



BHARAT HEAVY ELECTRICALS LIMITED

**Heavy Power Equipment Plant, Ramachandrapuram,
Hyderabad - 502 032. INDIA.**

Phones :

Purchase Dept. : Fax

E-mail :

Indent No. : _____

Date : _____

Enquiry No. : _____

DueDate : _____

Vendor Qtn. No.: _____

Date: _____

TENDER DOCUMENTS TO BE FILLED BY THE Vendor FOR SUPPLY OF
ASTM Impact testing M/C

ADDRESS OF THE Vendor :		ADDRESS OF THE INDIAN AGENTS(IF ANY):		
TELEPHONE NOS.:		TELEPHONE NOS.		
FAX NOS.:		FAX NOS.:		
E-MAIL ADDRESS :		E-MAIL ADDRESS:		
NOTE:				
<p>1. Vendor shall submit complete information against each clause of the specification given below point by point.</p> <p>2. The Vendor should fill the "Offered" Column in compliance to specified requirements and also "Deviations" column, where there is deviation from the requirement. Duly filled specification cum compliance certificate should be submitted along with the bid. Inadequate, incomplete, ambiguous or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance</p> <p>3. The offer and all the documents enclosed with bid should be in English language only.</p> <p>4. The main equipment and accessories required for the machine to be offered.</p>				
Sl.No.	Description for BHEL Requirement	Offered	Deviations	Remarks
	Purpose:			
	Impact Testing machine as per ASTM E23 ,EN10045-2 & ISO 148Standard to meet Pressure vessels code requirement shall be quoted			
1	Technical details			
	a) Energy capacity: 0-300 ft-lb / 0-400J min			
	b) Resolution of 4-digits display			

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	c) Specimen cross section: 10X10 mm			
	d) Total frictional & Windage lossess during pendulam swing should not exceed 0.75%of the energy range			
	e) Automatic pendulum hoisting as well as automatic pendulum break			
	f) Self-centering Tongs for positioning the Impact Specimen Manually			
	g) Safety Lock to hold the Pendulum in its raised position. Vibration free relaese of the pendulum when the lock is released			
	h) Safety box for collecting specimen remnants			
	i) Transperent Safety guards to be provided around the machine for safety			
	j) The scale shall be supplied in ft.lbf, J and Kg.m			
	k) The equipment shall work between 10 to 45 degree Centigrade and Specify the atmospheric conditions, as the working environment for the offered equipment to deliver precise results and serve for the prescribed life of the equipment.			
	l) The applicable NIST V notch Impact samples sets in each range for calibration at BHEL which are sufficient for two years calibration shall be provided,(ie Calibration Once in a year)			
	m) Calibration Procedure using NISTstandard samples for different applicable energy levels shall be followed as per latest ASTM E 23			
	n)Software to configure test, conduct tests,recall previous results, user selected reporting & exporting formats, built in programs for X bar, R & frequency distribution shall be provided			
	o)Interfacing Facility: Provided with RS 232 Interface Port and Cable [not less than 5 mtrs. in length] for connecting to PC with software for acquisition of test data.			
	p) Input Electric Power supply shall be : 230±10%V,50Hz, Single Phase AC or 3x400 to 440V;50Hz, Three phase AC			
	q) Accessories for the calibration of the system shall be provided.			
2	The Vendor shall furnish technical catalogue of the proposed equipment alongwith quotation and customers reference in India for the above equipment.			
3	Five sets of operating instruction manuals/schematic drawing shall be sent alongwith civil foundation plan.			
4	BHEL engineers will inspect above equipment prior to shipment at Vendor 's works. It is the resposibility of the Vendor to prove all conditions of specification by providing required samples & tools at Vendor works. Sufficient advance inspection call to be given to BHEL and shall make necessary arrangements for the predespach inspection.			

Sl.No.	Description for BHEL Requirement	Offered	Deviations	Remarks
5	<p>Vendor shall quote for recommended spares for five years of trouble free service with Break up of Items along with their cost .</p> <p>Spares for Main Equipment & Accessories: BIDDER has to list down the SPARES (including one set of striking Tups, Anvils & supports, Printed Circuit Boards – PCBs, etc.) coming under the Category of Mechanical, Electrical & Electronic Spares for the Main Equipment as well for the essential and optional desirable Accessories. (Accessory for measurement of Lateral Expansion in impact tested samples/ for evaluating percentage shear fracture, to be quoted as optional).</p> <p>BIDDER to QUOTE with UNIT RATE for all the listed SPARES, to be procured with the equipment.</p>			
6	ERECTION & COMMISSIONING			
6.1	Vendor to take full responsibility for carrying out the erection, startup, testing of the system, its control & all types of other supplied equipment/accessories etc. Service requirement like power shall be provided by BHEL at only one point to be indicated by Vendor in their foundation / layout drawing. Other requirement like helping manpower shall be provided by BHEL.			
6.2	Vendor shall erect and commission the above machine at BHEL Hyderabad. Suitable training on all operational aspects and routine maintenance to be given by Vendor to BHEL engineers.			
6.3	The offer shall include following modality for erection & commissioning of the machine:			
	i. Complete erection and commissioning on turnkey basis.			
	ii. The Vendor shall do commissioning and provide necessary training to BHEL personnel and guidance during commissioning, Vendor has to repeat all geometrical accuracy tests, for which all tools etc. are to be arranged by the vendor at their risk.			
	iii. All foundation bolts/ anchoring materials/fixators/levelling shoes etc. required for final erection of the machine shall be provided by the Vendor along with basic machine.			
7	FOUNDATION:			
7.1	Foundation Design: In case any special foundation is required for installing the machine, detailed foundation drawings to be offered . The vendor should agree to supply 5 copies of machine layout and drawings within one month of placement of LOI/Order.			

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8	OPERATING CONDITIONS			
8.1	Power Supply will be provided by BHEL at a single point near the machine, as per layout recommended by Vendor. All types of cables, connections, circuit breakers etc. required for connecting BHEL's power supply point to different parts of the machine/control cabinets, shall be the responsibility of the Vendor. Vendor should ensure the proper earthing for the equipment and its peripherals/accessories. Any material requirement for the same should be informed with the foundation design/drawings in advance within one month of PO confirmation so that the same could be made ready & incorporated during construction of the foundation. The Vendor can take the earthing connection from the nearest available location of the laboratory.			
9	GUARANTEE			
9.1	The machine shall be guaranteed for satisfactorily and trouble free service for at least 24 months from the date of commissioning and final acceptance. Any spare required during the guarantee period shall have to be arranged by the Vendor at free of cost.			
10	PROVE OUT OF THE EQUIPMENT : After commissioning of the above equipment it has to be calibrated under TPI(Lloyds) inspection as per latest standard of ASTM E 23 ,DIN EN 10045-2 at BHEL. The first& second year calibration is the responsibility of Vendor including procurement of impact specimen from NIST and TPI Charges.This prove out at BHEL only treated as the equipment commissioning is completed. Acceptance of equipment will be based on NIST report.			
11	The Vendor shall explain in detail how the after sales service will be organised. The number of service engineers trained , qualified and experienced to attend service calls and details about ready availability of spares Shall be mentioned. Time taken for service engineers to Reach the site upon receipt of break down call shall be Indicated and assured.			
12	ANNUAL MAINTANENCE CONTRACT The Vendor shall indicate AMC Charges for providing AMC (Annual maintenance contract) for a minimum period of five years on expiry of warrenty period and same to be extendable up to three years. AMC includes every year calibration as per ASTM E 23 standard and if any break down occurs it has to be attended by Vendor (The no.of visits shall be min 3 visits, ie One visit is for calibration and service ,one visit is for service & maintainenc, one visit is for any break down call).. The procurement of standard impact specimen from M/s NIST, USA is responsibility of Vendor, however the cost of impact specimens will be borne by BHEL on completion of warranty period.for consequent year calibration of the equipment			

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13	QUALIFICATION REQUIREMENTS:			
13.1	The Vendor shall have a minimum experience of 5 years in manufacturing of ASTM Impact testing machine as per ASTM E23 and should have supplied at least 05 equipment's of the model quoted to various reputed organisations preferably in India			
13.2	The Vendor shall submit a Reference List of Customers for the model quoted including the names of the user contact persons, telephone numbers and e mail addresses.			
13.3	Performance Certificate from CUSTOMERS (minimum 2 Customers) with full contact details of CONTACT PERSON shall be submitted preferably in India.			
13.4	Vendor shall give point to point reply and if any deviations to the specification to be indicated in the offer			
14	If any thing missing in the above specifications it has to be strictly meet latest standard of ASTM E 23.			
15	TRAINING			
15.1	Vendor shall provide training for 2 BHEL executives on the equipment at the manufacturing place for two weeks at their cost			
16	PACKING			
16.1	Rigid packing to be made for all items of complete machine, all accessories and other supplied items to avoid any damage/loss in transit. When machine is dispatched in containers, all small loose items shall be suitably packed in boxes. Packing list to be provided in the box			