

**REGISTERED/IMMEDIATE**

Heavy Industries Taxila

Marketing and Procurement

Directorate (CP Branch)

Taxila Cantt, Pakistan

Telephone: (051) 9315029

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5001/IT-3001/18-19/DESCOM/FOB/CP-1/Proc

23 Jul 2018

To: M/s \_\_\_\_\_  
(All Concerned)

Subject: **REQUEST FOR PROPOSAL (FOB)**

**5001/IT-3001/18-19/DESCOM/FOB/CP/Proc dated 23 Jul 2018**

Dear Sir,

1. Heavy Industries Taxila invites Proposals from reputable and renowned firms/companies having sound financial background and relevant experience for procurement of High Frequency Induction Heating Furnace on FOB Basis.
2. Request for Proposal document is attached at Annex 'A'.
3. The proposal complete in all respects in sealed envelopes should reach following address and be clearly marked Procurement of High Frequency Induction Heating Furnace. "Pre-qualified / shortlisted companies will be asked to provide technical specifications and commercial quotation on which the firms will furnish their proposed solution and financial offers".

**REGISTERED**

**REQUEST FOR PROPOSAL**

REQUEST FOR PROPOSAL INQUIRY NO: 5001/IT-3001/18-19 / DESCOM / FOB / CP / Proc  
dated 23 Jul - 2018


TO BE OPENED ON: 28 Aug 2018 at 11 hours

TO: ASSISTANT DIRECTOR (PROCUREMENT)

FROM: M/s

4. The proposal shall be open for acceptance till 1030 hrs 28 Aug 2018.

Yours sincerely,

  
Major  
Acting /Assistant Director Procurement  
(Jawad Maqsood Butt)

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# Heavy Industries Taxila

Request for Proposal (Procurement)

For

High Frequency Induction Heating Furnace

Ver 1.0 Dated: \_\_\_\_\_ Jul, 2018

*Handwritten signature and date: 23/7*

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**Abbreviations/Acronyms**  
**Organization/Industry**

S.No.	Abbreviation	Description
1.	DESCOM	Development, Engineering, Support, Components Manufacturing.
2.	EOI	Expression of Interest .
3.	HIT	Heavy Industries Taxila.
4.	HITB	Heavy Industries Taxila Board.
5.	ISO	International Organization for Standardization.
6.	NTN	National Tax Number.
7.	PPRA	Public Procurement Regularity Authority.

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**HEAVY INDUSTRIES TAXILA**

**REQUEST FOR PROPOSAL (Procurement)**

**High Frequency Induction Heating Furnace**

**Introduction & General Information**

1. Heavy Industries Taxila (HIT) was established in the early seventies and grown into a gigantic industrial complex. HIT deals in manufacturing and up-gradation of Tracked Armored Personnel Carrier, Wheeled Light Armored Vehicles, Bullet Proof Cars, Tanks etc.

**Purpose:**

2. The purpose of this Request for Proposal (RFP) is to invite vendors to submit a proposal to HIT for procurement of High Frequency Induction Heating Furnace in DESCOM HIT as detailed in this document. The RFP provides vendors with the relevant operational, performance, application, and architectural requirements of the system.

**Coverage & Participation:**

3. The intended coverage of this RFP, and any agreement resulting from this solicitation, shall be for the use of HIT along with national needs. HIT reserves the right to add and/or delete elements, or to change any element of the coverage and participation at any time without prior notification and without any liability or obligation of any kind or amount.

**Vendor Understanding of the RFP:**

4. In responding to this RFP, the vendor accepts the responsibility fully to understand the RFP in its entirety, and in detail, including making any inquiries to HIT as necessary to gain such understanding. HIT reserves the right to disqualify any vendor who demonstrates less than such understanding. Further, HIT reserves the right to determine, at its sole discretion, whether the vendor has demonstrated such understanding. That right extends to cancellation of award if award has been made. Such disqualification and/or cancellation shall be at no fault, cost, or liability whatsoever to HIT.

**Good Faith Statement:**

5. All information provided by HIT in this RFP is offered in good faith. Individual items are subject to change at any time. HIT makes no certification that any item is without error. HIT is not responsible or liable for any use of the information or for any claims asserted there from.

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**Errors and omissions in this RFP and enhancements:**

- a. Vendors shall bring to the notice of HIT any discrepancies, errors, or omissions that may exist within this RFP. With respect to this RFP, vendors shall recommend to HIT any enhancements, which might be in HIT's best interest. These must be submitted in writing or through email and must be received prior to technical proposals submission.
- b. Inquiries about technical interpretations must be submitted in writing and be received prior to technical proposals submission. Any query received after the said date may not be entertained.
- c. Inquiries for clarifications/information that will not require agenda may be discussed verbally at any time during this process.
- d. The clarification and its replies will be shared with all prospective bidders.
- e. The authorized representatives for all correspondence queries/clarifications in relation to this RFP are:

**Primary Contact**

**Name:** Lt Col Noman Shabbir  
**Designation:** Assistant Director (Proc)  
**Postal Address:** M&P Directorate, HIT Taxila Cantt  
**Phone (Office):** 051-9315029  
**Email:** [noman111@hotmail.com](mailto:noman111@hotmail.com)

**Name:** Mr Engr. Muhammad Ashraf  
**Designation:** Senior Works Manager  
**Postal Address:** DGM(M) DESCOM, HIT Taxila Cantt  
**Phone (Office):** 051-9315333 Ext: 62845

**Secondary Contact**

**Name:** Col Shafqat Hussain  
**Designation:** General Manager(P)  
**Postal Address:** DESCOM, HIT Taxila Cantt  
**Phone (Office):** 051-9315047  
**Email:** [gmpd.hit@gmail.com](mailto:gmpd.hit@gmail.com)

**Agenda:**

6. HIT will make a good-faith effort to provide a written response to each question or request for clarification that requires agenda.

**Definitions**

7. Some important definitions used in this document are listed below:
  - a. **Purchaser:** means the Heavy Industries Taxila (HIT) or any other person for the time being or from time to time duly appointed in writing by the Purchaser to act as Purchaser for the purposes of the Contract.
  - b. **Vendor/Firm / Company:** These terms are used interchangeably for the firms who have participated in EOI activity.

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- c. **"Bidder / Tenderer":** means the interested Firm / Company / Supplier / Distributors that may provide or provides the subject related services to any of the public/private sector organization under the contract and have registered for the relevant business thereof.
- d. **Authorized Representative:** means any representative appointed, from time to time, by the Purchaser or the Bidder/Contractor.
- e. **Contractor:** means the Tenderer whose bid has been accepted and awarded Letter of Acceptance for a specific item followed by the signing of Contract.
- f. **Contract:** means the agreement entered into between the Purchaser and the Contractor, as recorded in the Contract Form signed by the parties, including all Schedules and Attachments thereto and all documents incorporated by reference therein.
- g. **Force majeure:** shall mean any event, act or other circumstances not being an event, act or circumstances under the control of the purchaser or of the Contractor. **Non-availability of materials / supplies or of import license or of export permit shall not constitute Force majeure.**

#### Existing Infrastructure

- 8. The vendor will survey / study the existing range and will consider all essential parameters prior to submitting the proposal for the subject purpose.
  - a. **Range layout:** Range dimensions are as per given requirements.
  - b. **Civil Structure:** The vendor is required to survey the designated place for installation/commissioning of High Frequency Induction Heating Furnace. The vendor needs to check the building's conformity for the subject purpose and all work required to accommodate the machine falls in the responsibility of the supplier.

#### Scope of Work

- 9. High Frequency Induction Heating Furnace was initially installed in 1979. Due to extensive use during last 38 years, the furnace has out lived its useful life. The present furnace is therefore obsolete and its maintenance spares such as Thyratrons tubes, Oscillation tubes, B4 & B5, grid control transformers etc are either not available in local market or available at very high prices in International market. Thus the maintenance cost and maintenance cost and consumption of electricity is very high. Furthermore, due to non availability of maintenance spares, the furnace remains out of action for long duration.
- 10. It is pertinent to mention that Induction Hardening Heating Furnace was installed for heat treatment of parts of T-59 Tanks only whereas at present hardening processes of parts of other Tanks, APCs, Guns, ARVs, e.g. Track Shoe of AlKhalid-1 & T-80 UD are also being carried out on the same furnace. Necessity is therefore, felt to procure new state of the art furnace.

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### Country of Origin

11. The High frequency induction furnace should be of western/ European/ Japanese/ USA/ South Korean origin.

### Furnace Footprint/ Overall Furnace Dimensions

12. To be specified.

### Major Specifications of the Furnace

13. The major specifications of the High Frequency Induction Furnace are as under.

Oscillating frequency	250 ~ 400 KHz
Oscillating power	200 KW
Max power output	160 KW
Operating power supply	380 VAC, 3 phase, 50 Hz
Capacity of power supply	400 KVA
Size of job to be hardened	Ø450mm ~ 240 mm
Automatic adaptation to changing load	The generator should be automatically self tune for different size of loads. It should have provision to set it manually as well.
Along with automatic function the generator should run on manual mode also and output power should be adjusted manually as well.	
The power circuit should have automatic protection against over load.	
Should be equipped with ripple free stabilized power supply.	
High energy efficient system, efficiency should be above 90%	
Completed with closed water/ Oil quenching circulation system.	
Converter design should be based on IGBT/ latest technology.	

### Diagnostic Function.

14. Diagnostic function for following should be included in controller to warn the operator for any deficiency.
- a. Low hydraulic oil level } If required
  - b. High hydraulic oil temperature } If required
  - c. Any other warning considered necessary

### Consumables/ Replacement parts Spares

15. All Essential/ critical spares required for smooth operation of the furnace for 5 years and should be part of overall supply with the machine.

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**Performance Requirement.**

16. The system should be capable of induction heating all the materials at the specified rotating speed employing.

**Machine Controller.**

17. PC based control software with USB interface. Controller details be provided. In case of any disturbance/ emergency stop, the controller should be able to recover the operation without causing any damage to the job.

**User Interface.**

18. Easily understandable working environment.

**Quick Start.**

19. Specify the time required by the Heating Furnace to become operational.

**Operating Cost.**

20. Provide the following information.
  - a. KW hour consumption of electricity with low to full load operating per hour.
  - b. Furnace with less operating cost will be preferred.

**Protection.**

21. Protection form dust dirt and grit for drive line and bearing should be ensured/part of machine. All the electrical systems should be protected with suitable protection devices.

**Warranty/ Guarantee.**

22. Warranty and Guarantee must include all components installed as replaceable under normal operating conditions. The entire furnace should have Two years warranty of consumable spares including electronics, hardware, software parts etc.

**Accessories.**

23. Firms to provide details of accessories for the High Frequency Induction Heating Furnace to be supplied by the firm. All essential accessories must be provided with the machine/equipment.

**Furnace Weight.**

24. To be specified.

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**Civil Work.**

25. Firm is responsible to carry out all types of civil work including drainage etc. Required for installation and commissioning of the Furnace at existing place of furnace at shop-8. Firm rep may visit the site for the installation of the Furnace in Shop-8 DESCOM Factory, HIT Taxila Cantt.

**Electrical, Pneumatic, Water etc. connecting.**

26. Firm will be responsible for carrying out all types of connections and up gradation (Electrical, water supply, air supply etc if required) for installation and the commissioning of the Furnace at existing place of High Frequency Induction Furnace. Firm rep may visit the site for the installation of the Furnace in Shop-8 DESCOM Factory, HIT Taxila Cantt.

**Turn Key Solution.**

27. Furnace to be installed as Turn key solution at purchaser site.

**Installation/ Commissioning.**

28. 100% installation/ Commissioning of Furnace will be undertaken by the supplier at purchaser premises.

**Machine Safety.**

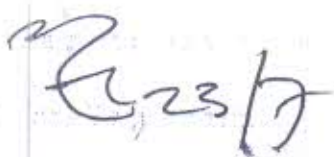
29. All safeties (included as integral part of Furnace) to be clearly specified.

**Operating Temperature.**

30. Must be able to operate in temperature range of 50 ° Centigrade.

**Maintenance Schedule/ Plans Requirement.**

31. Complete details of maintenance schedule along with maintenance requirement to be specified. All the consumables if required for 05 years of maintenance/repair or any other item required will be part of supply of overall package.



### **Machine Environment**

32. Specify whether furnace will be in closed or in open environment. For closed environment all necessary work required will be responsibility of the firm on existing site.

### **High Reliability with low Operating Cost.**

33. Furnace should be highly reliable, preferably maintenance free with low operating cost. Firm to clearly specify its reliability, maintainability, durability and availability data. Firm to clearly specify in quantitative form the data and also to provide operating and maintenance cost on yearly basis with operation hours.

### **Easy in Operation.**

34. Easy to learn type of system/ Operation of Furnace. Installation, maintenance and programming should be user friendly and furnace parts must be easily available in market. CNC controlled will be preferred.

### **Documentation and Laptop with Software.**

35. Firm to provide state of the art laptop with software's operator, repair/maintenance manuals and catalogue duly installed/ copied in the laptop system.
- Hard copy of manuals and part catalogue in English be also provided along with other necessary data package.

### **Logistic Backup Support**

36. OEM to provide with the furnace with maintenance / repair spare parts for continuous operation for at least 05 years.

### **Pre-Shipment Inspection and training.**

37. (a) 100% inspection including testing of the furnace will be undertaken by the purchaser's technical representatives of DESCOM at OEM premises by three members of tech official team including officers for one week excluding journey time. Complete expenses in FE and LC on account of inland transportation, boarding, loading, messing, return air tickets, medical facilities and miscellaneous expenditures of the team will be borne by the supplier.
- (b) Four weeks training will be imparted to three officials including officers of tech team of DESCOM at OEM site. Complete expenses in FE and LC on account of inland transportation, boarding, loading, messing, return air tickets, medical facilities and miscellaneous expenditures of the team will be borne by the supplier.

Notes.

38. (a) Specifications are enlisted with available information. Firm may not restrict themselves on these only and may offer machine with even better specs/parameters.  
(b) Machine with best suitable options will be selected.  
(c) Supplier will be responsible for complete installation / commissioning / civil work of the machine.  
(d) Supplier to include any part that is considered essential for the installation / commissioning of the machine and not covered in the above mentioned request.  
(e) After installation / commissioning, supplier team will be responsible for complete satisfaction of the purchaser regarding functioning / performance of the machine for 02x weeks.

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