

**PRODUCT ENGINEERING / V & SB
TECHNICAL DELIVERY CONDITIONS FOR
SUBDELIVERY COMPONENTS OF SOOT BLOWERS**

TSB : 023

Rev. 03

SHEET No. 01 of 01

POTENTIOMETER

01. Application : Used in Furnace Temperature Probe for indicating the position of thermocouple in boiler.
02. Material code : **96 353 319 0000**
03. Specification :
- 03.1. No. of Turns. : 10 (Wire wound).
 - 03.2. Resistance Range : 0 to 500 ohms
 - 03.3. Power Rating : 5 watts.
 - 03.4. Insulation : 1000 mega ohms (at 500 V D.C.)
 - 03.5. Ambient Temperature : -10°C to 85°C
 - 03.6. Enclosure : Completely enclosed and the enclosure should be dust proof as this will be used in an atmosphere laden with fly ash. The terminals shall be marked for identification.
 - 03.7. Construction : Out-line & shaft dimensions shall be strictly as per the Drawing 4-20-952-01536.
 - 03.8. Tolerance : $\pm 1\%$ tolerance $\pm 0.15\%$ linearity
04. Accessories : Mounting screws, washer & nuts.
05. Packaging : These should be packed in shock resistance boxes.
06. Storage : To be stored under roof safely, without subjecting to vibrations.
07. Inspection, Testing & Certificate :
- 07.1. Test certificate should be supplied.
 - 07.2. Guarantee certificate for the trouble free operation for 2 years from the date of commissioning the equipment should be provided.
 - 07.3. Inspection will be carried out at BHEL by BHEL Inspector for the following:
 - i. Check for physical damage.
 - ii. Check for the dimensions as per the drawing.
 - iii. Check for No. of turns.
 - iv. Check whether the supplier has provided the test certificate
 - v. Check the potentiometer electrically by applying 110v with suitable resistors for proper function.

Rev:03 Dt.10/09/2010.

CONVERTED AS SOFT COPY.

Prepared (J.SANKAR)

DATE:
10/09/2010.

Approved (K.SRIDHARAN)

ALL DIMENSIONS ARE IN MILLIMETRES.

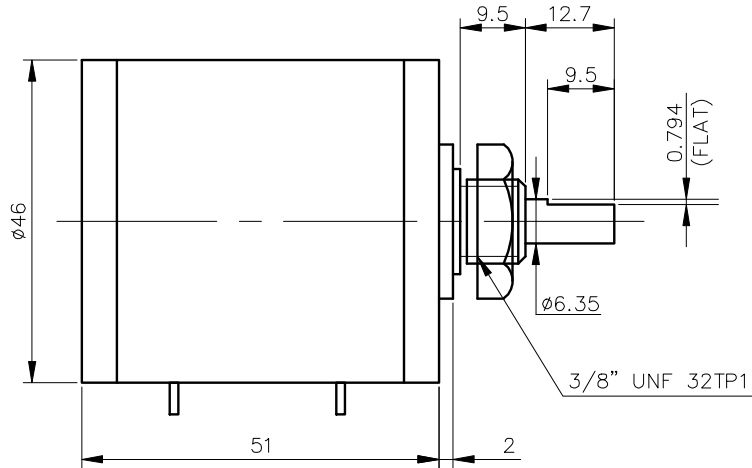
FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT QCP/QP

REV	DATE	ALTERED	J.S
02	28.09.10	CHD & APPD	K.S

CONVERTED AS CAD DRAWING.

DCN: SB: 801023/5011214


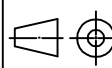
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SPECIFICATION: -

- NUMBER OF TURNS = 10 (WIRE WOUND)
- SHAFT RUN OUT = 0.05mm
- RESISTANCE RANGE = 0 TO 500Ω
- POWER RATING = 5 WATTS
- INSULATION RESISTANCE = 1000 MEGA OHMS (AT 500V D.C)
- AMBIENT TEMPERATURE = -10°C TO 85°C
- THE ENCLOSURE SHOULD BE DUST PROOF AS THIS WILL BE USED IN AN ATMOSPHERE LADEN WITH FLY ASH. FOR MOUNTING, STAR WASHERS AND HEX NUT ARE TO BE SUPPLIED.

CODE NO : 963533190000

NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No
	 BHARAT HEAVY ELECTRICALS LTD., UNIT: HIGH PRESSURE BOILER PLANT. TIRUCHIRAPALLI 620014.								
		DRN	J.SANKAR	SIGN	J.S	DATE	28.09.10	NO.OF VAR	
		CHD	K.SRIDHARAN	K.S	28.09.10				
		APPD	K.SRIDHARAN	K.S	28.09.10				
DEPT SB	 SCALE NTS	WEIGHT (KG).		REFERENCE INFORMATIONS				NO. OF ITEMS	
CODE 330		0.130		-					
TITLE	POTENTIOMETER (10 TURNS: 500Ω : 3600°)			CARD CODE	DRAWING NO.			REV	
				U 01	4-20-952-01536			02	

Annexure for Open Tender En-SSB1143

Slno	Material	Material Description	DRG No/Rev No	Spec No/Rev No	Qty
1	963533190000	POTENTIO METER	42095201536/02	TSB023/03	120



BHARAT HEAVY ELECTRICALS LTD

Valves/Purchase, Tiruchirappalli-620014, INDIA

TERMS & CONDITIONS

Phone: 0431 257 7210

Email: valpursd4@bheltry.co.in

velvizhi@bheltry.co.in

Procurement of PSS for Valves Dept

Ref: EN-MIC1771

Date: 16.01.2014

1. QUOTATIONS:

- a. **Submission of Tender:** Each offer should be sent in double cover separately and the same should be sealed and super scribed with correct Tender No., item of supply and due date of opening. Two or more quotations should not be sent in one cover. Price Bid should contain only Price in Rs per unit for each type. Tender should not be addressed to any individual's name but only by designation as below:

SR. MANAGER/PURCHASE/VALVES
HIGH PRESSURE BOILER PLANT
BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI - 620 014, TAMILNADU, INDIA

- b. **Late tenders:** Late tenders shall not be considered under any circumstance.
- c. **Regulations:** Tender should be accompanied by detailed technical literature, Catalogue and detailed dimensional drawings in ENGLISH. Tenders should be free from CORRECTION AND ERASURES. Corrections if any must be attested. All amounts shall be indicated both in words as well as figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.
- d. **Two Bid Systems:** The offers are invited in twopart bid system (Techno commercial & price Bid). First the Techno Commercial bid will be opened. Techno-commercially suitable vendors alone will be intimated for price bid opening or Reverse Auction.
- e. **PVC:** Price Variation clause not acceptable. Prices should be firm.
- f. **Catalogue:** Manufacturer's name, Trade Mark or Patent No. if any should be specified. Illustrative leaflets giving technical particulars are required along with quotation wherever necessary.
- g. **Acceptance:** The purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any tender in part or full without assigning any reason whatsoever.
- h. **Samples:** Samples should be submitted separately if specially requested in tender before due date of the enquiry. They should be clearly marked with the enquiry No and date on the outside cover to facilitate identification.
- i. **Spares:** The tenderer should quote separately for spares that are required for two years trouble free operation. The spares offer should accompany the offer of main equipment; otherwise the quotation will be overlooked.

2. COMMERCIAL TERMS & CONDITIONS:

- a. **Terms of Payment:**
For Indigenous Suppliers: 100% after 45 days on satisfactory receipts and acceptance of material at BHEL stores/ Site acknowledgement.
For Import Suppliers: 100% payment against presentation of documents through Bank.
No other payment term is acceptable to BHEL.
- b. **Liquidated Damage:** A sum equivalent to 0.5% of price for every week up to a maximum of 10% will be levied of the delayed supplies / undelivered goods.
- c. **Delivery Terms:**
For Indigenous Suppliers: FOR BHEL Trichy/FOR site as mentioned in enquiry inclusive of freight and insurance.
For Import Suppliers: FOB nearest SEA Port/FCA nearest AIR port.
- d. **Validity of Offer:** Prices should be valid for 1 year from the date of finalization of this tender.
- e. **Taxes & Duties:** If any Sales Tax is payable as extra to the quoted price, it should be specifically stated in quotation along with CST & T.N.G.S.T No. failing which the purchaser will not be liable for payment of Sales Tax. Our T.N.G.S.T No. 3550005 Dated 01-04-1995 C.S.T. No. 259383 Dt. 11.06.1991.
- f. **Guarantee Clause:** The vendor shall give a guarantee for the performance of his supplies for a period of eighteen months from the date of dispatch or twelve months from the date of commissioning whichever is earlier.
- g. **Risk Purchase:** Alternatively the purchaser at their option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of seller either the whole of goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefore. Supplier shall be liable for any loss which the purchaser may sustain by reason for such risk purchases in addition to penalty at the rate mentioned in clause 2.b above.
- h. **Preferential Delivery:** If a contract is placed on a higher tender as a result of this invitation to tender in preference to the lowest acceptable offer in consideration of the earliest delivery, the seller will be liable to pay to the purchaser the difference between the contract rate and that of the lowest acceptable tender on the basis of final price FOR destination, including all elements of freight, sales tax, duties and other incidents, incidental in case of failure to



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complete supplies in terms of such contract within the date of delivery specified in the tender and incorporated in the contract.

- i. **MODVAT/CREDIT:** If any Excise Duty is payable, the chapter head/sub-head reference and the rate of the duty should be quoted. If the tender is availing MODVAT credit for his input materials, the effect of proforma invoice should be passed on to the purchaser.
- j. **Miscellaneous:** Any Other conditions which might have been quoted by the seller and are in contravention to the terms prescribed, the order and which have not been specifically accepted in by Purchaser will not be applicable to the contract.
- k. **Delivery:** Delivery schedule shall be strictly as per BHEL tender requirement which are as indicated against each item in our tender. If supplier offers more than this delivery period BHEL will operate 0.5% loading factor for evaluation of their offer for every week delay.
- l. **Performance Bank Guarantee:** If tender Calls for Performance Bank Guarantee, Vendor should provide a performance bank guarantee (PBG) for 10% of the total Purchase order value valid for warranty/guarantee period with an additional claim period of 2 months.
- m. **Counter offer:** BHEL reserves the right to counter-offer with vendors other than L1, in order to have broader vendor base for ensuring delivery.
 - (i) If one vendor alone accepting the counter offer rates, loading shall be 60:40 on L1:L2.
 - (ii) If two vendors are accepting the counter offer rates, loading shall be 50:30:20 on L1:L2:L3.
 - (iii) If three vendors are accepting the counter offer rates, loading shall be 40:30:20:10 on L1:L2:L3 & L4.
 - (iv) If four vendors are accepting the counter offer rates, loading shall be 40:20:15:15:10 on L1:L2:L3, L4 & L5.
 - (iv) Highest rate bidder will not be considered for this tender, in case of more than four responses for each enquiry serial numbers.

n. Reverse Auction: BHEL reserves the right to go for a Reverse Auction (RA) instead of Opening the price bid, which will be decided after techno-commercial bid evaluation. Information and general terms and conditions governing RA are given below:-

GENERAL TERMS AND CONDITIONS OF RA

Against this enquiry for the subject item/system with detailed scope of supply as per enquiry specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING ON INTERNET.

- a. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- b. BHEL will engage the service provider who will provide all the necessary training and assistance before commencement of on line bidding on internet.
- c. BHEL will inform the vendor in writing in case of reverse auction, the details of Service Provider to enable them to contact & get trained.
- d. Business rules like event date, time, Start price, bid decrement value; extensions etc. also will be communicated through service provider for compliance.
- e. Vendors have to mail/fax the Compliance form in the prescribed format (provided by the Service provider) before the start of the Reverse auction. Without this, the vendor will not be eligible to participate in the event.
- f. BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the vendor to enable them to fill-in the price and keep it ready for keying in during the Auction.
- g. Reverse auction will be conducted on the scheduled date & time.
- h. At the end of Reverse Auction event, the lowest bidder value will be known on the network.
- i. The lowest bidder has to mail/fax the duly signed Filled-in prescribed format as provided on case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail.
- j. Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL as per prevailing procedure.

3. GENERAL CONDITIONS

- a. All items shall be supplied as per the Purchase Specifications mentioned in our Enquiry to the latest applicable revision / Drawing
- b. BHEL reserves the right to finalize the tender as per item sl no wise or as a total package or project wise. Separate orders will be released for each project and documents should be supplied for each order separately.
- c. BHEL reserves the right to increase or reduce or split the Tender Quantity and to NOT to order for some or all material based on the changes in project.



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- d. BHEL shall have the right to visit vendor works during the execution of contract along with end customer for verifying status, inspection and testing of the material.
- e. BHEL reserves the right to negotiate or re-float the tender in case the quoted prices are not acceptable.
- f. Supplier shall arrange packing to avoid lose or damages during Road Transport, Site handling & Storage.
- g. Purchase Order, PO Item SI No, Material code, Quantity should marked the Packing clearly.
- h. Confirmation for compliance is to be given in the offer for all the conditions specified above and to the respective Purchase Specification.
- i. Vendors shall give dispatch schedule to BHEL for various chains against the pending orders once in 15 days.

4. DOCUMENTATION:

For Indigenous suppliers:-

- a. **With Consignment:** Duplicate for transporter copy of Invoice, Packing List, Delivery Challan, O&M manual Material Test Certificate, Test Certificates, Calibration Report, Compliance Certificate & Guarantee/Warranty Certificate etc...
- b. **Online Submission:** Supplier should upload the soft copy of all Test Certificates in BHEL website <http://vis.bheltry.co.in/vis/index.jsp> at Vendor information system tab.
- c. **To Finance:** Original and Duplicate Invoice for payment with GR reference ,should be sent directly to
Sr Manager/Finance/Valves-Bills section
HPBP BHEL Tiruchirappalli-620014, Tamilnadu.

To Purchase:

- i. **FOR BHEL TRICHY case-**Copy of Invoice, Packing list, LWB and Delivery challan for reference, original IBR documents/Inspection despatch clearance certificates
- ii. **FOR Site case-** Original Excise Invoice, Original LWB, Original Packing List, Original IBR documents, Original despatch clearance Certificate, Original Inspection report, Test certificates as per PO,Original Site Acknowledgment etc...
- d. **Identification:**, Purchase Order, PO item SI No, Material code, quantity, Unique SI No if any should be provided in all despatch documents, materials and packing clearly.

For Import suppliers:-

- a. **With Consignment:** O&M manual and Packing List, Fumigation certificates (In case of SEA shipment).
- b. **Through Bank:** All Original Documents in Triplicate Bill of lading in case of SEA/Airway Bill in case of AIR consignment, the invoice indicating the Unit price & total price, Packing List contains quantity ,net & gross weight, Packing dimensions, Certificate of Origin, all Inspection test certificates, Guarantee/warranty certificates are to be sent through supplier's bankers to BHEL bankers
- c. **To Purchase:** One copy of above non-negotiable documents are to be sent to purchase department after dispatch of the materials to follow up with freight forwarder.
- d. **Identification:**, Purchase Order, PO item SI No, Material code, quantity, Unique SI No if any should be provided in all materials and packing clearly.