Annexure-A

Reconditioning and Retrofitting of Box type forging furnace, Plan No. - 5/1-07.

Existing Furnace Details:

Furnace Type	Producer Gas Fired Chamber Type Furnace
Application	Forging of components
Working Space inside Furnace	1600(L)mm X 1000 (W) mm X 700(H) mm
Max. Operating Temperature	1250°C
Time to obtain max Temp.	6 hrs.
Batch Capacity	1000 kg/Batch
Rate of Rise of Temperature	Depending upon job setting rate of rise of temperature varies from 100°C/Hr. to 220°C/Hr
Fuel	Producer Gas at a pressure of 425mm WG with a C.V. of 1250 Kcal/N Cu. M
No. of burners	2 (Manually Ignited)
Type of Lining	Refractory Brick lining
Furnace door	Water cooled
Number of Zones	One

Purpose of project & basic requirement

a.) Modification of existing furnace and its combustion system to make furnace suitable to operate on Natural gas as fuel.
b.) After modification the furnace should meet the following criteria:
- Process temperature : 1250°C
- Furnace should reach the desired temperature of 1250°C on load in about 6 hours.
- Temperature uniformity in the furnace should be ± 10°C.
- Capable for load of 1000 kg/ Batch.
- Furnace door: Tightly sealed in closed position to prevent heat loss and any type of leakage.
- Furnace skin temperature measured at a distance of 1m from open side should be not more than 50°C higher to ambient.

Annexure –A/ Part-I

A. Scope of Supply

Sl. No.	Description	Quantity	Compliance	Remarks
1.	**INSULATION SYSTEM** :			
1.1	FOR SIDE WALL & ROOF:			
i) ii) iii) iv) v)	The refractory lining will be modified to suit, burner front plate and door. The lining pattern will be as follows: Refractory bricks as per standard IS : 8 for walls Refractory bricks as per standard IS : 6 for walls Light weight insulation bricks as per IS: 2042 for Hot face of Insulation. The roof insulation and refractory shall be conventional arch type design as per IS:8 Fire Clay and Insulating mortar.	Material Shall be supplied by BHEL.		
1.2	FOR HEARTH/BED:			
i) ii) iii) iv)	The lining on the bed will be modified to provide flue down takes on hearth level of back wall instead of roof High Alumina Bricks min 60% alumina Refractory bricks as per standard IS : 6. Light weight insulation bricks as per IS: 2042 for Hot face of Insulation. Fire Clay and Insulating mortar.	Material Shall be supplied by BHEL.		
1.3	Modifications required in External dimensions shall be taken care by the vendor, so that with the new insulation system working space inside the furnace shall be retained.			
1.4	As a Heavy Hammering machine is nearby the furnace, the long term stability of insulation against vibrations at high temperature of around 1250°C has to be ensured by the vendor. Suitable method to anchor the insulation may be adopted for the same.			
1.5	FLUE: The flue lining will be modified for installing damper.			
2.	**METAL ENCLOSURE**			
i) ii) iii)	Furnace casing will be modified for mounting of new burners, front plate, new door and flue exhaust at hearth level. Flue duct to be modified for connecting to existing stack through roof. Furnace casing and flue duct to be repaired with new M.S material wherever damaged.	MS Plate, Sections, angles, channel required for repair & modification will be provided by BHEL		
3.	**DOOR MECHANISM**			
i)	The existing Pneumatic Door lifting mechanism shall be retained and necessary overhauling and repair shall be carried out.			

ii) iii)	New door & Front plate shall be supplied <u>with conventional refractory and insulation</u>, suitable for operating temperature. The new door and front plate will withstand maximum operating temperature **without water cooling.** Door sealing provision to avoid any Heat loss or leakage from sides of door after closing.			
4.	**BURNERS**			
i)	Burners capacity to be decided by the vendor in order to achieve the desired temperature on full load in due time. Heat load calculations to be submitted by the vendor.			
ii)	No. of Zones : One			
iii)	Minimum nos. of burners	**2 nos.**		
iv)	Ignition : Automatic Direct spark ignition			
v)	Flame supervision : UV sensor with cooling air provision / by ionization electrode			
vi)	Burner turn down : Min 10:1			
vii)	Burner Type : Nozzle mix medium velocity			
viii)	Burner Nozzle : Shall be capable to deliver three stage mixing of fuel and air inside the burner			
ix)	Burner assembly shall consist of Basic burner, Refractory block and holder, metering orifices in Gas and Air-line, Spark rod and Peep Sight			
5.	**GAS LINE COMPONENTS**			
i)	Individual Burner Manual Ball valve	**2 nos.**		
ii)	Individual Burner Manual Butterfly valve	**2 nos.**		
iii)	Individual Burner Manual Solenoid valve (Fast closing/ Fast opening)	**2 nos.**		
iv)	Air – Gas Ratio regulator shall be capable of turn down of 10:1	**2 nos.**		
V)	Pressure gauge with push cock	**2 nos.**		
6.	**MAIN GAS VALVE TRAIN :**			
	All valves will be interconnected and mounted on supporting structure, suitable for natural gas inlet pressure of 5 bar and it should be equipped with following accessories:			
i)	Manual shut off valve			
ii)	Main gas pressure regulator			
iii)	Gas filter – Filtration capacity 30 micron	**1no**		
iv)	Inlet pressure gauge with Push Cock	**1no**		
v)	Gas solenoid valve	**1 no**		
vi)	Low Gas pressure switch with isolation valve	**2 nos.**		
vii)	High Gas pressure switch with isolation valve	**1 no**		
vii)	Outlet pressure gauge with push cock type block and bleed valve	**1 no.**		
viii)	Vent valve	**1 no.**		

7.	**COMBUSTION AIR LINE COMPONENTS:**			
i)	Pressure gauge with Push Cock type block and bleed valve	**2 nos.**		
ii)	Low Pressure switch with isolation valve for safety interlock	**1 no**		
iii)	Motorized Controlled Butterfly valve (modulating control)	**1 no**		
iv)	Manual Butterfly valve (air- line) for individual burner	**2 nos.**		
8.	**COMBUSTION AIR BLOWER**			
i)	Combustion air blower with motor and inlet air filter			
ii)	Capacity to be decided by vendor			
9.	**COMPONENTS FOR AUTO IGNITION AND FLAME SUPERVISION :**			
i)	U.V. Sensor with cooling air adaptor for each burner / ionization electrode	**2 nos.**		
ii)	Ignition transformer for each burner	**2 nos.**		
iii)	Burner sequence controller	**2 nos.**		
10.	**TEMPERATURE CONTROL & BURNER MANAGEMENT PANEL :**			
i)	Rittal make control panel coated with Siemens grey paint.			
ii)	Cabinet shall be fitted with following and completely wired: • Mains incoming supply via bus bars properly supported in the panel with insulating bush. • Bottom entry for supply cables. • MCCB and Power contactors. • 1 no. Voltmeter 0-500VAC with 3 phase selector switch for monitoring line voltage. • 1 no ammeters with CT and selector switch for monitoring line currents for each phase • Auxiliary contactors, relays, MCBs, MPCBs, Fuses, LED-type Indicating lamps, push buttons etc. for Furnace control • Isolation cum control transformer of suitable rating for furnace control circuit • Micro Annunciators • Cooling fans of ebm nadi make of adequate rating for proper cooling of the panel. • Necessary switchgear and instrumentation for automatic controller and safety to be incorporated. **(Note : All above mentioned switchgears should be of Siemens/ ABB/ L&T/GE make only)**			
iii)	The cable entry shall be from bottom of the panel.			
iv)	Burner control panel shall have provision of both Auto and Manual control of Burners.			
v)	Control panel shall have Emergency Stop switch which should be capable to stop complete operation including Gas flow without any failure. This switch should be clearly visible and approachable to operator.			
vi)	The Electric circuitry of the burners shall be such that Burners always start in low fire condition even if Burner/ Burners were stopped in high fire condition			

vii)	In control panel there shall be clear light conditions with alarms for Burner condition like Failure, Low Gas pressure, High gas pressure and Low air pressure.			
viii)	Provision of independent operation of both the burners either in Auto or Manual mode.			
11.	**AIR AND GAS PIPE LINE :**			
i)	Complete combustion Air line from Combustion Air blower to each Burner – New MS Black pipe line with all required fittings, gasket, nut & bolt.			
ii)	Complete Gas line from Gas valve train to each Burner – Seamless pipe with all required pipe fittings of schedule 40 with related gaskets, nut & bolt.			
12.	**ELECTRICAL AND INSTRUMENTATION COMPONENTS**			
i)	Power cable for Blower motor and power supply to control panel with lugs and connector – Size and length of cable is to be decided by the party.			
ii)	Instrumentation cable from control panel to components on field and Gas valve train to control panel with lugs and connector.			
iii)	R-Type Simplex thermocouple with inconnel sheath having min. wire dia. of 1mm.	**1no.**		
iv)	Compensating cable – R type			
v)	Suitable cable trays and supports for fixing of cable trays.			
vi)	PID temperature controller of size 96mmX96mm.			
13.	**EXHAUST SYSTEM**			
i)	Pipe line, valves and dampers required for modification of existing Flue duct system so as to ensure proper evacuation exhaust of flue gases and maintaining of pressure inside the Furnace.			
ii)	Existing Exhaust system is to be modified and connected existing chimney. The flue take-off will be from the hearth level and from back wall of furnace to existing flue duct which connected to existing chimney.			
iii)	Material required for connecting exhaust / Flue duct of the furnace with existing main exhaust line which is connected to existing chimney.			
iv)	The emissions from Flue system shall meet all the CPCB norms			
v)	New manually operated damper will be provided for maintaining furnace pressure for increasing thermal efficiency.			
14.	**OTHER ITEMS**			
14.1	***Paint and Putty for painting the furnace with Heat resistant Silver Aluminium Paint.***			
14.2	***Any other item not spelled out and envisaged in the above specifications but essentially required for efficient control and modernization of the furnace as per the objective of the project may be offered by the vendor.*** ***No changes shall be permissible after the placement of P.O./W.O.***			
15.	**DOCUMENTS:**			
15.1	Operation and maintenance manual of the furnace, giving all details like electrical circuit diagram, Instrumentation schematics, mechanical assembly drawings etc.	**3 sets**		

15.2	Operation and service manuals of following:			
i)	Burners	**3 sets**		
ii)	Main Gas Valve train	**3 sets**		
iii)	Gas line components	**3 sets**		
iv)	Flame Auto ignition and Supervision	**3 sets**		
v)	Combustion airline and blower	**3 sets**		
15.3	List & catalogues of all bought out items	**3 sets**		
16.	**SPARES :**			
i)	Complete burner assembly as offered against Sl. No. 4	**1no.**		
ii)	'R' type thermocouples with inconnel sheath as offered against Sl. no. 12 (iii)	**1no.**		

Annexure-A/Part-II

B. SCOPE OF WORK AND OTHER TERMS & CONDITIONS

Sl. No	Description	Compliance	Remarks
1.	**REMOVAL & DISCONNECTION**		
i	Removal of water cooled type door		
ii	Removal of front plate		
iii	Dismantling of existing Gas and Air line		
iv	Disconnection and Removal of all old electrical cables and control cabinets		
v	Removal of existing insulation & brickwork of the side walls, roof, and door.		
vi	Salvage Useable refractory and insulation.		
2.	**FURNACE SHELL REPAIR**		
i	Necessary repair of the furnace shell will be carried out before commencing new insulation work		
ii	Skin temperature of furnace should be within 50deg C above ambient measured at 1 m distance at steady state condition.		
3	**PAINTING:**		
i	The furnace shall be painted in heat resistant Silver Aluminium oxide paint from the outside.		
ii	All pipe lines shall be painted after applying Primer in the pipes		
4	**INSTALLATION**		
i	Door of new design to be installed		
ii	Overhauling and repair of existing door lifting mechanism.		
iii	Installation of Alarm Annunciator		
iv	Installation of gas pipeline from gas train valves to Burner along with all control valve & gauges		

v	Installation of air pipeline from combustion blower to Burner along with all control valve & gauges		
vi	Repair of door lifting mechanism		
vii	Installation and fixing of Natural Gas burners.		
viii	Fixing of Gas valve train near the furnace at location finalized by BHEL.		
ix	Installation of Combustion Air blower on the foundation provided by BHEL.		
x	Installation of temperature control and Burner Management Panel(s) near the furnace at location finalized by BHEL.		
xi	Installation of all supplied Electrical items, instrumentation and controls		
xii	Installation of manually operated damper in flue line		
xiii	Cable tray laying work		
xiv	Cabling from control panel to Field instruments and Gas valve train to control panel.		
xv	Installation of all supplied Refractory Lining in the furnace		
xvi	Refractory lining of door		
xvii	Insulation of flue passage		
xviii	Installation of flue refractory for fitting damper system		
xix	Installation of all insulating material		
5	**SAFETY INTERLOCKS & PROTECTION**		
i	Audio visual alarm annunciator will be supplied for following abnormal conditions : - Low combustion air pressure. - Low gas pressure. - High gas pressure. - Excess furnace temperature. - Individual Burner flame failure		
6	**MISCELLANEOUS WORKS**		
i	Supplier shall execute any other work found necessary to complete the work but not stated explicitly above, along with all required material without any obligation.		
7	**ACCEPTANCE CRITERIA**		
i	Acceptance shall be at BHEL, Hardwar works after successful commissioning, testing and job proving and after achieving following criteria: a. Maximum working temperature-1250°C b. Rate of heating from ambient to maximum temperature with full load within 6 hrs. c. Temperature uniformity during steady state. Vendor to prove the uniformity and stability of furnace temperature (+/- 10°C during steady state) by doing its calibration at three temperature points including maximum temperature. Items required for calibration shall be provided by BHEL. d. Skin Temperature within 50°C above ambient during steady stage, measured 1 mtr away from door opening. e. The flue design will ensure exhaust of flue gas to chimney /stack by natural draft.		

ii	All furnace functions shall be demonstrated. Forging cycle for two components (decided by production deptt. of BHEL) shall be established by heating the furnace to load and temperature specifications.		
8	**DELIVERY:**		
i	**Material: 16 weeks** from the date of release of the Work order.		
ii	Vendor to note that early delivery shall be acceptable subject to prior approval by BHEL.		
iii	**Commissioning: 8 week**s from date of release of furnace for work.		
iv	An activity chart shall be submitted by the vendor detailing all the activities scheduled and time taken to complete the commissioning of each furnace.		
9	**WARRANTY :**		
i	Vendor shall stand warranty for all the materials supplied, all services provided and all the work executed for a period of 12 months from the date of successful commissioning of the furnace at BHEL, Hardwar		
10	**VENDOR'S OBLIGATION**		
i	**Vendors are advised to visit the site, before submitting bid.**		
ii	Any Material or work not specified in scope of supply/scope of work but required for successful modernization of the furnace may be advised and quoted by the Party along with their bid. No changes shall be permissible after the placement of W.O. /P.O. by BHEL and the same shall have to supplied and commissioned free of cost.		
iii	Party shall bring all required tools (power as well as hand tools), Meters and testing equipment as required for installation and commissioning.		
iv	All Welding rods and man power required for welding shall be party's responsibility.		
11	**BHEL'S OBLIGATION:**		
i	Crane facility and lifting tackles like slings, rope, D-Shackles shall be provided free of cost.		
ii	Electricity, welding set, Gas cutting equipment, Gases and holders shall be provided free of cost.		
iii	Machining facility required for erection & commissioning, subject to the extent available in BHEL, shall be provided free of cost		
iv	All civil work (except refractory works) shall be executed by BHEL subject to prior intimation and drawing submission by the party		
12	**TRAINING**		
i	Party shall impart training on the new systems supplied and commissioned by them in situ to BHEL technical staff, in following areas		
ii	Instrumentation: For commissioning & maintenance of various controllers.		
iii	Training for operations and functioning of furnace.		
13	**PRE-DISPATCH INSTRUCTIONS**		
i	Pre-dispatch inspection of all the items covered under Scope of Supply shall be carried out by BHEL at vendor's works.		
ii	Vendor shall invite BHEL for carrying out pre- dispatch inspection.		

iii	Deputed BHEL persons shall do pre acceptance at vendor works and give dispatch clearance.		
iv	Expenses of Boarding and lodging of BHEL personnel during PDI shall be borne by BHEL.		
v	Before inviting BHEL for Pre-dispatch inspection, vendor shall submit to BHEL the Bill of Material (BOM).		
14	**QUALIFYING CONDITIONS**		
14.1	Average Annual financial turnover during the last 3 years, ending 31st March 2016, should be at least 5 lakhs.		
14.2	Experience of having successfully completed similar works ending 31st January 2016 should be either of the following : Three similar completed projects with each project costing not less than 6.6 lakhs. OR Two similar completed projects with each project costing not less than 8.25 lakhs. OR One similar completed projects with each project costing not less than 13.2 lakhs.		
14.3	**Definition of Similar Work :** Supply/Upgradation and commissioning gas heated/fired furnace with minimum 02 nos. burners of Eclipse – India / Kromschroder- Germany/ Wesman - IBS/ Riello- Italy make, in past Seven years (on the date of opening of tender) and such furnace have run satisfactorily for at least six months after commissioning.		
14.4	Name, designation, Phone, FAX no. and e-mail address of the contact person of the customer		
14.5	P.O. /W.O. copies, Handing over MOM/ Final MOM/ Completion certificate, Performance certificate about the furnace shall be provided by the Vendor from the customer regarding satisfactory performance of furnace supplied to them. **Note: BHEL may verify information submitted by vendor**		
15	**RISK PURCHASE CLAUSE**		
15.1	In case of delays in supplies / defective supplies or non-fulfillment of any other terms & conditions given in the work order the purchaser may cancel the work order in full or part thereof and may also make the purchase of the material / service from elsewhere / alternative source at the risk and cost of supplier. Vendor does not agree to above clause, their offer is liable to be rejected. In case any vendor accepts risk purchase clause initially and subsequently declines to honor the term in the eventuality of RISK PURCHASE, they may be banned for business with BHEL.		
16	**LATE DELIVERY PENALTY (LD) CLAUSE:-**		
16.1	LD @ ½% per week subject to a maximum of 10% of the Material cost including spare parts shall be applicable for delay in deliveries. The time period from invitation date for Pre dispatch inspection from vendor to the date of arrival of Pre Dispatch Team to vendor's works and any other reasons attributed to BHEL will not be accounted for in delivery period. This period will be excluded for the purpose of calculating LD. Vendor should intimate regarding PDI 7 days in advance only		

16.2	LD @ ½ % per week subject to a maximum of 10% of the Commissioning Charges shall be applicable for delay beyond scheduled commissioning date for reasons attributed to the party.		
17	**EARNEST MONEY DEPOSIT (EMD):**		
17.1	Vendors have to deposit EMD of Rs. 40,000/-. EMD may be deposited in cash, through pay order or through demand draft in favor of Accounts Officer, HEEP, BHEL, Haridwar only		
17.2	EMD shall be converted to Security deposit if the work is awarded.		
17.3	EMD of unsuccessful bidders shall be refunded back normally within fifteen days of acceptance of award of work by the successful tenderer.		
17.4	EMD shall not carry any interest.		
17.5	EMD by tenderer will be forfeited as per tender documents if:		
17.5.1	After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates.		
17.5.2	The tenderer does not commence the work within the period as per LOI/contract.		
17.6	Offers without EMD will be rejected and will not be considered for evaluation. However "The units registered under Single Point Registration Scheme of NSIC are eligible to get the benefits under "Public Procurement Policy for Micro & Small Enterprises (MSEs) Order 2012". • Issue of the Tender Sets free of cost; • Exemption from payment of Earnest Money Deposit (EMD). • MSE suppliers can avail the intended benefits only if they submit along with their offer, attested copies of EM-II certificate having deemed validity (five years from date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM-II certificate along with attested copy of a CA certificate (Format enclosed Annexure –„C" attached where deemed validity of EM – II certificate of five years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiencies in above required documents are not submitted before price bid opening. If tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal." **Documents should be notarized or attested by Gazetted officer.**		
18	**SECURITY DEPOSIT (SD):**		
18.1	Successful vendor shall deposit security. The rate of security deposit will be as below: 1. For work Up to Rs 10 Lakhs : 10% of work order value 2. Above Rs 10 Lakhs upto Rs 50 Lakhs : Rs 1 Lakh + 7.5% amount exceeding Rs 10 Lakh 3. Above Rs 50 Lakhs: Rs 4 Lakhs + 5% amount exceeding Rs 50 Lakhs		

18.2	The security deposit should be submitted before the start of work in the following forms : • Cash (As permissible under the Income Tax Act) • Pay Order, Demand Draft in favour of HEEP, BHEL, Haridwar • Local cheques of Scheduled Banks, subject to realization. • Bank Guarantee from Scheduled Banks/Public Financial Institution as defined in the companies Act. The Bank guarantee format should have the approval of BHEL.		
18.3	EMD of successful tenderer can be converted and adjusted against the Security Deposit		
18.4	Security Deposit shall not carry any interest		
18.5	100% of the Security Deposit amount shall be refunded to the vendor after final acceptance of work. SD shall be released after the submission of Performance Bank Guarantee (PBG) by the vendor.		
19	**PERFORMANCE BANK GUARANTEE (PBG):**		
19.1	Vendor shall be required to submit a Performance Bank Guarantee (PBG) for 10% of the total work order/ contract value which shall be valid for a period of 12 months from the date of final acceptance of furnace		
19.2	The PBG shall be submitted on a non-judicial stamp paper of value not less than Rs.100/- issued by any one of the nationalized banks.		
20	**PAYMENT TERMS:** (Note: No advance payment shall be made to the vendor.)		
20.1	Part payment will be made after completion of following milestones		
20.1.1	Payment of 80% of material cost along with 100% of all taxes & duties (Excise duty, CST/VAT as applicable) shall be payable after inspection & acceptance of material at HEEP, BHEL, Haridwar. Vendor to ensure that all relevant documents are submitted.		
20.1.2	Final payment of balance 20% of material cost, 100% of commissioning charges including service taxes as applicable amount will be made after Final acceptance of the machines (As per Clause No.-7 of Annexure-A /Part-II). The payment shall be made subject to submission of PBG (As per Clause No.-19 of Annexure-A /Part-II)		
20.2	All the payments shall be made through e-payment after submission of following documents along with first bill		
20.2.1	E-payment form duly filled (Form will be provided by BHEL)		
20.2.2	Income tax exemption letter(if applicable)		
20.3	Excise duty & CST/VAT will be paid on material cost and service tax will be paid on commissioning charges at actuals. Related original documents to be submitted for availing MODVAT credit by BHEL.		
21	**GENERAL CONDITIONS:**		
21.1	A point wise compliance statement shall be submitted by the party with reference to the above scope of supply against each clause/ sub-clause with relevant details & comments. Non-compliance to any of the clauses & quoting inadequate quantity can lead to dis-qualification of the offer		
21.2	The Vendor is advised to inspect the furnace prior to quoting ascertain all the relevant details required for successful completion of the work.		

21.3	The proposed electrical schematic & Bill of material for the furnace shall be provided by the vendor sufficiently in advance of the delivery date so as to enable BHEL to study the same.		
21.4	Vendor must compulsorily quote the quantity exactly as per the Scope of supply. No reduction in quantity as per the above Scope of supply is permissible.		
21.5	Vendor must quote the Spare parts separately in the offer as per the price bid format (Annexure-B).		
21.6	The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com		
21.7	The award of works will be made on basis of the total of Material cost , Spare Parts cost, Commissioning charges and all taxes, duties as applicable (Cost to BHEL)		
21.8	The Vendor should submit their best price at this stage itself and they will not be allowed to revise the price. Any revision / discount given by the vendor subsequently will be ignored.		
21.9	Check List as per **Annexure 'C'** must be enclosed with techno-commercial bid.		
22.	**OFFER:** The offer should be submitted in two parts and in following manner.		
22.1	**TECHNO-COMMERCIAL BID :**		
22.1.1	The envelop shall contain the Techno-commercial Bid **(ANNEXURE 'A')** with technical details and commercial terms & conditions along with relevant documents like copies of ESI, PF code, PAN No., Service Tax Regn. No., TIN No., CST No., Experience Certificates, Audited Balance Sheet of last 3 years, P.O copies & Commissioning/ Performance certificates (against Pre-qualifying conditions), Tender fees, EMD as per Check List **ANNEXURE 'D'.**		
22.1.2	The envelop shall be super scribed with "Techno-Commercial Bid", Name of work & NIT No.		
22.1.3	Point-wise compliance of this scope of supply and work is to be given by vendors while submitting their techno-commercial offer in the format provided by BHEL. Each page of the compliance list has to be signed by the vendor.		
22.1.4	The vendor must note that no prices are to be quoted/ mentioned in the techno-commercial offer.		
22.2	**PRICE BID :**		
22.2.1	The second envelope shall contain only the price bid with separate price for material, spares, work & applicable taxes & duties on Price Bid Format only as per **ANNEXURE 'B'.**		
22.2.2	Any other information in the price bid shall not be considered and the quotation is likely to be rejected. Price bid document shall be signed by the bidder at the bottom of the page.		
22.2.3	The envelope shall be sealed and super scribed with "Price Bid", Name of work & NIT No.		
22.2.4	Price bids of techno commercially accepted vendors shall be opened.		
22.2.5	Both the above two envelopes shall be kept in another sealed cover. The cover shall be super-scribed with "Quotation for (name of work), NIT No. & due date and shall be submitted in Tender Box kept in the Tender room of Purchase department at the 4th floor of the Main Administrative Building of BHEL, HEEP, Haridwar and it should also contain Bidder address.		

23.	**COMMERCIAL TERMS:**		
23.1	Prices shall be quoted on "Firm Price" basis only. The prices should be on F.O.R BHEL, Haridwar basis inclusive of Packing & Forwarding, transit insurance & Transportation charges. Applicable % of ED & Sales Tax, Installation/ Commissioning Charges & Service Tax should be clearly indicated in attached Price bid format as per "Annexure B"		
23.2	Validity of offer shall be for a minimum period of 120 days from the date of Tender Opening.		
23.3	Freight & transit insurance charges from Dispatching station to BHEL, Haridwar shall be borne by the party.		
23.4	The material will be dispatched to central plant store, HEEP, BHEL, Haridwar with instructions to forward the same to Sr. Engineer (WEX-MCR).		
24.	**PACKING:**		
24.1	Supplier shall arrange for adequate protection and packing of the consignment so as to avoid loss and damage during transit and also take appropriate measures to prevent metal parts from rusting and corrosion during transit. Handling instructions shall be clearly printed /painted on the packages. Each package should carry a detailed packing slip. Supplier shall be responsible for any loss/damage during transit due to defective/inadequate packing.		

ACCEPTABLE MAKE:

Sl No	Item	Make
1	**Burner**	Eclipse – India / Kromschroder- Germany/ Wesman - IBS/ Riello- Italy
2	**Solenoid Valve**	Kromschroder- Germany / Dungs –Germany/ Madas -Italy
3	**Air Gas Ratio Regulator**	Eclipse – India/ Kromschroder- Germany/ Wesman- IBS / Dungs -Germany
4	**UV Sensor**	Eclipse – India / Honeywell/ Kromschroder
5	**Sequence Controller**	Eclipse – India/ Kromschroder- Germany/ Honeywell/ Siemens
6	**Ignition Transformer**	Eclipse – India/ Kromschroder- Germany/ Honeywell/ COFI-Italy
7	**Gas Pressure Regulator**	Kromschroder- Germany/ Dungs- Germany/ Madas- Italy
8	**Gas Filter**	Kromschroder Germany/ Dungs- Germany
9	**Pressure Switch**	Kromschroder- Germany/ Dungs- Germany/ Madas- Italy/ Rexroth
10	**Safety Valve**	Kromschroder- Germany/ Dungs- Germany/ Madas- Italy
11	**Motorized Valve**	Kromschroder- Germany/ Honeywell/ Dungs- Germany
12	**Temperature Controller**	Chino/ Eurotherm/ Yokogawa/ Fuji/ Honeywell
13	**Thermocouple**	Toshniwal / Tempsens/Baumer/Eleind/Techno
14	**Pressure Gauge**	Marchel – Germany/ Fiebig/ Wika/ Aschroft
15	**Ball Valve/ Butterfly Valve**	Kromschroder- Germany/ Dungs- Germany/ Zoloto/ Kirloskar/ Honeywell
16	**Switch gear**	Siemens/ L&T/ ABB/ GE/ Schneider