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## PRODUCT STANDARD HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM

VZ01002	
Rev No. 00	
Page 2 of 9	

## **INDEX**

Description
Introduction
Background
Scope of Work
Inputs by BHEL
Selection procedure limited to EOI
Information to be submitted along with EOI

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Ref. Doc

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# PRODUCT STANDARD HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM

VZ01002

Rev No. 00

Page 3 of 9

## 1.0 Introduction

Bharat Heavy Electricals Limited (BHEL) (www.bhel.com) is a Government of India Undertaking and a Maharatna Company, Established in 1964. BHEL is an integrated power plant equipment manufacturer and one of the largest Engineering and Manufacturing Company of its kind in India. The company is engaged in the Design, Engineering, Manufacturing, Construction, Testing, Commissioning and servicing of a wide range of products and services for core sectors of the economy, viz. Power, Transmission, Industry, Transportation (Railways), Renewable Energy, Oil & Gas, Water and Defence with over 180 products offerings to meet the needs of these sectors. BHEL has been the bedrock of India's Heavy Electrical Equipment industry.

BHEL has a widespread network of 17 Manufacturing Divisions, 2 Repair Units, 4 Regional Offices, 8 Service Centers, 6 Overseas Offices, 6 Joint Ventures, 15 Regional Marketing Centers and current project execution at more than 150 project sites across India and abroad corroborates the humungous scale and size of its operations.

Adding to its achievements, BHEL has joined the elite club of select global giants having an installed base of over 170 GW of power generating equipment globally. BHEL also has a widespread overseas footprint in 78 countries with cumulative overseas installed capacity of BHEL manufactured power plants nearing 10,000 MW.

BHEL has technology tie-ups with leading companies in the world including General Electric Company, Alstom SA, Siemens AG and Mitsubishi Heavy Industries Ltd., supported by technology developments in its own R&D centres. The quality & reliability of BHEL products at par with other Global players and adheres to international standards.

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# PRODUCT STANDARD HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM

VZ01002

Rev No. 00

Page 4 of 9

Heavy Plates & Vessels division [HPVP], Visakhapatnam

After being a subsidiary of BHEL for five years, the erstwhile Bharat Heavy Plates & Vessels (BHPV) was merged with BHEL on 30.08.2013. The new name of BHPV after merger with BHEL is "Heavy Plates & Vessels Plant" (HPVP) which is 17th manufacturing unit of BHEL located at Visakhapatnam, Andhra Pradesh, India.

HPVP is engaged in design, engineering, procurement, manufacture, supply, erection, testing and commissioning of various sophisticated equipment and systems for core business sectors like Refineries, Fertilizers, Petrochemicals, Steel Plants, Oil & Natural Gas, Heavy Chemicals etc.

HPVP's product range includes Heat Recovery Steam Generators(HRSGs), Coal/Oil/Gas fired boilers, Pressure Vessels, Columns, Heat Exchangers, Air Fin Coolers, LPG Bullets, LPG Spheres, LPG Mounded Bullets, Storage Tanks, Reactors, Nitrogen and Oxygen Plants, Ammonia Storage Tanks, Cryogenic Storage Tanks, Purge Gas Recovery Units, Evaporators, Industrial Boilers, Deaerators, Fired Heaters etc.

## 2. Background:

BHEL-HPVP supplied 44 numbers of "High Purity Nitrogen Plants to refineries, fertilizer plants till 2005 as one of its products with capacities up to 4600 NM3/hr with technology absorbed from M/s Air Liquide, France. BHEL-HPVP would like to re-enter into the business by tie-up with interested technology providers with the scope indicated in the specification.

BHEL would like to float an EOI for identifying the technology provider with their scope of work indicated in this document.

BHEL will short list parties based on their selection process and enlist them into their product directory.

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## PRODUCT STANDARD HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM

VZ01002

Rev No. 00

Page 5 of 9

Form No.

BHEL will send enquiry to all such parties (on case to case basis / for every enquiry) to enable them to submit their techno commercial offer (two-part bid) covering the scope as indicated in this specification.

Price evaluation statement shall be worked out on over all landed cost basis (total cost to BHEL) for whole package for all the technically commercially qualified bidders to arrive at L1 bidder

BHEL will enter into pre-bid tie up with the L1 bidder at the proposal stage itself.

In the event of BHEL becoming successful bidder., BHEL will place order on L1 bidder for their portion of scope.

## 3. Scope of work

A brief scope of technology provider is as under

## Pre Bid stage:

- 1. Basic design of the entire plant
- 2. Process guarantee
- 3. Techno commercial offer for critical equipment [Cold box and Air drying bottles (optional)].
- 4. Filled in data sheets for equipment in supplier scope.
- 5. Civil input for the entire plant.
- 6. Piping and Instrumentation diagram (P&ID) of entire plant.
- 7. Specifications and data sheets for the BHEL portion of supply.
- 8. Plant layout
- 9. Piping and Valves material specification.
- 10. Electrical load list and Utility requirement
- 11. Quality related documents for their scope of work.
- 12. Post bid clarifications

## **Execution stage:**

1. Detailed PFD, P&IDs and HMBs

# Form No.



## PRODUCT STANDARD HEAVY PLATES & VESSELS PLANT

VZ01002

Rev No. 00

Page 6 of 9

VISAKHAPATNAM

- 2. Specifications and data sheets for the BHEL portion of supply.
- 3. Specifications and data sheets, drawings for supplier's portion of supply.
- 4. Plant layout
- 5. Supervision of commissioning and Performance guarantee test.
- 6. Vetting of detailed drawings prepared by BHEL and BHEL's sub vendors
- 7. O&M manuals

Proposed scope matrix between BHEL and Technology provider is enclosed as Annexure-I

## 4. Inputs by BHEL:

BHEL will provide the following documents for each specific project to enable supplier to render his services

- a) Project information.
- b) Target scope of work.
- c) Specification and specific documents
- d) Sample Terms and conditions
- e) Sample Commercial Terms and conditions (Indigenous Supplier)
- f) Sample Commercial Terms and conditions (Foreign Supplier)

### 5. Selection Process limited to EOI.

- The EOI process involves seeking willingness of interested parties who make an application in response to this EOI. At the end of this process, BHEL intends to invite interested Applicant(s) for further deliberations.
- II. Bidders should have designed, engineered, supplied, erected commissioned in the last seven years at least one cryogenic nitrogen plant with min capacity of 5000NM3/hr [GAN+LIN) of nitrogen with min purity of 99.99% (Vol) and Oxygen content less than 3ppm & CO2 content less than 3ppm as on bid due date.
- III. Responses to EOI are to be submitted in English only.
- IV. Notwithstanding anything contained in this EOI, BHEL reserves the right to accept or reject any Application and to annul the EOI Process in whole or part, at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons thereof.

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Doc

# Form No.



## PRODUCT STANDARD

## HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM

VZ01002

Rev No. 00

Page 7 of 9

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- V. BHEL reserves the right to verify all statements, information and documents submitted by the Applicant in response to the EOI. Any such verification or lack of such verification by BHEL shall not relieve the Applicant of his obligations or liabilities hereunder nor will it affect any rights of BHEL.
- VI. The EOI process shall be governed by, and construed in accordance with, the laws of India and the Courts at New Delhi shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or in connection with the EOI process.
- VII. All costs incurred for participation in the EOI shall be borne by the Applicant (s).
- **VIII.** Further information can be obtained at the address below during 8.00 to 16.30 hrs. local time. Bidders can also raise queries through email.

Mr. A Madhusudan Sr. Manager / Mkt Administrative Building, 1st floor, BHEL, HPVP, Visakhapatnam-530012 Andhra Pradesh, India. Tel: +91-0891- 6681239, Email:amadhu@bhel.in

## 6. Information to be submitted along with EOI

Interested parties are requested to submit their technical and financial credentials along with other relevant information in the form of documents listed below by Post/Email.

- i. Company Brochures
- ii. Profile of company indicating type of business and experience
- iii. Annual turnover of company for last 5 years
- iv. Duly filled in EOI form. Annexure-A. Organizations / company to indicate the nature of EPC contract works.

The details submitted by the Applicant(s) shall be complete in all respects and BHEL may seek clarifications / additional information as considered necessary. Such clarifications/additional information must be provided within 7 days of BHEL request.

EOI information as called for in sl. No 6 shall be reached to BHEL address as indicated in sl. No 5 on or before 04.01.2022

# Form No.

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# PRODUCT STANDARD HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM

Rev No. 00

Page 8 of 9

## EOI Form [Annexure-A]

	_	_
Firm's ref. No:		
Date:		

**Subject:** Response to EOI for basic design and supply of critical equipment of high purity nitrogen plant.

In response to your EOI, we are pleased to submit the details of our firm as below

1.	Name of the firm						
2	Name of the Proprietor/MD/CEO						
3	Address of firm where work is executed						
4	Contact Details Mobile / Phone No & Email						
5	Turnover and net worth in last 5 years						
	Financial year	Turnover			Net worth		
6	Details of <u>Completed plants</u> in last 7 years All projects of capacity 5000 NM3/hr are only to be included.						
SI. No.	Name of Project	Name of Client		-	Date of award	Date of Completion	Order value
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Any Other information:

(Sign & Company Seal) Authorized Signature

Ref. Doc

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