

**INSTITUTE FOR PLASMA RESEARCH
NEAR INDIRA BRIDGE, GANDHINAGAR HIGHWAY
BHAT, GANDHINAGAR 382 428
GUJARAT STATE**

**EMPANELMENT OF VENDORS FOR FABRICATION OF
HIGH VACUUM AND ULTRA HIGH VACUUM CHAMBERS,
COMPONENTS & MECHANICAL STRUCTURES**

Institute for Plasma Research (IPR) is an Autonomous institute of Department of Atomic Energy, Government of India engaged in research in the field of hot plasmas, is interested to empanel vendors for **“FABRICATION OF HIGH VACUUM AND ULTRA HIGH VACUUM CHAMBERS AND COMPONENTS, LARGE SIZE MECHANICAL STRUCTURES AND PRECISE MANUFACTURING AND MACHINING OF SPECIAL MATERIALS”**. Vendors should have or have access to all or anyone of the following facilities. (1) Forming, Machining of stainless steel, carbon steel, aluminium, copper etc. (2) ARC welding and TIG welding (3) Electropolishing and ultrasonic cleaning of fabricated components (4) Precision machining like wire cutting, EDM, CNC Milling etc. and (5) Any other specialized forming facilities like friction welding, explosion bending, hydraulic forming, electron beam welding etc. Vendor Data forms for empanelment of vendors is available on IPR website www.ipr.res.in/purchasetenders.html. Interested fabricators/manufacturers fulfilling the criteria mentioned above may at their option, download the Vendor Data Forms from the website and submit their request for empanelment as per the details given in the documents. In case party desires to collect the Vendor Data forms by post, they may contact the Purchase Officer at the above address. Vendor Data Forms will be issued up to **18-7-2008**.

The Vendor Data Forms with complete details along with all documents asked for in the advertisement should be submitted in an envelope superscribing the envelope with **“REQUEST FOR EMPANELMENT OF VENDORS FOR VACUUM CHAMBER/MECHANICAL STRUCTURES”** on or before **8th August, 2008**. IPR reserves the right to accept or reject the request for empanelment without assigning any reasons.

TO BE FURNISHED ON VENDOR'S LETTER HEAD

VENDOR DATA FOR EMPANELMENT

ITEMS:

(1) Vacuum Systems

Fabrication of high vacuum, ultra high vacuum chambers and components: Material of construction will be primarily different grades of Stainless Steel. Surface finish of the finished component will be in the range of 1.6 micron to 0.8 micron. After fabrication, the component will be electro-polished and ultrasonically cleaned. Normally TIG welding (GTAW) is employed in fabrication of vacuum system and components. In higher thickness materials (Submerged Arc Welding) SMAW is used. For some job silver brazing, vacuum brazing or induction brazing may be required.

(2) Mechanical structures:

Fabrication of mechanical structures & supports: material of construction – Aluminum, SS, carbon steel etc. In some cases, structure erection and commissioning at IPR site may be required.

(3) Precision machining:

Precision machining of some materials like copper, insulators etc. Precise machining may call for special milling, wire cut, EDM, laser cutting, punching, etc.

(A) VENDOR DETAILS:

1.	Name of the Company
2.	Address
3.	Phone No.
4.	Fax No.
5.	Email address
6.	Type of the Company: (Large scale / Small scale etc.)
7.	Sales Tax / VAT Number
8.	Registration with Excise authorities/PLA No. (if applicable)
9.	Service Tax Registration No. (if applicable)
10.	I T PAN No.
11.	Bank Solvency
12.	Company profile
13.	List of clients where the company is on approved list of fabricators
14.	List of customers with name of contact person and address
15.	Copies of orders having values: (i) 1 to 5 lakhs; (ii) 6 to 10 lakhs; (iii) 11 to 15 lakhs; (iv) 16 to 20 lakhs; (v) above 20 lakhs
16.	Performance certificate issued by customers

Documentary proof/Xerox copies in respect of Sr.No.7 to 16 above to be furnished.

(B) Details about Man power:

Sr.No.	Type of Man Power	Qualification	Number
1.	Engineers		
2.	Supervisors		
3.	Mechanics		
4.	Welders		
5.	Draughtsman		
6.	Any other if applicable		

(C) Experience and facilities:

Please give following details in separate sheet.

- (1) **Electro polishing:** Experience in electro polishing and facility available with vendor or accessible to vendor for electro polishing. Give detail of a specific job carried out that required electro polishing.
- (2) **Ultrasonic cleaning:** Experience in ultrasonic cleaning and facility available with vendor or accessible to vendor for ultrasonic cleaning. Give detail of a specific job carried out that required ultrasonic cleaning.
- (3) **Vacuum Brazing:** Experience in vacuum brazing and facility available with vendor or accessible to vendor for vacuum brazing. Give detail of a specific job carried out that required vacuum brazing.
- (4) **Induction Brazing:** Experience in induction brazing and facility available with vendor or accessible to vendor for induction brazing. Give detail of a specific job carried out that required induction brazing.
- (5) **Helium Leak Testing:** Experience in helium leak testing and facility available with vendor or accessible to vendor for helium leak testing. Give detail of a specific job carried out that required helium leak testing.
- (6) **Buffing / Honing / material coating:**
- (7) **Details of special job executed, if any.**

(D) Fabrication and Machining facilities:

Give details of fabrication and machining facilities available with vendor in separate sheet in the following format.

(If possible vendor are requested to mention year of manufacturing of the machines)

Sr. No.	Machine	Numbers	Make and specification of machine
(1)	Lathe machine		
(2)	Shaping machine		
(3)	Planing machine		
(4)	Milling machine		
(5)	Drilling machine		
(6)	Boring machine		
(7)	Jig Boring		
(8)	Hot sheeting rolling machine		
(9)	Cold sheet rolling machine		
(10)	Heat treatment furnace		
(11)	Plasma cutting machine		
(12)	Wire cutting machine		
(13)	CNC machine		

	(Specify which type and capacity)		
(14)	Spark erosion drilling machine		
(15)	TIG welding machine for thick plates		
(16)	TIG welding machine for thin ($\leq 3\text{mm}$) sheets		
(17)	Electric Arc Welding machine		
(18)	E.B. welding		
(19)	Laser welding		
(20)	Other welding machines		
(21)	Brazing facility		
(22)	Material handling equipment (No off and capacity)		
(23)	Any Special Purpose Machines		

(E) Inspection and Measurement Tools:

Sr.No.	Technique	Equipment	Specifications of Equipment
(1)	Vernier Calipers		
(2)	Micrometer		
(3)	Height gauge		
(4)	Gauges		
(5)	Any other instruments		
(6)			

(F) Quality Surveillance Facilities:

Please give details in separate sheet about Quality Surveillance System followed. Also give details of testing facilities available with vendor or accessible to vendor in separate sheet in the following format.

Sr.No.	Technique	Equipment	Specifications of Equipment
(1)	Helium leak testing		
(2)	Radiography for weld joints		
(3)	Ultrasonic detector for weld joints		
(4)	Physical properties of material		
(5)	Chemical properties of material		
(6)	Any other		

(G) Facility for preparation of Fabrication Drawings:

Please give details in separate sheet regarding in-house facility for preparation of fabrication drawings.

- Hardware available – computers / plotter /printer etc
- CAD packages used,
- Manpower available

(H)Furnish details of major sub-contractors engaged by you with their facilities.

We hereby confirm that the information/details furnished above are true and, if found incorrect during scrutiny, IPR has sole authority to reject our application.

Place:

For _____

Date:

Authorised signatory
(Official seal)

TO BE FURNISHED ON VENDOR'S LETTER HEAD

VENDOR DATA FOR EMPANELMENT

ITEMS:

Fabrication of components of Vacuum system, like flanges, coupler, adaptor etc., and mechanical structures.

Material of construction of vacuum components will be mainly Stainless Steel of different types. Surface finish of the finished component will be between 1.6 micron to 0.8 micron. Only TIG welding will be used in fabrication of vacuum system and components.

Material of construction of mechanical structures will be Stainless steel, Carbon steel, aluminium etc. Precise machining with wire cutting, EDM etc., may be required for copper, insulators etc.

(A) VENDOR DETAILS:

1.	Name of the Company
2.	Address
3.	Phone No.
4.	Fax No.
5.	Email address
6.	Type of the Company
7.	Sales Tax / VAT Number
8.	Registration with Excise authorities/PLA No. (if applicable)
9.	Service Tax Registration No. (if applicable)
10.	I T PAN No.
11.	Bank Solvency
12.	Company profile
13.	List of clients where the company is on approved list of fabricators
14.	List of customers with name of contact person and address
15.	Copies of orders having values: (i) Up to 1 lakh; (ii) 1 to 3 lakhs; (iii) 3 lakhs and above
16.	Performance certificate issued by customers

Documentary proof/Xerox copies in respect of Sr.No.7 to 16 above to be furnished.

(B) Details about Man power:

Sr.No.	Type of Man Power	Qualification	Number
1.	Engineers		
2.	Supervisors		
3.	Mechanics		
4.	Welders		
5.	Draughtsman		

(C) Experience and facilities:

Please give following details in separate sheet.

- (1) Details of routine fabrication and machining jobs carried out.

- (2) Type of welding used for routine jobs, e.g. electric arc welding, TIG welding, SMAW, aluminium welding etc.
- (3) Type of brazing used for various jobs.
- (4) Details of specialized fabrication and machining jobs carried out.
- (5) Details of various materials used for fabrication and machining.

(D) Fabrication and Machining facilities:

Give details of fabrication and machining facilities available with vendor in separate sheet in the following format.

Sr.No.	Machine	Numbers	Make and specification of machine
(1)	Lathe machine		
(2)	Shaping machine		
(3)	Milling machine		
(4)	Drilling machine		
(5)	Boring machine		
(6)	Hot sheeting rolling machine		
(7)	Cold sheet rolling machine		
(8)	Heat treatment furnace		
(9)	Plasma cutting machine		
(10)	Wire cutting machine		
(11)	CNC machine		
(12)	Spark erosion drilling machine		
(13)	TIG welding machine for thick plates		
(14)	TIG welding machine for thin ($\leq 3\text{mm}$) sheets		
(15)	Electric Arc Welding machine		
(16)	E.B. welding		
(17)	Other welding machines		
(18)	Brazing facility		
(19)	Material handling equipment		

(E) Quality Surveillance Facilities:

Please give details in separate sheet about Quality Surveillance System followed. Also give details of testing facilities available with vendor or accessible to vendor in separate sheet in separate sheet.

(F) Furnish details of major sub-contractors engaged by you with their facilities.

We hereby confirm that the information/details furnished above are true and, if found incorrect during scrutiny, IPR has sole authority to reject our application.

Place: _____ For _____

Date:

Authorised signatory
(Official seal)