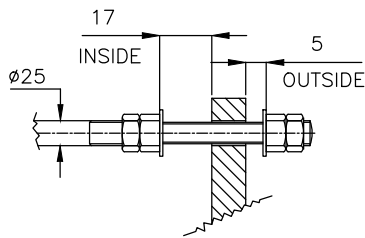
DETAIL OF SL.NO.2



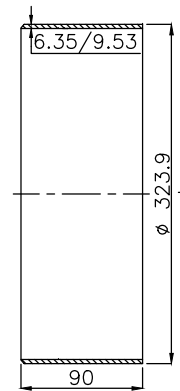
DETAIL OF SL.NO.3



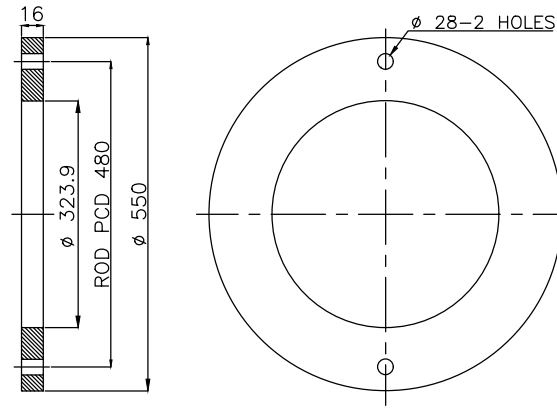
DETAIL OF SL.NO.4



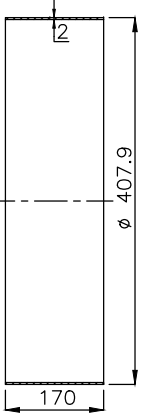
DETAIL OF SL.NO.5



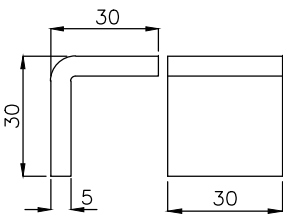
DETAIL OF SL.NO.6



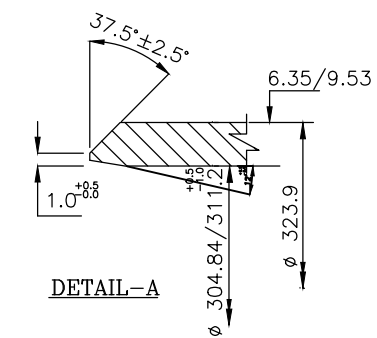
DETAIL OF SL.NO.7



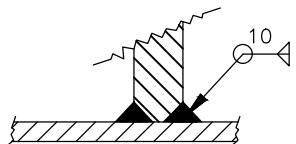
DETAIL OF SL.NO.8



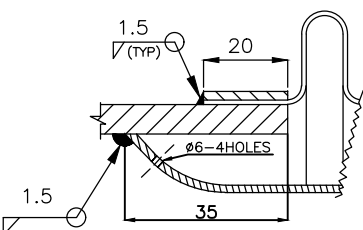
DETAIL OF SL.NO.9



DETAIL-A



DETAIL-B



DETAIL-C

BELLOW DETAILS			
SL NO	DESCRIPTION	UNITS	DATA/PARTICULARS.
1	TAG No.	-	LATER
2	QUANTITIES PER UNIT	Nos.	LATER
3	TOTAL QUANTITY	Nos.	LATER
4	LOCATION	-	MAIN CONDENSATE SUCTION
5	FLUID	-	CONDENSATE
6	INSTALLATION	-	LATER
7	PIPE SIZE(ODxTHK)	mm	323.9 x 6.35/9.53
8	OPERATING PRESSURE	Kg/cm ² (A)	0.0971
9	DESIGN PRESSURE	Kg/cm ² (G)	2.0
10	HYDRO TEST PRESSURE (FOR 30 Min.)	Kg/cm ² (G)	3.0
11	VACUUM TEST PRESSURE(FOR 30 Min.)	mm-Hg	50mm of Hg (Abs)
12	OPERATING TEMPERATURE	°C	42.4
13	DESIGN TEMPERATURE	°C	60
14	BELLOW CYCLE LIFE	Nos.	22844
15	AXIAL COMPRESSION (DESIGN)	mm	17
16	LATERAL DEFLECTION (DESIGN)	mm	7
17	AXIAL SPRING RATE	Kg/mm	18.49
18	LATERAL SPRING RATE	Kg/mm	30.95
19	ANGULAR SPRING RATE	Kg-M/Deg.	NA
20	TOTAL EQUIVALENT MOVEMENT (FOR ASSEMBLY)	mm	35.56
21	TOTAL EQUIVALENT MOVEMENT (PER BELLOW)	mm	17.78
22	OVERALL LENGTH	mm	500
23	BELLOW CENTER DISTANCE	mm	190
24	BELLOW CONVOLUTED LENGTH	mm	100
25	LIMITING INTERNAL DESIGN PRESSURE BASED ON COLUMN INSTABILITY (P _{sc})	Kg/cm ²	9.88
26	LIMITING INTERNAL DESIGN PRESSURE BASED ON INPLANE INSTABILITY (P _{si})	Kg/cm ²	9.29
27	TOTAL STRESS (St)	Kg/cm ²	10628.15

BILL OF MATERIAL FOR SINGLE BELLOW			
SL NO	COMPONENT'S NAME	MATERIAL	QUANTITY
1	BELLOWS	SA240TP304	2 Nos.
2	COLLAR	SA240TP304	4 Nos.
3	SLEEVE	SA240TP304	2 Nos.
4	END PIPE	SA106Gr.B	2 Nos.
5	LIMIT ROD	IS 1367 CL 6.8	2 Nos.
6	SPOOL PIPE	SA106Gr.B	1 No.
7	ROUND FLANGE	IS 2062 Gr. B/SA 515 / 516 Gr.70	2 Nos.
8	SHROUD (COVER)	IS 2062 Gr. B	2 Nos.
9	SHROUD (COVER) SUPPORTS	IS 2062 Gr. B	8 Nos.
10	BOLT & NUT-M8	IS 1367 CL 6.8/6.0	AR
11	NUT, LOCKNUT & WASHER (size M25)	IS 1367 CL 6.8/6.0	AR

- NOTES:-
- BELLOW DESIGN CODE : EJMA LATEST EDITION.
 - WELDING CODE/STD : ASME SEC IX.
 - BUTT WELD DETAIL : AS PER ASME B16.25 TO SUIT MATCHING PIPE.
 - INSPECTION & TESTING : AS PER APPROVED QP. THE LATEST REVISION/YEAR OF ISSUE OF ALL THE STANDARDS INDICATED IN QP SHALL BE REFERRED.
 - SURFACE PREPARATION: SP3, POWER TOOL CLEANING.
 - PAINTING DETAILS : PROJECT SPECIFIC PAINTING DETAILS WILL BE PROVIDED LATER.
 - REFER CLAUSE NO. 9 OF TECHNICAL SPECIFICATION.
 - SUITABLE SHIPPING BRACKETS WILL BE PROVIDED IN YELLOW COLOUR WHICH MUST BE REMOVED AFTER INSTALLATION.
 - 2MM THICK RECTANGULAR STAINLESS STEEL NAME PLATE HAVING DETAIL LIKE MANUFACTURER NAME, TAG, ASSEMBLY WEIGHT, SIZE AND TYPE, SHALL BE FIXED ON EXPANSION JOINTS. ALL DETAIL SHALL BE ENGRAVED 1MM DEEP AND FILLED WITH BLACK ENAMEL PAINT.
 - ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED.
 - EXPANSION JOINTS ARE TO BE PROVIDED WITH LIFTING LUGS.
 - THICKNESS OF PRESSURE PARTS INDICATED ARE MINIMUM REQUIREMENTS.
 - TYPE TEST: REFER CLAUSE NO. 10 OF TECHNICAL SPECIFICATION.
 - 300 NB BELLOWS WILL HAVE TWO VARIENT OF END PIPE NAMEDLY 6.5 MM AND 9.53 MM BASED ON THE PROJECTS REQUIREMENT. ACCORDINGLY VARIOUS SIZES OF BELLOWS COMPONENTS MAY BE CHANGED I.E. COLLAR DIA., SLEEVE DIA, SHROUD DIA ETC. THIS WILL BE INCORPORATED IN PROJECT SPECIFIC DRAWINGS.
 - FOR PACKING REFER ANNEXURE-I OF TECHNICAL SPECIFICATION.
 - PROJECT SPECIFIC DETAILS WILL BE PROVIDED LATER.

PROJECT:	PROJECT SPECIFIC DETAIL		
CUSTOMER:	PROJECT SPECIFIC DETAIL		
CONSULTANT:	PROJECT SPECIFIC DETAIL		
JOB NO.	XXXX	DEPT.	SCALE
STATUS	CONTRACT	DATE	DATE
DISTRIBUTION	BHARAT HEAVY ELECTRICALS LTD POWER SECTOR PROJECT ENGINEERING MANAGEMENT Noida		
REV.	DATE	ALTD	CHD
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.			
TITLE: GA OF UNTIED BELLOW-SIZE 300NB			
DEPT. SCALE NTS			
SIGN			
SHEET OF			
REV. SIZE A0			



TECHNICAL SPECIFICATION
ME BELLOWS
FRAMEWORK AGREEMENT

PE-TS-020-100-M021

Issue No: 01

Rev. No. 00

Date : 24-08-2026

QUALITY PLAN

		MANUFACTURER NAME & ADDRESS			MANUFACTURING QUALITY PLAN				SPEC. NO : PE-TS-020-100-M021				DATE: 24.08.2026				
					CUSTOMER: PROJECT SPECIFIC DETAIL				QP NO.: PE-QP-020-100-M021				DATE: 24.08.2026				
					PROJECT: PROJECT SPECIFIC DETAIL				PO NO.:				DATE:				
					ITEM: ME BELLOWS		SYSTEM: POWER PIPING		SECTION: II				SHEET 1 OF 3				
SI No.	Component & Operations		Characteristics	Class	Type of Check		Quantum of Check		Reference Document	Acceptance Norms	Format of Record		Agency		Remarks		
1	2		3	4	5		6		7	8	9		D	M		B	C
							M B/C										

1.0 RAW MATERIALS AND SUB-ASSEMBLIES INSPECTION														
1.1	Convolution and sleeves	Chemical Properties	MA	Chemical Analysis	1 Sample / Heat	ASTM A 240	ASTM A 240	MTC	√	P	V	V	Correlated MTC with respect to Heat / Batch / Lot to be reviewed	
		Mechanical Properties	MA	Mechanical Tests	1/ Heat / HT batch	ASTM A 240	ASTM A 240	MTC	√	P	V	V		
		Inter Granular Corrosion Test	MA	Verification	1 Sample / Heat	ASTM A 262 Practice E	Refer Note.2	TC	√	P	V	V		
1.2	Flange/Lugs/Hinge/Plate /Gimbal ring	Chemical Properties	MA	Chemical Analysis	1 Sample / Heat	Approved Drg.	Approved Drg.	MTC	√	P	V	V	For Hinge Pin, Rod, Lug material TC's to be furnished and reviewed. Refer Note-1	
		Mechanical Properties	MA	Mechanical Tests	1/ Heat / HT batch				√	P	V	V		
1.3	Pin/Tie Rod	Chemical Properties	MA	Chemical Analysis	1 Sample / Heat	Approved Drg.	Approved Drg.	MTC	√	P	V	V		
		Mechanical Properties	MA	Mechanical Tests	1/ Heat / HT batch			MTC	√	P	V	V		
1.4	For all material referred 1.1 to 1.3 above	Surface Defect	MA	Visual	100 %	As per relevant std.		Insp. report	√	P	V	V		
		Dimension	MA	Measurement	100 %	Approved drawing		Insp. report	√	P	V	V		
1.5	Pipe Ends / Centre Pipes	Chemical & Mechanical	MA	Chemical & Mechanical Tests	1/Heat	Approved drawing		MTC	√	P	V	V	Refer Note-1	
2.0 IN-PROCESS INSPECTION														
2.1	Welding	WPS, PQR, WPQ	CR	Verification	100%	ASME Sec-IX	ASME Sec-IX	Format of ASME.	√	P	V/W	V	Refer Note-3.	
2.2	Bellows & Plate formed Pipes.	Fit-up of weld	MA	Visual & Measurement	100%	Appd. Drg / ASME-VIII.	ASME-VIII	Insp. report		P	-	-		
		NDT on Bellows (before Forming)	CR	DPT	100%	ASTM E 165, Appd. Drg.	ASME-VIII	Insp. report	√	P	V	V		
			CR	RT	100%	ASME Sec.V/ Appd. Drg.	ASME-VIII	Insp. report	√	P	V	V	Review of RT films & report by Customer during final inspection.	
2.3	Segmental Flanges	Stress Relieving	Major	Review of HT Chart	100%	ASME Sec-I	ASME-VIII	HT Chart	√	P	V	V		
		NDT on Butt Welds after SR	MA	DPT	100%	ASTM E-165	ASME-VIII	DPT report	√	P	V	V		
			CR	RT for Thk ≤40 mm UT for Thk> 40 mm	100%	ASME Sec V ASTM-A388/A435	ASME-VIII Approved Drg	Insp. report	√	P	V	V	Review of RT films & report by Customer during final inspection.	

BIDDER/SUPPLIER	
Sign & Date	
Seal	

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:		Anand Dev	Checked by:		Ashish Panigrahi
Reviewed by:		Sweta Singhal	Reviewed by:		Harish Kumar

CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

		MANUFACTURER NAME & ADDRESS				MANUFACTURING QUALITY PLAN				SPEC. NO : PE-TS-020-100-M021				DATE: 24.08.2026	
						CUSTOMER: PROJECT SPECIFIC DETAIL				QP NO.: PE-QP-020-100-M021				DATE: 24.08.2026	
						PROJECT: PROJECT SPECIFIC DETAIL				PO NO.:				DATE:	
						ITEM: ME BELLOWS		SYSTEM: POWER PIPING		SECTION: II				SHEET 2 OF 3	
SI No.	Component & Operations	Characteristics	Class	Type of Check	Quantum of Check		Reference Document	Acceptance Norms	Format of Record	Agency				Remarks	
1	2	3	4	5	6		7	8	9	D	M	B	C		
					M	B/C									

2.4	Fillet Welds	NDT	MA	DPT	100%	\$	ASME SecV/ Appd Drg.	ASME Sec VIII	Insp. report	√	P	W	V	\$ 25 % random for BHEL (minimum 2 bellows per type & size)	
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3.0 FINAL INSPECTION

3.1	Bellow Convolutions	Workmanship	MA	Visual	100%	1 per type	Appd. Drg	Appd. Drg.	Insp report	√	P	W	V	
		Visual & Dimensional	MA	Measurement	100%		Appd. Drg	Appd. Drg	Insp report	√	P	W	W	
		NDT	MA	DPT	100%		ASTM E 165	ASME-VIII	DPT report	√	P	W	W	-Including both sides of Long seam for ID>450 NB. -Including outer & accessible inner side for ID<450 NB.
		Thinning	MA	MOCK UP PIECE (OR) UT	1 per type		EJMA	Not to exceed 15% of actual raw material thickness	Insp report	√	P	W	W	Refer Note-4
3.2	Gimbal Ring, Hinge plate, Flange, Shroud, Sleeve Pin, Tie rod, Washer & Nut.	Workmanship & Dimension	MA	Visual & Measurement	100%		Appd. Drg.	Appd. Drg.	Insp report	√	P	V	V	
3.3	COMPLETE BELLOWS	Leak tightness	CR	Vacuum test	100%	#/ *	Test Procedure / Appd Drg.	No leakage and Permanent Deformation.	Insp. report	√	P	W#	W*	# 25 % for BHEL (minimum 2 bellows per type & size) * Minimum 1 bellow per type & size per offered lot for Customer
			CR	Hydraulic test	100%	#/ *	Test Procedure / Appd Drg.	No leakage and Permanent Deformation.	Insp. report	√	P	W#	W*	
		Movement Test	CR	Axial movement test	100%	#/ *	Test Procedure / EJMA /Appd Drg	Test Procedure / EJMA / Appd Drg	Test report	√	P	W#	W*	
		Spring Rate Test	CR	Measurement	1 per type & size		Test Procedure / EJMA /Appd Drg	Test Procedure / EJMA / Appd Drg	Test report	√	P	W	W	
		Dimensional (Critical	CR		100%	#/ *	Appd Drg	Appd Drg	Insp. report	√	P	W#	W*	# 25 % for BHEL

BIDDER/SUPPLIER	
Sign & Date	
Seal	

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:		Anand Dev	Checked by:		Ashish Panigrahi
Reviewed by:		Sweta Singhal	Reviewed by:		Harish Kumar

CUSTOMER REVIEW & APPROVAL			
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		MANUFACTURER NAME & ADDRESS			MANUFACTURING QUALITY PLAN				SPEC. NO : PE-TS-020-100-M021				DATE: 24.08.2026		
					CUSTOMER: PROJECT SPECIFIC DETAIL				QP NO.: PE-QP-020-100-M021				DATE: 24.08.2026		
					PROJECT: PROJECT SPECIFIC DETAIL				PO NO.:				DATE:		
					ITEM: ME BELLOWS		SYSTEM: POWER PIPING		SECTION: II				SHEET 3 OF 3		
Sl No.	Component & Operations		Characteristics	Class	Type of Check		Quantum of Check		Reference Document	Acceptance Norms	Format of Record		Agency		Remarks
1	2		3	4	5	6		7	8	9	D	M	B	C	
						M	B/C								

		dimensions like Length, Diameter, Convolution Height & Pitch etc.) -Visual (Profile Geometry, Ovality)		Measurement / Visual									(minimum 2 bellows per type & size) . * Minimum 1 bellow per type & size per offered lot for Customer	
		Marking	CR	Visual	100%		Appd. Drg	Appd. Drg.	Insp report	√	P	W	V	
3.4	TYPE TEST	Life Cycle Test for 10000 cycles	CR	Cycle Life	1 per type		EJMA / NTPC Approved Test Procedure / Appd. Drg.		Insp report	√	P	W/V	W/V	Refer Note-5 & 6
		Squirm Test	CR	Squirm Test	1 per type				Insp report	√	P	W/V	W/V	
		Meridional Yield Rupture Test	CR	Yield Rupture Test	1 per type				Insp report	√	P	W/V	W/V	
3.5	Complete Assembly	Workmanship, Completeness as per drawing & Dimension	MA	Visual & Measurement	100%	\$	Appd. Drg.	Appd. Drg.	Insp report	√	P	W	V	\$ 25 % random for BHEL (minimum 2 bellows per type & size)
4.0	Documentation	Completeness of records.	MA	Verification of records & certificates.	100%		Appd. Drg.	Appd. Drg.	Insp report	√	P	V	V	
5.0	Painting	Painting	MA	DFT Measurement	100%	\$	Appd Drg/ Painting schedule	Appd Drg	Insp report	√	P	W	V	\$ 25 % random for BHEL (minimum 2 bellows per type & size)
6.0	Packing	Soundness of packing	MA	Visual	100%		Appd Drg	Appd Drg	Insp report		P	V	-	

Notes:
Note-1: In case co-related test certificates are not available, check testing shall be carried out by vendor on sample selected by Customer/BHEL at NABL accredited lab.
Note-2: No sign of fissures on the weldments or on the parent metal.
Note-3: For welders already approved by BHEL, WPS & PQR shall be reviewed by Customer, else Welder Qualification shall be offered for witness to BHEL.
Note-4: For wall thinning, thinning to be limited to 15% of actual raw material thickness. Wall thickness is to be measured on no. of locations along the circumference.
Note-5: Type test clearance shall be taken separately from Customer through BHEL before start of routine test.
Note-6: Bellows of the same Type would mean those having the same Diameter, Height, Pitch, Shape of convolution, Ply thickness, bellow material and maximum movement per convolution.
Note-7: All material TCs & Inspection Records as indicated in the QP shall be submitted to Customer for review.
Note-8: All materials of construction shall be as per approved drawing.
Note-9: Quantum of check may vary for different projects depending upon final customer requirement. Vendor to comply the same.

Legends:	D: Documentation; Records identified with "Tick"(√), shall be essentially included by supplier in QA Documentation			
	M: Supplier/ Manufacturer/ Sub-Supplier		MA: Major	P: Perform
	B: BHEL/BHEL appointed and Customer approved Inspection agency		CR: Critical	HT: Heat Treatment
	C: Customer		TC: Test Certificate	W: Witness
	DFT: Dry film thickness		TR: Test report	LPT: Liquid Penetrant Test
			MTC: Mill Test Certificate	UT: Ultrasonic Test
				RT: Radiography Test

BIDDER/SUPPLIER	
Sign & Date	
Seal	

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:		Anand Dev	Checked by:		Ashish Panigrahi
Reviewed by:		Sweta Singhal	Reviewed by:		Harish Kumar

CUSTOMER REVIEW & APPROVAL			
Doc No:			
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	TECHNICAL SPECIFICATION ME BELLOWS FRAMEWORK AGREEMENT	PE-TS-020-100-M021
		Issue No: 01
		Rev. No. 00
		Date : 24-08-2026

List of Projects considered for Framework Agreement:

SI No.	NProject
1	2X660 MW RAGHUNATHPUR TG
2	2X800 MW DVC KODERMA
3	1X800 MW SINGARENI
4	1X800 MW YAMUNANAGAR
5	2X660 MW KORBA WEST
6	1X800 MW UKAI
7	3X800 MW TALABIRA
8	1X660 MW AMARKANTAK
9	1X660 MW SATPURA
10	1X800 MW DARLIPALLI
11	3X800 MW MUNPL MEJA
12	3X800 MW NTPC TELANGANA
13	2X660 MW KORADI TPS
14	2X800 MW ADANI POWER LIMITED ASSAM PHASE 1
15	2X800 MW ADANI POWER LIMITED ASSAM PHASE 2
16	2X800 MW ADANI POWER LIMITED KAWAI PHASE III

Note: The quantity mentioned in the Technical Specification is the lump sum quantity to be ordered for the above mentioned projects

	TECHNICAL SPECIFICATION ME BELLOWS FRAMEWORK AGREEMENT	PE-TS-020-100-M021
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ANNEXURE-I

PACKING REQUIREMENT

Sl.no	DESCRIPTION
1	Type of Packing:
1.1	The bellows have to be dispatched in total assembled form and at free length.
1.2	Bellows shall be provided with suitable knock-off type temporary shipping brackets to maintain proper face to face dimension during shipment and installation. These brackets shall be tagged with instruction that they are to be left in place during erection but shall be removed before the system is placed in operation. These brackets shall be provided in yellow colour.
1.3	Exposed finished surface of metal expansion bellows shall be thoroughly greased before transportation. The bellows with all accessories needs to be suitably packed to avoid physical damage and corrosion during transit and storage. The packing shall be suitable for different handling operation and for the adverse condition during transportation and during indoor/outdoor storage of material. The following are the minimum requirements to be complied with for packing. i) Each Bellows shall be fully covered with multi layered cross laminated colourless polyethylene sheet of at least 100 GSM, then one layer of bubble sheet of at least 80GSM. The above wrapped bellows shall be packed inside wooden box. Item shall be firmly fixed to the packing box to restrict its movement. ii) Wrapped Bellows shall be packed in all around covered wooden box with suitable strength for handling and storage.
2	Cushioning material and moisture absorber:
2.1	Suitable cushioning shall be provided by rubberized coir/ thermocol / expanded soft polyethylene foam.
2.2	Adequate quantity of packed desiccant shall be suitably placed inside the packing box.
3	Packing slip & holder:
3.1	Packing slip kept in polyethylene bag shall be placed inside the wooden box at appropriate place.
3.2	One copy of packing slip wrapped in polyethylene bag covered in galvanized iron tin sheet/ aluminium packing slip holder shall be fixed on the external surface the packing box.

	TECHNICAL SPECIFICATION ME BELLOWS FRAMEWORK AGREEMENT	PE-TS-020-100-M021
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BILL OF QUANTITY

S.NO.	TYPE AND SIZE	QUANTITY (Nos)
1	GIMBAL BELLOW-2000NB	64
2	HINGED BELLOW-2000NB	32
3	GIMBAL BELLOW-1800NB	24
4	HINGED BELLOW-2000NB	12
5	GIMBAL BELLOW-1600NB	28
6	HINGED BELLOW-1600NB	14
7	GIMBAL BELLOW-1200NB	4
8	HINGED BELLOW-1200NB	2
9	GIMBAL BELLOW-1100NB	14
10	HINGED BELLOW-1100NB	28
11	HINGED BELLOW-900NB	6
12	HINGED BELLOW-800NB	42
13	TIED LATERAL BELLOW-800NB	42
14	UNTIED BELLOW-550NB	6
15	UNTIED BELLOW-500NB	69
16	UNTIED BELLOW-450NB	12
17	UNTIED BELLOW-300NB	72
	TOTAL FOR SUPPLY	471

	TECHNICAL SPECIFICATION ME BELLOWS FRAMEWORK AGREEMENT	PE-TS-020-100-M021
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PRICE VARIATION COMPENSATION

- 1.Ex-works prices shall be variable. In order to take care of variation in cost of manufacture of product on either side, due to variation in the index of LABOUR and MATERIALS, Price Variation Formula as described herein shall be applicable.
2. 85% component of Order Value shall be considered for PVC calculations and remaining 15% shall be treated as fixed component. The basis for calculation of price variation in each category, their component, Base Index, shall be as under:

Sl. No.	Category	INDEX/ AVERAGE MINIMUM WAGE	Percentage component
1	Manufacture of basic Iron and Steel	Name of Commodity: Mild Steel (MS) Flats & Sheets Monthly Index numbers for Mild Steel (MS) Flats & Sheets As per Office of Economic Adviser (Website: https://eaindustry.nic.in)	60
2	Labour	ALL-INDIA AVERAGE CONSUMER PRICE INDEX NUMBERS FOR INDUSTRIAL WORKERS' published by Labour Bureau, Ministry of Labour and Employment, Government of India (Website: https://labourbureau.nic.in)	25

- 3.Payment/recovery due to variation in index shall be determined on the basis of the following notional formula without any initial absorption, in respect of the identified components viz. Mild steel and labour.
Current Price = Order Price * (0.15+0.6*M1/M0 +0.25 * L1/L0)

Where,

M0 = Monthly Wholesale Price Index (WPI) (Base: 2022–23 = 100) for Mild Steel (MS) Flats & Sheets, as published by the Office of the Economic Adviser, as on the Base Date

M1 = Monthly Wholesale Price Index (WPI), Base 2022–23 = 100, as published by the Office of the Economic Adviser, for Mild Steel (MS) Flats & Sheets, one month prior to dispatch.

L0 = Monthly All-India Average Consumer Price Index (CPI) Numbers for Industrial Workers (Base Year: 2016), as on the Base Date.

L1 = Monthly All-India Average Consumer Price Index (CPI) Numbers for Industrial Workers (Base Year: 2016), one month prior to dispatch.

NOTE:

- 1.Base date for PVC consideration shall be calendar month of the date of PO of Framework Agreement.
- 2.Total PVC shall be limited to + 30% of Ex-Works Value actually supplied and -ve (negative) price variation shall be unlimited.
- 3.The price adjustment shall be applicable upto the contractual date of completion of supplies. Contractual delivery date would mean the delivery date mentioned in the order including amendments in delivery date (if any). PVC will not be applicable for the period beyond the contractual delivery date.

	TECHNICAL SPECIFICATION ME BELLOWS FRAMEWORK AGREEMENT	PE-TS-020-100-M021			
		Issue No: 01			
		Rev. No. 00			
		Date : 24-08-2026			

DOCUMENTATION REQUIREMENT

DRAWINGS & DOCUMENTS TO BE SUBMITTED BY ALL THE BIDDERS ALONG WITH THE BID					
Sl. No.	DOCUMENT TITLE				
1	PQR CREDENTIALS				
2	COMPLIANCE SHEET				

DRAWINGS & DOCUMENTS TO BE SUBMITTED BY SUCCESSFUL BIDDER AFTER AWARD OF CONTRACT ALONG WITH SUBMISSION SCHEDULE					
Sl. No.	DOCUMENT TITLE	VENDOR SUBMISSION (DAYS)*	BHEL COMMENT	VENDOR RESUBMISSION (DAYS)#	BHEL/CUSTOMER COMMENTS/APPR- OVAL (DAYS)
PRIMARY DOCUMENT					
1	GA DRAWING	10	7	7	18
2	QUALITY PLAN DULY SIGNED & STAMPED	10	7	7	18
SECONDARY DOCUMENT					
3	TYPE TEST REPORTS/ TYPE TEST PROCEDURE.	10	7	7	18
4	AXIAL SPRING RATE TEST PROCEDURE	10	7	7	18
5	ROUTINE TEST PROCEDURE	10	7	7	18

Notes: (1)- * 1st submission within indicated days from date of purchase order.
(2) - # Submission within indicated days after incorporating all BHEL/Customer comments.
(3)- Primary documents shall be considered for Delay Analysis.

DRAWINGS & DOCUMENTS TO BE SUBMITTED AS FINAL/AS-BUILT DOCUMENT	
Sl. No.	DOCUMENT TITLE
1	APPROVED DOCUMENTS
2	O&M MANUAL



**TECHNICAL SPECIFICATION
ME BELLOWS
FRAMEWORK AGREEMENT**

PE-TS-020-100-M021

Issue No: 01

Rev. No. 00

Date : 24-08-2026

COMPLIANCE CERTIFICATE

1	It is hereby confirmed that the technical specification (sheet 1 to 32) has been read and understood. We confirm compliance to the tender specification including any prebid clarification and amendments issued prior to techno-commercial bid opening without any deviation.
2	It is hereby declared that any technical submittals which was not specifically asked by BHEL in NIT shall not to be considered as part of bid and shall not be evaluated by BHEL.

Signature of authorised Representative

Name and Designation :

Name & Address of the Bidder

Date



PRE - QUALIFYING REQUIREMENTS

DOCUMENT NO: PE-TS-020-100-M021

REVISION NO: 00

DATE: 24.08.2026

SHEET: 1 of 2

Standard document No.:PE-TS-999-000-M052

Project: FRAMEWORK AGREEMENT

Package: METAL EXPANSION BELLOWS

CRITERIA FOR EVALUATION (TECHNICAL):

1. Technical Pre-Qualifying Requirements:

1.1 The bidder should have designed, in-house manufactured, tested, inspected and supplied metal expansion bellows (Gimbal / Hinged) with minimum size of 1600NB (Min. Design pressure: 1.1 Kg/cm²(g), Min Design temperature: 50°C), for use in power cycle piping of power plant or for similar application in other industries.

1.2 The item(s) mentioned in point 1.1 should have performed successfully for atleast one year. To establish meeting this requirement, the bidder/supplier shall conform to any one of the following clauses through supporting documents:

- (i) One (1) Performance certificate along with correlated purchase order from End-user having the item(s) performing successfully for atleast one (1) year from date of commissioning. The one-year period should have been completed prior to the date of bid submission as defined by BHEL-PEM in NIT.

Documents Required:

Performance certificate from End-user (duly signed & dated) specifying that the product is performing successfully for one (1) year from date of commissioning (also to be mentioned in certificate) along with correlated purchase order.

Or

- (ii) One (1) repeat contract from a purchaser (i.e. 2 Nos of Purchase orders from one purchaser). A contract shall be considered as repeat, when the second contract is given by the same purchaser after lapse of minimum one (1) year from date of placement of first contract. The contracts should have been placed prior to the date of bid submission as defined by BHEL-PEM in NIT.

Documents Required:

Purchase order(s) and supply details like Material dispatch clearance certificate (MDCC)/ Material receipt certificate (MRC)/Lorry receipt (LR)/ Invoice of first Purchase order.

Note:

All the documents as mentioned above at 1.2(i) & (ii) shall be within 15 years from date of bid submission as defined by BHEL-PEM in NIT.

1.3 In addition to above, bidder should have the following facilities for Metal expansion bellows of max. size of each type as per BHEL requirement as mentioned in Bill of Quantity of Technical Specification:

- a) In-house capability of manufacturing metal expansion bellows.

Documents required:

Purchase order (s) / Certificate indicating capacity and details/ undertaking of manufacturing facilities.

- b) In-house testing facilities for carrying out tests as per relevant standards & Quality plan. In case, the in-house testing facilities are not available, then bidder/supplier shall furnish undertaking that test(s) will be carried out from govt. approved lab or test house recognized by reputed customers.

Documents required:

Details of testing facilities.

PREPARED BY:

NAME: ANAND DEV
DESIGNATION: SR. MGR
DEPT.: PS-PEM/ MPL

REVIEWED BY:

NAME: SWETA SINGHAL
DESIGNATION: DGM
DEPT.: PS-PEM/ MPL

APPROVED BY:

NAME: B K AGARWAL
DESIGNATION: DH-AGM
DEPT.: PS-PEM/ MPL



PRE - QUALIFYING REQUIREMENTS

DOCUMENT NO: PE-TS-020-100-M021

REVISION NO: 00

DATE: 24.08.2026

SHEET: 2 of 2

1.4 To establish business continuity, bidder is required to submit at least (1) Purchase order for any type for Metal expansion bellows (from Bill of Quantity of technical specification) for minimum 300NB size in last 3 (three) years from date of bid submission as defined by BHEL-PEM in NIT.

2.0 Bidder to also comply with general points mentioned below.

2.1 Offers of the JV companies/ Joint Bidders/ bidders having collaboration/ licensing agreement/ MOU/ Indian subsidiaries shall be evaluated as follows:

- a) If bidder happens to be an Indian subsidiaries of foreign OEM, then the credentials of the foreign OEM can also be considered for meeting PQR.
- b) If bidder happens to be the Joint Venture Company, then the credentials of any of JV partners can be also considered for meeting PQR.
- c) If bidder happens to be the having valid collaboration agreement/ MOU/ licensing agreement with some other company, then the credentials of collaborator/ MOU partner/ licensing company can also be considered for meeting PQR.

Note: If bidder(s) qualifies on the basis of credentials of his principal/ JV partner/ Collaborator/ joint bidder etc., then the principal/ JV partner/ Collaborator/ MOU partner/ joint bidder shall be responsible for overall design vetting and warranty/ guarantee of the package. The scope matrix clearly defining their respective roles including design vetting, manufacturing of critical component, E&C etc. and warranty/ guarantee shall be submitted along with the offer.

2.2 Bidder to note that the arrangement of bidding (joint bid partners/ collaborator/ MOU partner/ licensing company etc.) once offered to BHEL as a part of bidding documents cannot be changed till the execution of contract(s).

2.3 Consideration of offer shall be subject to customer's approval of bidders, if applicable.

2.4 Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.

2.5 After satisfactory fulfilment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.

2.6 Bidder to ensure that Third Party/customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document/ certificate issuing authority such as name & designation of issuing authority and its organization contact number and email-id etc. In case the same found not available, purchaser has right to reject such document from evaluation.

2.7 Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.

PREPARED BY:

NAME: ANAND DEV
DESIGNATION: SR. MGR
DEPT.: PS-PEM/ MPL

REVIEWED BY:

NAME: SWETA SINGHAL
DESIGNATION: DGM
DEPT.: PS-PEM/ MPL

APPROVED BY:

NAME: B K AGARWAL
DESIGNATION: DH-AGM
DEPT.: PS-PEM/ MPL



PRE - QUALIFYING REQUIREMENTS

PROJECT:

RATE CONTRACT

PACKAGE:

METAL EXPANSION BELLOWS

CRITERIA FOR EVALUATION - FINANCIAL :

	Amount (in Rs.)
Average annual financial turnover value during last three Financial Years as on tender due date should not be less than	2,33,00,000

Rs.Two Crore Thirty Three Lakh only

Notes:-

a) The bidder has to submit Audited Financial accounts comprising of Audit report (if applicable), Balance sheet, Profit & Loss A/c Statement and Notes/Schedules pertaining to Turnover/Sales/Revenue, for last three years (or from the date of incorporation, whichever is less) as on tender due date to review the above criteria. In case the incorporation of vendor is less than 3 years, average annual Financial turnover shall be calculated based on available information as below: -

i) If the accounts are available for ≤ 1 Financial Year, the Average Annual Turnover shall be calculated based on available information divided by 1 (One).

ii) If the accounts are available for >1 but ≤ 2 Financial Years, the Average Annual Turnover shall be calculated based on available information divided by 2 (Two).

iii) If the accounts are available for >2 but ≤ 3 Financial Years, the Average Annual Turnover shall be calculated based on available information divided by 3 (Three).

b) Foreign bidder is to submit a latest report from reputed third-party business rating agency like Dun & Bradstreet, Credit reform etc. in addition to the documents mentioned at point (a) above for review of above criteria.

c) Other income shall not be considered for arriving at Annual Turnover/Sales. For evaluation purpose, turnover figure excluding taxes shall be considered.

d) For evaluation of foreign bidder exchange rate (TT selling rate of SBI) as on scheduled date of tender opening (Part-I bid in case of two-part bid) shall be considered.

e) Bidder who is 50% or above subsidiary of any company including those registered outside India and does not meet any of the above Financial criteria, such bidder may be qualified based on credentials of its holding company provided such holding company meets the above PQR criteria. In such case, the bidder would be required to furnish a letter of support from its holding company, pledging unconditional and irrevocable Financial support for the execution of the contract by the bidder in case of award.

f) In cases where audited results for its last Financial year as on the date of Techno-Commercial bid opening are not available, a certificate would be required from CEO/CFO stating the the Financial results of the Company are under audit as on the date of Techno-Commercial bid opening and are not available.

		PACKAGE: M.E. BELLWS PROJECT: FRAMEWORK AGREEMENT (RATE CONTRACT) ENQUIRY NO.:77/26/6155/SUM dated 24.09.2026 SUPPLIER NAME:									
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NO OF UNIT	TYPE OF BELLWS	SIZE (NB)	L/OM	TOTAL QTY	UNIT EX WORKS PRICE (DAILY PACKED) (N), (1 TOTAL EX WORKS/QTY)	TOTAL EX WORKS PRICE (DAILY PACKED) (N PERCENTAGE (%) OF TOTAL EX WORKS PRICE OF ME BELLWS GIVEN AT SL NO. A.18	TOTAL EX WORKS PRICE (DAILY PACKED) (N) (NAGE ALLOCATION AT COLUMN 7 X TOTAL EX WORKS PRICE OF ME BELLWS/100)	FREIGHT CHARGES (EXCLUDING GST) @ ____ % OF TOTAL EX WORKS	FREIGHT CHARGES EXCLUDING GST (RM)	Applicable GST @ ____ % (on "Total EX WORKS + FREIGHT")	GST (RM)	TOTAL F.O.B. SITE PRICE (RM)
1	2	3	4	5	6	7	8	9	10	11	12	13
A.1	GIMBAL BELLWS	2000	NOS.	64	+H0E18	+34.20721	+B0E2+G18+100		+H0E+J07+30E8%		+H0E+J07+30E8%	+H0E+J07+30E8%
A.2	GIMBAL BELLWS	1800	NOS.	24	+H0E12	+12.75961	+B0E2+G18+100		+H0E+J07+30E8%		+H0E+J07+30E8%	+H0E+J07+30E8%
A.3	GIMBAL BELLWS	1600	NOS.	28	+H10E10	+11.76182	+B0E2+G10+100		+H10E+J10+10E8%		+H10E+J10+10E8%	+H10E+J10+10E8%
A.4	GIMBAL BELLWS	1200	NOS.	4	+H11E11	+0.72984	+B0E2+G11+100		+H11E+J11+11E8%		+H11E+J11+11E8%	+H11E+J11+11E8%
A.4	GIMBAL BELLWS	1100	NOS.	14	+H12E12	+2.14675	+B0E2+G12+100		+H12E+J12+12E8%		+H12E+J12+12E8%	+H12E+J12+12E8%
A.6	HINGED BELLWS	2000	NOS.	32	+H13E13	+12.46621	+B0E2+G13+100		+H13E+J13+13E8%		+H13E+J13+13E8%	+H13E+J13+13E8%
A.7	HINGED BELLWS	1800	NOS.	12	+H14E14	+4.49668	+B0E2+G14+100		+H14E+J14+14E8%		+H14E+J14+14E8%	+H14E+J14+14E8%
A.8	HINGED BELLWS	1600	NOS.	14	+H15E15	+4.14538	+B0E2+G15+100		+H15E+J15+15E8%		+H15E+J15+15E8%	+H15E+J15+15E8%
A.9	HINGED BELLWS	1200	NOS.	2	+H16E16	+0.28265	+B0E2+G16+100		+H16E+J16+16E8%		+H16E+J16+16E8%	+H16E+J16+16E8%
A.10	HINGED BELLWS	1100	NOS.	28	+H17E17	+3.34251	+B0E2+G17+100		+H17E+J17+17E8%		+H17E+J17+17E8%	+H17E+J17+17E8%
A.11	HINGED BELLWS	900	NOS.	6	+H18E18	+0.60116	+B0E2+G18+100		+H18E+J18+18E8%		+H18E+J18+18E8%	+H18E+J18+18E8%
A.12	HINGED BELLWS	800	NOS.	42	+H19E19	+3.32484	+B0E2+G19+100		+H19E+J19+19E8%		+H19E+J19+19E8%	+H19E+J19+19E8%
A.13	TIED LATERAL BELLWS	800	NOS.	42	+H20E20	+4.83611	+B0E2+G20+100		+H20E+J20+20E8%		+H20E+J20+20E8%	+H20E+J20+20E8%
A.14	UNITED BELLWS	500	NOS.	6	+H21E21	+0.29199	+B0E2+G21+100		+H21E+J21+21E8%		+H21E+J21+21E8%	+H21E+J21+21E8%
A.15	UNITED BELLWS	500	NOS.	89	+H22E22	+2.77477	+B0E2+G22+100		+H22E+J22+22E8%		+H22E+J22+22E8%	+H22E+J22+22E8%
A.16	UNITED BELLWS	450	NOS.	12	+H23E23	+0.39699	+B0E2+G23+100		+H23E+J23+23E8%		+H23E+J23+23E8%	+H23E+J23+23E8%
A.17	UNITED BELLWS	300	NOS.	72	+H24E24	+1.75999	+B0E2+G24+100		+H24E+J24+24E8%		+H24E+J24+24E8%	+H24E+J24+24E8%
A.18	GRAND TOTAL		NOS.			+SUM(E6:E24)	X	+H	+SUM(J6:J24)	+K6	+SUM(L6:L24)	+SUM(M6:M24)

NOTES:
1. Type test charges are inclusive in Ex-Works cost. There is no separate head for type test charges.
2. Supplier to quote grand total value of the complete package (Po X) only as per line B/C/D above. The item wise break-up of total price and unit price shall be derived as per the formula indicated above.
3. Supplier to quote freight charges in percentage of their quoted Total Exworks Prices. Supplier to give single % of freight charges considering delivery anywhere in India in the freight column.Suppliers have to give same % of freight for each line item. Further, Supplier to quote non-zero freight %.

COST OF WITHDRAWAL									
PROJECT:-						Framework Agreement (Rate Contract)			
PACKAGE :-						M.E. BELLOWS			
TENDER ENQUIRY :-						77/26/6155/SUM dated 24.09.2026			
NAME OF THE Supplier									
Sl. No.	Volume/Section	Page No.	Clause No.	Technical Specification/Tender Document No	Complete Description of Deviation	Cost of withdrawal of deviation to be entered by the Supplier in	Reference of price Schedule of which Cost of Withdrawal of Deviation is applicable	Nature of cost of withdrawal of deviation (Positive/Negative)	Reasons for quoting deviation
1	TECHNICAL DEVIATION								
1.01									
1.02									
1.03									
1.04									
1.05									
2	COMMERCIAL DEVIATION								
2.01									
2.02									
2.03									
2.04									
2.05									

NOTES:

1. Cost of Withdrawal of deviation will be applicable on the basic price (i.e. excluding taxes, duties & freight) only.

2. All the Suppliers have to list out all their technical & commercial deviations (if any) in details in the above format.

3. Any deviation not mentioned above and shown separately or found hidden in offer, will not be taken cognizance of.

4. Supplier shall submit duly filled unpriced copy of above format indicating "quoted" in "cost of withdrawal of deviation" column of the schedule above along with their Techno-commercial offer, wherever applicable. In absence of same, such deviation(s) shall not be considered and offer shall be considered in total compliance to NIT.

5. Supplier shall furnish price copy of above format along with price bid.

6. The final decision of acceptance/ rejection of the deviations quoted by the Supplier shall be at discretion of the Purchaser.

7. Suppliers to note that any deviation (technical/commercial) not listed in above and asked after Part-I opening shall not be considered.

8. For deviations w.r.t. Credit Period, Liquidated damages, Firm prices if a Supplier chooses not to give any cost of withdrawal of deviation loading as per Annexure-VII of GCC, Rev-07 will apply. For any other deviation mentioned in un-priced copy of this format submitted with Part-I bid but not mentioned in priced copy of this format submitted with Priced bid, the cost of withdrawal of deviation shall be taken as NIL.

9. Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not be accepted.

10. All techno-commercial terms and conditions of NIT shall be deemed to have been accepted by the Supplier, other than those listed in unpriced copy of this format.

11. Cost of withdrawal is to be given separately for each deviation. In no event Supplier should club cost of withdrawal of more than one deviation else cost of withdrawal of such deviations which have been clubbed together shall be considered as NIL.

12. In case nature of cost of withdrawal (positive/negative) is not specified it shall be assumed as positive.

13. In case of discrepancy in the nature of impact (positive/ negative), positive will be considered for evaluation and negative for ordering.

ANNEXURE-I

PRICE VARIATION COMPENSATION

1.Ex-works prices shall be variable. In order to take care of variation in cost of manufacture of product on either side, due to variation in the index of LABOUR and MATERIALS, Price Variation Formula as described herein shall be applicable.

2. 85% component of Order Value shall be considered for PVC calculations and remaining 15% shall be treated as fixed component. The basis for calculation of price variation in each category, their component, Base Index, shall be as under:

Sl. No.	Category	INDEX/ AVERAGE MINIMUM WAGE	Percentage component
1	Manufacture of basic Iron and Steel	Name of Commodity: Mild Steel (MS) Flats & Sheets Monthly Index numbers for Mild Steel (MS) Flats & Sheets As per Office of Economic Adviser (Website: https://eaindustry.nic.in)	60
2	Labour	ALL-INDIA AVERAGE CONSUMER PRICE INDEX NUMBERS FOR INDUSTRIAL WORKERS' published by Labour Bureau, Ministry of Labour and Employment, Government of India (Website: https://labourbureau.nic.in)	25

3.Payment/recovery due to variation in index shall be determined on the basis of the following notional formula without any initial absorption, in respect of the identified components viz. Mild steel and labour.

$$\text{Current Price} = \text{Order Price} * (0.15 + 0.6 * M1/M0 + 0.25 * L1/L0)$$

Where,

M0 = Monthly Wholesale Price Index (WPI) (Base: 2022–23 = 100) for Mild Steel (MS) Flats & Sheets, as published by the Office of the Economic Adviser, as on the Base Date

M1 = Monthly Wholesale Price Index (WPI), Base 2022–23 = 100, as published by the Office of the Economic Adviser, for Mild Steel (MS) Flats & Sheets, one month prior to dispatch.

L0 = Monthly All-India Average Consumer Price Index (CPI) Numbers for Industrial Workers (Base Year: 2016), as on the Base Date.

L1 = Monthly All-India Average Consumer Price Index (CPI) Numbers for Industrial Workers (Base Year: 2016), one month prior to dispatch.

NOTE:

- 1.Base date for PVC consideration shall be calendar month of the date of PO of Framework Agreement.
- 2.Total PVC shall be limited to + 30% of Ex-Works Value actually supplied and -ve (negative) price variation shall be unlimited.
- 3.The price adjustment shall be applicable upto the contractual date of completion of supplies. Contractual delivery date would mean the delivery date mentioned in the order including amendments in delivery date (if any). PVC will not be applicable for the period beyond the contractual delivery date.



BHEL / PEM / CMM

SPECIAL CONDITIONS OF CONTRACT OF FRAMEWORK AGREEMENT (RATE CONTRACT) FOR M.E. BELLOWS

1. This tender is issued by BHEL PEM for Framework Agreement (Rate Contract) of M.E. BELLOWS required at various BHEL project sites on behalf of various BHEL units. Framework Agreement (Rate Contract) validity for ordering shall be two years from the purchase order for Rate Contract.
2. Framework Agreement (Rate Contract) shall be finalized only with suppliers who are registered with BHEL-PEM. Bidders who are not registered with BHEL-PEM (suppliers already registered with other BHEL Units shall also be required to apply registration in BHEL PEM) needs to apply & get registered for subject package with PEM before Reverse Auction & hence they need to apply online for registration on PEM web portal & have to enclose acknowledgement with the bid documents else their bid may not be considered for evaluation.

The bidders who are not registered with BHEL-PEM may apply for registration in BHEL-PEM through Registration Portal available at <https://bhel.com/supplier-registration> .

All credentials and/ or documents duly signed & stamped related to registration has to be uploaded on the website & submit the application for registration. One set of hard copy filled-up SRF downloaded from Online Registration Portal duly signed & stamped has to be submitted.

3. Framework Agreement (Rate contract) is proposed to be done with 2 suppliers in ratio of 70:30 value wise at L1 FOR site price (Ex-works + freight) for this package. However, order for a project shall not be split.
4. Quantity variation shall be applicable as + 10 % of the contract value. Bidder shall note that the quantities indicated in the tender are tentative quantities. No minimum quantity is guaranteed by BHEL.
5. This tender is issued by BHEL PEM for Framework Agreement (Rate Contract) of M.E. BELLOWS required at various BHEL project sites on behalf of various BHEL units. All bidders shall note the following: –
 - a) As and when requirement arises, the concerned Purchase Department of respective BHEL unit will place order directly on the supplier against the Framework Agreement (Rate Contract).
 - b) The drawings/ documents submission & approval, submission of Performance Security/ Performance Bank Guarantee, submission of invoices, processing and release of payment after supply of material, contractual dispute & commercial matters shall be dealt as per Framework Agreement (Rate Contract) contract terms & conditions directly by Purchase Department of respective BHEL unit which has placed purchase order against the Rate Contract.
6. Details of consignee and project site information for dispatch of material shall be intimated at the time of placement of PO for specific project after finalization of RC.
7. The items will be required against respective projects. Exact quantities and Project information shall be intimated while placing Purchase Order for a specific project based on the Rate Contract.
8. Price Variation shall be applicable for the subject package. All bidders shall quote as per the Price Variation Formulae Annexure provided in NIT.
9. Inspection of materials shall be carried out by BHEL/ CQA and or by Customer or by an Authorized Agency at manufacture's works before dispatch, if required. Dispatch of material to be done, only after receipt of BHEL/ Customer MDCC. It is responsibility of vendor to obtain Material Dispatch Clearance Certificate (MDCC) from BHEL or Customer as required before dispatch of material.
10. Vendor shall give inspection call on BHEL-CQS web site to applicable inspection agency with a copy of inspection call to BHEL for arranging Customer participation (if applicable) in inspection / Joint inspection on the proposed date with an advance notice of 15 working days. Inspection charges shall be paid by BHEL.



BHEL / PEM / CMM

11. Items have to be manufactured as per specification and supplied strictly in accordance with the approved BHEL/ Customer's Drawings & Quality Plan. The items/ test certificate of items, which for any reason are not acceptable to BHEL/ Customer, shall be required to be retested. No extra charge shall be payable on those account by BHEL.
12. Please refer Annexure-II for Payment of Detention Charges.
13. Other terms and conditions shall be as per Standard Technical specification No. PE-TS-020-100-M021, GCC Rev 07, Corrigenda 01, Corrigenda 02 and Corrigenda 03 to GCC Rev 07 and Enquiry letter.
14. This Enquiry is subject to Conditions/ limits if any imposed in in BHEL-PEM PMD/ Vendor registration.
15. Tentative quantity is given in Enquiry.
16. Bidders to submit offer for RC of said items ONLINE via BHEL-GePNIC Portal only. Bidders to upload tender documents complete in all respects duly signed & stamped on each and every page by the authorized signatory of the bidder as a token of acceptance of all the terms and conditions of tender.
17. The Bidder along with its associate/ collaborators/ sub-contractors/ sub-vendor/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL web site <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud as soon as it comes to their notice.

Annexure-II

Following shall be part of Special Conditions of Contract for Framework Agreement (Rate Contract) of M.E. BELLLOWS:

PAYMENT OF DETENTION CHARGES:

1. Detention charges shall be paid extra if the vehicles are not unloaded/ released beyond free period owing to reasons attributable to BHEL/Customer site. 'Free Time' and Detention charges shall be as follows:

Sl. No.	Vehicle type	Free Time (in Days)	Detention Charges per Day (INR)
i	ICV/LCV/HCV/Truck/ Multi-axle Vehicle. Open Body	3	1000
ii	Mechanical Trailers up to 28T	3	1200
iii	Mechanical Trailers above 28T	3	1500

2 Free Time (in days) includes the day of arrival at Halt station but excludes the day of exit.

3 If the reporting period happened to be Sundays & Holidays, then the next working day will be considered as date of reporting of Vehicle.

4 Total detention charges shall be limited to 50% of the basic Freight charges (at actual limited to the value mentioned in the PO/Contract) of the respective consignment.

5 Illustration of Calculation of Detention Days:

If the vehicle reached the site for unloading and made IN entry on 01.01.2026, then free period (3 days) will be up to 03.01.2026. If the EXIT Entry of vehicle is made on 06.01.2026, then detention will be calculated excluding 06.01.2026 and free period (3 days) and two days will be eligible for the detention.

6 Payment of Detention Charges:

6.1 Detention charges at unloading point at sites shall be paid based on Gate entry at site with certification duly signed and stamped by BHEL site MM personnel. In case the vehicle reached at site and the site security/ site officials are not allowing the vehicle to enter the site, the date of arrival of vehicle at site, based on GPS report (GPS report should have vehicle details to ensure genuineness) will be considered as the date of reporting at site for calculation of detention charges duly certified BHEL site MM personnel. For claiming detention charges against GPS report, vendor to immediately intimate through mail to concerned PEM's Purchase personnel along with GPS report. Supporting document such as valid RC of vehicle shall be submitted along with the invoice for authentication of vehicle type.

6.2 No detention charges shall be payable, if the delay in receipt & unloading of the materials at Site is attributable to the Transporter.

6.3 Payment for detention charges (if any) shall be processed & released on pro-rata basis along with CRAC/ MRC on submission of Bills.

ANNEXURE-III

BREACH OF CONTRACT, REMEDIES AND TERMINATION

1	The following shall amount to Breach of Contract: I. Non-supply of material/ non-completion of work by the Supplier within scheduled delivery/ completion period as per contract or as extended from time to time. II. The Supplier fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period. III. The Supplier delivers equipment/ material not of the contracted quality. IV. The Supplier fails to replace the defective equipment/ material/ component as per guarantee clause. V. Withdrawal from or abandonment of the work by the Supplier before completion as per contract. VI. Assignment, transfer, subletting of Contract by the Supplier without Buyer's written permission resulting in termination of Contract or part thereof by Buyer. VII. Non-compliance to any contractual condition or any other default attributable to Supplier. VIII. Any other reason(s) attributable to Supplier towards failure of performance of contract. In case of breach of contract, Buyer shall have the right to terminate the Purchase Order/ Contract either in whole or in part thereof without any compensation to the Supplier. IX. Any of the declarations furnished by the Supplier at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature that could have resulted in non-award of contract to the Supplier or could expose Buyer and/ or Owner to adverse consequences, financial or otherwise. X. Supplier is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of Buyer, in violation of the Integrity Pact entered into with Buyer has the potential to harm the overall business of Buyer/ Owner. Note- Once Buyer considers that a Breach of contract has occurred on the part of Supplier, Buyer shall notify the Supplier by way of notice in this regard. Supplier shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days. In case the Supplier fails to remedy the breach, as mentioned in the notice, to the satisfaction of Buyer, Buyer shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of Contract.
2	<u>Remedies in case of Breach of Contract:</u> I. Wherein the period as stipulated in the notice issued under clause no. 25.1 above has expired and Supplier has failed to remedy the breach, Buyer will have the right to terminate the contract on the ground of "Breach of Contract" without any further notice to Supplier. II. Upon termination of contract, Buyer shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier. This amount shall be recovered by way of encashing the security instruments like EMD, Performance Security etc. available with Buyer against the said contract.

	III. Wherever the value of security instruments like EMD, Performance Security available with BHEL-PEM against the said contract is 10% of the Contract Value or more, such security instruments to the extent of 10% Contract Value will be encashed. IV. In case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered from other financial remedies i.e. available bills of the Supplier, retention amount, from the money due to the Supplier etc. with BHEL-PEM. V. In case the amount recovered under clause no. IV above is not sufficient to fulfil the amount recoverable then the 10% of the contract value or the balance amount, as the case may be, will be recovered from any money(s) payable to Supplier under any contract with other Units of BHEL including recovery from security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD. VI. In case the amount recovered under clause no. IV & V above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to the Supplier. VII. If Supplier fails to deposit the balance amount within the period as prescribed in demand notice, Legal action shall be initiated for recovery against the defaulted Supplier. VIII. It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that Buyer would incur in completion of balance contractual obligation of the contract through any other agency and Buyer will not be required to furnish any other evidence to the Supplier for the purpose of estimation of damages. IX. However, Supplier shall continue performance of the Order/ Contract, under all circumstances, to the extent not cancelled. X. In addition to the above, imposition of Liquidated Damages, Debarment, Termination, De-scoping, Short-closure, etc., shall be applied as per provisions of the Contract.
3	The defaulting Supplier shall not be eligible for participation in any of the future enquiries floated by Buyer to complete the balance work. The defaulting Supplier shall mean and include: (a) In case defaulted Supplier is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor. (b) In case defaulted Supplier is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole Proprietor.
4	<u>LD against delay in executed supply in case of Termination of Contract:</u> LD against delay in executed supply shall be calculated in line with LD clause no. 22 above, for the delay attributable to Supplier. For limiting the maximum value of LD, contract value shall be taken as Executed Value of supply till termination of contract.

	Method for calculation of “LD against delay in executed supply in case of termination of contract” is given below: Let the time period from scheduled date of start of supply till termination of contract excluding the period of Hold (if any) not attributable to Supplier = T1 Let the value of executed supply till the time of termination of contract= X Let the Total Executable Value of supply for which inputs/fronfs were made available to Supplier and were planned for execution till termination of contract = Y Delay in executed supply attributable to Supplier i.e. $T2 = [1 - (X/Y)] \times T1$ LD shall be calculated in line with LD clause (clause 22.0) of the Contract for the delay attributable to Supplier taking “X” as Contract Value and “T2” as period of delay attributable to Supplier.
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ANNEXURE-IV

1. SETTLEMENT OF DISPUTE

If any dispute or difference of any kind whatsoever shall arise between Buyer and the Supplier, arising out of the contract for the performance of the work whether during the progress of contract termination, abandonment or breach of the contract, it shall in the first place referred to Designated Engineer for amicable resolution by the parties. Designated Engineer (to be nominated by Buyer for settlement of disputes arising out of the contract) who within 60 days after being requested shall give written notice of his decision to the Supplier. Save as hereinafter provided, such decision in respect of every matter so referred shall forthwith be given effect to by the Supplier who shall proceed with the work with all due diligence, whether he or Buyer desires to resolve the dispute as hereinafter provided or not.

If after the Designated Engineer has given written notice of this decision to the party and no intention to pursue the dispute has been communicated to him by the affected party within 30 days from the receipt of such notice, the said decision shall become final and binding on the parties. In the event the Supplier being dissatisfied with any such decision or if amicable settlement cannot be reached then all such disputed issues shall be resolved through conciliation in terms of the Buyer Conciliation Scheme 2018 as per Clause below:

2. CONCILIATION

Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure as per Buyer Conciliation Scheme 2018. 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 for conduct of conciliation proceedings" (as available in www.bhel.com).

Note:

Ministry of Finance has issued OM reference No. 1/2/24 dated 03.06.2024 regarding "Guidelines for Arbitration and Mediation in Contracts of Domestic Public Procurement. In the said OM it has been recommended that Government departments/Entities/agencies are to encourage mediation under the Mediation Act. 2023. The said Act has not yet been notified by the Government. Therefore, the clause "Settlement of Disputes" shall be modified accordingly as and when the Mediation Act 2023 gets notified.

3. ARBITRATION

- i. Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 2 herein above or otherwise) 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 (hereinafter referred to as the 'Dispute'), then, either Party may, refer the disputes to Delhi International Arbitration Centre (DIAC) and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the Rules of said Arbitral Institution.
- ii. A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving notice to the other party in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice') before referring the matter to arbitral institution. The Notice shall be addressed to the Head of the Unit of Buyer, executing the Contract and shall contain the particulars of all claims to be referred to arbitration with sufficient detail and shall also indicate the monetary amount of such claim including interest, if any.

ANNEXURE-IV

- iii. After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to the Delhi International Arbitration Centre (DIAC) and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd Judge having considerable experience in commercial matters to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution (DIAC) once selected at the time of invocation of dispute shall remain unchanged.
- iv. The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.
- v. The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be New Delhi.
- vi. Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matters relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at New Delhi.
- vii. Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Supplier, if the Contract has been mutually closed or 'No Demand Certificate' has been furnished by the Supplier or any Settlement Agreement has been signed between the Employer and the Supplier.
- viii. It is agreed that Mechanism of resolution of disputes through arbitration shall be available only in the cases where the value of the dispute is less than Rs. 10 Crores.
- ix. In case the disputed amount (Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within their rights to take recourse to remedies other than Arbitration, as may be available to them under the applicable laws after prior intimation to the other party. Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof as amended from time to time, shall apply to the arbitration proceedings under this clause.
- x. In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose of clause.
- xi. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction.

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 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 (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 05/0003/2019-FTS-10937 dated 14-12-2022 as amended from time to time.

ANNEXURE-IV

JURISDICTION

Subject to clause 30 of this contract, the Civil Court having original Civil Jurisdiction (Delhi) shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract.

GOVERNING LAWS

The contract shall be governed by the Law for the time being in force in the Republic of India.

UNDERTAKING

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

To

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)
3rd Floor, BHEL-SADAN,
PLOT NO. 25, SECTOR-16-A,
NOIDA-210-301 (U.P.)

Dear Sir/Madam,

Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS

Ref: Enquiry No: 77/26/6155/SUM dated 24.09.2026

I/We, _____ declare that,

I/We am/are not admitted under insolvency resolution process or liquidation under Insolvency and Bankruptcy Code, 2016, as amended from time to time or under any other law as on date, by NCLT or any adjudicating authority/authorities.

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

Place:

Date:

DECLARATION BY AUTHORISED SIGNATORY OF SUPPLIER

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

To

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)
3rd Floor, BHEL-SADAN,
PLOT NO. 25, SECTOR-16-A,
NOIDA-210-301 (U.P.)

Dear Sir,

Sub: **DECLARATION BY AUTHORISED SIGNATORY REGARDING AUTHENTICITY OF SUBMITTED DOCUMENTS**

Ref : 1) Enquiry No: 77/26/6155/SUM dated 24.09.2026

2) All other pertinent issues till date

I/We, hereby certify that all the documents submitted by us in support of possession of "Qualifying Requirements" are true copies of the original and are fully compliant required for qualifying / applying in the bid and shall produce the original of same as and when required by Bharat Heavy Electricals Limited.

I / We hereby further confirm that no tampering is done with documents submitted in support of our qualification as Supplier. I / We understand that at any stage (during bidding process or while executing the awarded contract) if it is found that fake / false / forged bid qualifying / supporting documents / certificates were submitted, it would lead to summarily rejection of our bid / termination of contract. BUYER shall be at liberty to initiate other appropriate actions as per the terms of the Bid / Contract and other extant policies of Bharat Heavy Electricals Limited.

Yours faithfully,

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

Date:

NON-DISCLOSURE CERTIFICATE

(To be Typed & submitted in the Letter Head of the Company/Firm of Supplier)

I/We understand that BHEL <**PS- PEM**> is committed to Information Security Management System as per their Information Security Policy.

Hence,

I/We

M/s

.....
who are submitting offer for providing services to BHEL <**PS- PEM**> against Enquiry No. 77/26/6155/SUM hereby undertake to comply with the following in line with Information Security Policy of <**PS- PEM**>.

- To maintain confidentiality of documents & information which shall be used during the execution of the Contract.
- The documents & information shall not be revealed to or shared with third party which shall not be in the business interest of BHEL <**PS- PEM**>.

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

Date:

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 _____

(hereinafter referred to as "Contract"). 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 panel of Independent External Monitor(s) (IEMs), 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. The Bidder(s)/ Contractor(s) commits himself to observe the following principles during 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 Indian Penal Code (IPC) and Prevention of Corruption 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 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. 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.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and shall await their decision in the matter.

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, terminate the contract, if already awarded, exclude from future business dealings and/ 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 (s) from the tender process before award/ order acceptance according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal is entitled to terminate the Contract according to Section 3, or terminates the Contract in application of Section 3 above , the Bidder(s)/ Contractor (s) transgression through a violation of Section 2 above shall be construed breach of contract and the Principal shall be entitled to demand and recover from the Contractor an amount equal to

5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee , whichever is higher, as damages, in addition to and without prejudice to its right to demand and recover compensation for any other loss or damages specified elsewhere in the contract.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years (to be reckoned from date of bid submission) with any other company in any country conforming to the anti-corruption approach in India that could justify his exclusion from the tender process. The date of such transgression, for the purpose of disclosure by the bidders in this regard, would be the date on which cognizance of the said transgression was taken by the competent authority. The transgression(s), for which cognizance was taken even before the said period of three years, but are pending conclusion, shall also be reported by the bidders.
- 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 or action can be taken as per the separate "Guidelines on Suspension of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 6 - Equal treatment of all Bidder (s)/ Contractor (s) / Sub-contractor (s)

- 6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.
- 6.2 In case of a joint venture, all the partners of the joint venture should sign the Integrity Pact. In case of Sub-contracting, the Principal Contractor shall be solely responsible for the adherence to the provisions of IP by the sub-contractor(s).
- 6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

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 panel of Independent External Monitor(s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact on receipt of any complaint by them from the bidder(s).
- 8.2 The IEMs are 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 IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as /Top Secret are not to be disclosed.

- 8.4 The Principal will provide to the IEMs 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 IEMs the option to participate in such meetings.
- 8.5 The role of IEM is advisory and the advice of IEM is non-binding on the Organization. However, as IEMs are invariably persons with rich experience who have retired as senior functionaries of the government, their advice would help in proper implementation of the IP.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of the tendering process, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an examination, and submit their joint recommendations to the Management. In case the full panel is not available due to some unavoidable reasons, the available IEM(s) will conduct examination of the complaints. Consent of the IEM(s), who may not be available, shall be taken on record.
- 8.7 The IEMs shall examine all the representations/grievances/ complaints received by them from the bidders or their authorized representative related to any discrimination on account of lack of fair play in modes of procurement and bidding systems, tendering method, eligibility conditions, bid evaluation criteria, commercial terms & conditions, choice of technology/ specifications etc.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.
- 8.9 IEMs should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the Principal should be looked into by the CVO of the Principal.
- 8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code / Prevention of Corruption 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 IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs.
- 8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.
- 8.13 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.
- 9.2 If any claim is made/ lodged during currency of this Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.
- 10.2 Changes and supplements as well as termination notices need to be made in writing.
- 10.3 If the Bidder(s)/ Contractor(s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.
- 10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact 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 Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.
- 10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. If required, the Principal may adopt any mediation rules for this purpose. However, not more than five meetings shall be held for a particular dispute resolution. The fees/expenses on dispute resolution shall be equally shared by both the parties. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as per the terms & conditions of the Contract.

For & On behalf of the Principal
(Office Seal)

Place _____

Date _____

Witness: _____
(Name & Address) _____

For & On behalf of the Bidder/ Contractor
(Office Seal)

Witness: _____
(Name & Address) _____

DECLARATION OF RELATED FIRMS AND THEIR AREA OF ACTIVITIES

Date: _____

To

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)
3rd Floor, BHEL-SADAN,
PLOT NO. 25, SECTOR-16-A,
NOIDA-210-301 (U.P.)

Dear Sir/ Madam,

Sub: **DETAILS OF RELATED FIRMS AND THEIR AREA OF ACTIVITIES**

Ref : 1) Enquiry No: 77/26/6155/SUM dated 24.09.2026

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

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

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

Regards,

(_____)

From: M/s _____

Supplier Code: _____

Address: _____

DECLARATION FOR RELATION IN BHEL

(To be typed and submitted in the Letter Head of the Company/Firm of Supplier failing which the offer of Supplier is liable to be summarily rejected)

To

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)
3rd Floor, BHEL-SADAN,
PLOT NO. 25, SECTOR-16-A,
NOIDA-210-301 (U.P.)

Dear Sir,

Sub: DECLARATION FOR RELATION IN BHEL

Ref: 1) Enquiry No: 77/26/6155/SUM dated 24.09.2026

I/We hereby submit the following information pertaining to relation/relatives of Proprietor/Partner(s)/ Director(s) employed in BHEL.

Tick (✓) any one as applicable:

1. The Proprietor, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL.

OR

2. The Proprietor, Partner(s), or Director(s) of our Company/Firm HAVE relation/relatives employed in BHEL and their particulars are as below:

i.

ii.

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

Note:

1. Attach separate sheet, if necessary.
2. If BHEL Management comes to know at a later date that the information furnished by the Supplier is false, BHEL reserves the right to take suitable against the Supplier.

MAKE IN INDIA

Subject: - CERTIFICATION REGARDING LOCAL CONTENT

Reference: Enquiry No: 77/26/6155/SUM dated 24.09.2026

Description of item(s): M.E. Bellows

We hereby certify that the quoted items offered by us against above Enquiry No. is having local content of% .

Further, to certify that the local content % certified above is in line with definition of Local content given in point no 2 of Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 and we qualify as **Class –.....** (Class-I/ Class-II/Non-Local Supplier - as applicable) local supplier.

We further confirm that details of location at which the local value addition is made is at
..... (Supplier's / OEM's Manufacturing works)

Country of Origin from OEM:

(For items sold by Supplier as reseller, OEM certificate for Country of Origin to be submitted.)

We confirm the following for the current tender:

- (1) Repackaging/ Refurbishment/ Rebranding of imported products has not been considered for calculation of local content or Domestic Value Addition (DVA).

That the cost of imported items sourced locally from resellers/ distributors and cost of license/royalty paid/technical expertise cost etc. source from outside of India has been excluded from the local content, as mentioned in 2(d) of PPP-MII order Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT.

- (2) For contracts involving supply of multiple items, weighted average of all items has been taken while calculating the local content.
- (3) We understand, for this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non-local supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.
- (4) We understand that we have to give a self-certification regarding local content wherever the tender value is up to INR 10 crores. In case, the tender value is more than INR 10 Crores, we shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. In both the cases, the certification has to be provided by us during bid submission.
- (5) We also understand, false declaration will be in breach of Code of Integrity under the rule 175(1)(i)(h) of the General finance rules for which the Supplier or its successors can be debarred for up to two years as per Rule 151(iii) of the General Finance Rules along with such other actions as may be permissible under the law.

- (6) That in case we are the successful Supplier and the contract value of the order awarded to us is more than INR 10 crores, we will provide local content certification duly certified by cost/ chartered accountant in practice during execution of the contract. That a penalty up to 10% of the contract value may be imposed on us during execution, in case we do not meet the stipulated local content during the execution of the contract. We are also aware that the contract awarded to us will not be terminated on this account.
- (7) We hereby declare that the details furnished above are true and correct to the best of our knowledge and belief and we undertake to inform you of any changes therein, immediately. In case any of the above information is found to be false or untrue or misleading or misrepresenting, we are aware that we may be held liable for it.

Thanking you,
Yours faithfully,

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

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

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

TO WHOMSOEVER IT MAY CONCERN

TO

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)
3rd Floor, BHEL-SADAN,
PLOT NO. 25, SECTOR-16-A,
NOIDA-210-301 (U.P.)

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

Ref: OM dtd. 23.02.2023 of Department of Expenditure, Ministry of Finance, Govt. of India

Enquiry No: 77/26/6155/SUM dated 24.09.2026
Description of item(s): M.E. Bellows

I have read the clause regarding restrictions on procurement from a Supplier of a country which shares a land border with India, as per OM dtd. 23.02.2023 of Department of Expenditure, Ministry of Finance, Govt. of India. I certify that _____ (**SPECIFY THE NAME OF THE ORGANIZATION HERE**), is not from such a country/ has been registered with the Competent Authority (*attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT).*)

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

Thanking you,
Yours faithfully,

(Signature, Date & Seal of
Authorized Signatory of the Supplier)

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

BANK GUARANTEE FOR PERFORMANCE SECURITY

(On non-Judicial paper of appropriate value)

Bank Guarantee No:

Date:

TO

BHARAT HEAVY ELECTRICALS LTD.

POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)

3rd Floor, BHEL-SADAN,

PLOT NO. 25, SECTOR-16-A,

NOIDA-210-301 (U.P.)

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited (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 _____¹ through its Unit at.....(name of the Unit) having awarded to (Name of the Supplier) with its registered office at _____² hereinafter referred to as the ' Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated³ valued at Rs.....⁴ (Rupees -----) / FC.....(in words.....) for⁵ (hereinafter called the 'Contract') and the Supplier having agreed to provide a Contract Performance Bank 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 any sum or sums up to a maximum amount of Rs -----⁶ (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

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 Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, 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 Supplier shall have no claim against us for making such payment.

We thebank 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/ satisfactory completion of the performance guarantee period as per the terms of the 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.

WeBANK 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 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 Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said 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 Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Supplier's liabilities.

This Guarantee shall remain in force up to and including.....⁷ 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 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 the⁸ we shall be discharged from all liabilities under this guarantee thereafter.

This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.

Courts at shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee

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.....⁶
- b. This Guarantee shall be valid up to⁷
- c. Unless the Bank is served a written claim or demand on or before⁸ 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 SUPPLIER /SUPPLIER / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE

⁸ DATE OF EXPIRY OF CLAIM PERIOD

Note:

1. Bank Guarantee should be refunded to the contractor without interest, after he duly performs and completes the contract in all respects but not later than 60 (sixty) days of completion of all such obligations including the warranty under the contract.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Supplier/ Bank issuing the guarantee.
3. From Nationalized/Public Sector / Private Sector/ Foreign Banks 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.

UNDERTAKING FOR CONFLICT OF INTEREST

(To be typed and submitted in the Letter Head of the Supplier)

Ref : 1) Enquiry No: 77/26/6155/SUM dated 24.09.2026

Treatment of Cases Regarding Conflict of Interest:

The Supplier notes that a conflict of interest would said to have occurred in the tender process and execution of the resultant contract, in case of any of the following situations:

- i) If its personnel have a close personal, financial, or business relationship with any personnel of BUYER who are directly or indirectly related to the procurement or execution process of the contract, which can affect the decision of BUYER directly or indirectly;
- ii) The Supplier (or his allied firm) provided services for the need assessment/ procurement planning of the Tender process in which it is participating;
- iii) Procurement of goods directly from the manufacturers/ suppliers shall be preferred. However, if the OEM/ Principal insists on engaging the services of an agent, such agent shall not 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 the manufacturer/ supplier and the agent, bid received from the agent shall be ignored. However, this shall not debar more than one Authorised distributor (with/ or without the OEM). from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate.
- iv) A Supplier participates in more than one bid in this tender process. Participation in any capacity by a Supplier (including the participation of a Supplier as a partner/ JV member or sub-Supplier in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a sub-Supplier in more than one bid if he is not bidding independently in his own name or as a member of a JV.

The Supplier declares that they have read and understood the above aspects, and the Supplier confirms that such conflict of interest does not exist and undertakes that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Supplier(s), in this regard. 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 Supplier is found having indulged in above activities, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by the BUYER as per extant policies/ guidelines.**

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

Ref : 1) Enquiry No: 77/26/6155/SUM dated 24.09.2026

DECLARATION BY MSE SUPPLIERS REGARDING OWNERSHIP STRUCTURE
ALONG WITH UDYAM CERTIFICATE

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

Type under MSE	SC/ST Owned	Women Owned	Others (excluding SC/ST & Women Owned)
Micro			
Small			

(Signature, Date & Seal of Authorized Signatory of the Supplier)

INSURANCE SURETY BOND TOWARDS PERFORMANCE SECURITY

(To be stamped in accordance with Stamp Act of India)

Insurance Surety Bond No. **[Insert Bond Number]**

Date **[Insert Date]**

TO

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)
3rd Floor, BHEL-SADAN,
PLOT NO. 25, SECTOR-16-A,
NOIDA-210-301 (U.P.)

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited (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) with its registered office at _____ hereinafter referred to as the ' Vendor / Contractor / Supplier ', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated valued at Rs..... (Rupees -----)/FC.....(in words.....) for (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide an Insurance Surety Bond towards Performance Security, 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 Insurer), having registered/Head office at and inter alia a branch at under this Surety Bond, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums up to a maximum amount of Rs ----- (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Insurer shall be conclusive as regards the amount due and payable by the Insurer under this Surety Bond. However, our liability under this Surety Bond 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 Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Surety Bond shall be a valid discharge of our liability for payment thereunder.

We theInsurer further agree that the Surety Bond herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/satisfactory completion of the performance guarantee period as per the terms of the 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.

WeInsurer 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 Vendor / 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 Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / 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 Insurer also agrees that the Employer at its option shall be entitled to enforce this Surety Bond against the Insurer as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier 's liabilities.

This Surety Bond shall remain in force up to and including..... and shall be extended from time to time for such period as may be desired by Employer.

This Surety Bond shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / 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 theor the extended date in accordance with the preceding para, we shall be discharged from all liabilities under this Surety Bond thereafter.

We, Insurer lastly undertake not to revoke this Surety Bond 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 Insurer under this Surety Bond shall not exceed.....
- b) This Surety Bond shall be valid up toor the extended date, if any.
- c) Unless the Insurer is served a written claim or demand on or before _____ or the extended date, if any, all rights under this guarantee shall be forfeited and the Insurer shall be relieved and discharged from all liabilities under this Surety Bond irrespective of whether or not the original Surety Bond is returned to the Insurer.

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

For and on behalf of

[Signature]

[(Name of the Insurer)]

[Official Address]

[Designation of Insurer Stamp]

Authorized vide Power of Attorney No./Staff Authority No. [Insert POA Number]

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 CONTRACT VALUE
- 5 PROJECT/SUPPLY DETAILS

6 AMOUNT IN FIGURES AND WORDS
7 VALIDITY DATE
8 DATE OF EXPIRY OF CLAIM PERIOD

Notes:

1. Insurance Surety Bond should be refunded to the contractor without interest, after he duly performs and completes the contract in all respects but not later than 60 (sixty) days of completion of all such obligations including the warranty under the contract.
2. The Insurance Surety Bond should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the Insurance Surety Bond is submitted or is to be acted upon or the rate prevailing in the State where the Insurance Surety Bond was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Supplier/ Insurer issuing the Insurance Surety Bond.
3. The Insurance Surety Bond shall be from an Insurer as per guidelines issued by Insurance Regulatory and Development Authority of India (IRDAI) as amended from time to time.
4. Insurance Surety Bond for Performance Security shall be submitted to the Buyer in Original.
5. Insurance Surety Bond issued by Branches in India can be accepted subject to the condition that the Insurance Surety Bond 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.