

**BHARAT HEAVY ELECTRICALS LIMITED**  
**HEEP HARIDWAR INDIA-PIN 249403**  
**FAX NO: 0091 1334 226462/223948**  
**PHONE NO: 0091 1334 284144**

**Sub: Requirement of MS (STRUCTURAL STEEL WELDABLE QUALITY) Plates**

The Heavy Electricals Equipment Plant (HEEP) located in Haridwar, India is one of the major manufacturing plants of Bharat Heavy Electricals Ltd. The core business of HEEP includes design and manufacture of large steam turbines, turbo generators and so on.

Bids are invited for following items through GeM Portal- <https://gem.gov.in>

Tender No	Item Description	Size (mm)	Qty. (Kg)	Delivery Requirement	Delivery Period (in No. of days from PO date)
F/F219/25/2379/K1	<b>HW1011819732</b> STRUCTURAL STEEL WELDABLE QUALITY (PLATES) <b>SPECIFICATION:</b> <b>AA10119 REV 15</b>	<b>10 x 3200 x 8000</b>	<b>8038</b>	30/04/2026	<b>90 Days</b>

**Remarks-**

1. Delivery period mentioned in enquiry is indicative, bidders to quote their best possible delivery.
2. Total 04 Nos. plates are required to be supplied as per enquiry size only.
3. **Quantity tolerance  $\pm 5\%$  is acceptable.**
4. **Enquiry plates shall be supplied from BIS approved plate manufacturer for IS 2062, Grade E250BR and dimension.**
5. **Breach of Contract:**

In case of breach of contract, wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is atleast 10% of the contract value, the same be encashed. In case the value of the security instruments available is less than 10% of the contract value, the balance amount be recovered from other financial remedies (i.e. available bills of the contractor, retention amount, etc. with BHEL) or legal remedies be pursued. The balance scope shall be got done independently without Risk & Cost of the failed supplier/ contractor. Further, levy of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract. Accordingly, recovery of an amount equivalent to 10% of the contract value shall be made in case of breach of contract.

**6. Payment terms shall be as follows:**

The payment shall be made within no. of days as defined in the below table from appointed day

Type of Bidder	Payment Terms (Number of days)
Micro & Small Enterprises (MSMEs)	45 days
Medium Enterprises	60 days
Non MSME	90 days

### **Appointed day means**

- The day of material entry in HEEP (i.e. CISF Stamp date), subject to submission of non-discrepant documents by vendor as per Purchase Order.  
Or
- Where there is any objection regarding acceptance of goods, the same shall be informed to supplier within fifteen days from the day of the delivery of good. Appointed day will be the day on which such objection is removed by the supplier.
- For BOIs, the appointed day means the date of receipt of material at respective project Site (i.e. MRC date).

**Note:** Benefits of MSE (Price preference, Payment preference etc.) will be given only to those MSE Vendors who are manufacturers of offered items against the NIT. No MSE benefits shall be provided to Agents / Stockists / Dealers / Traders etc. for the items offered but not manufactured by themselves.

7. Vendor should raise inspection call for BHEL / TPI inspection at least 4 days in advance to the planned date of inspection. If customer inspection is envisaged at vendor's works, vendor should give inspection call at least 7 days in advance to the planned date of inspection.
8. For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non-local supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.
9. Test certificate and Guarantee certificate are required.
10. Rest terms and conditions shall be as per latest GeM GTC/ Buyer added bid specific ATC.
11. The bids received from same IP address shall be outrightly rejected and shall not be considered for further evaluation.
12. If a re-visit of BHEL appointed TPIA is required at vendor's works due to:
  - (a) Complete material not being offered during inspection (whilst physical visit of Inspection Engineer at Supplier's work) with respect to offered quantity mentioned in raised inspection call.
  - (b) Lapses on account of supplier has led to rejection of offered material (as per approved QAP/Technical specification/other pertinent requirement while carrying out inspection)Additional visit charges to be paid by BHEL to TPIAs shall be deducted from supplier's bills as penalty.
13. No deviation Certificate to be submitted as attached. Any deviation w.r.t. the tender (technical or commercial) must be explicitly mentioned alongwith the offer.
14. ***For goods / works / services on Indian Suppliers / Contractors: Irrespective of the value of the invoice amount, the supplier/ contractor should necessarily upload the invoice details on BHEL SUVIDHA portal at <https://suvidha.bhel.in/suvidha/>, prior to despatch/raising invoice. All documents as per contract checklist, along with additional documents (if any), must be uploaded on the portal. It is mandatory that tax invoices with a net amount (including taxes) exceeding Rs five lakhs uploaded on the portal are digitally signed using a Class 3 Digital Signature Certificate (DSC) issued by a licensed Certifying Authority. Submission of invoice document in hard copy is allowed for invoices with a net amount (including taxes) equal to and upto Rs five lakhs in case the requirement for digitally signed invoice is not explicitly mentioned in the contract checklist.***

*The Invoice will not be accepted in absence of the above. ”*

**15. Declaration by bidder regarding Conflict of interest**

The bidder notes that a conflict of interest would said to have occurred in the tender process and execution of the resultant contract, in case of any of the following situations:

- i) If its personnel have a close personal, financial, or business relationship with any personnel of BHEL who are directly or indirectly related to the procurement or execution process of the contract, which can affect the decision of BHEL directly or indirectly;
- ii) The bidder (or his allied firm) provided services for the need assessment/ procurement planning of the Tender process in which it is participating;
- iii) Procurement of goods directly from the manufacturers/ suppliers shall be preferred. However, if the OEM/ Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. In case bids are received from both the manufacturer/ supplier and the agent, bid received from the agent shall be ignored. However, this shall not debar more than one Authorized distributor (with/ or without the OEM) from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate.
- iv) A bidder participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as a partner/ JV member or sub-contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a sub-contractor in more than one bid if he is not bidding independently in his own name or as a member of a JV.

The Bidder declares that they have read and understood the above aspects, and the bidder confirms that such conflict of interest does not exist and undertakes that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s), in this regard. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by BHEL as per extant policies/ guidelines.

**Signature with stamp**

**Name of Authorized Person:**

**Designation:**

**Name of Firm:**

**Date:**

**Pre- Qualification Requirements**  
**(Plate of IS:2062, Grade E250 BR with mandatory Impact test)**

<b>PQR Point</b>	<b>Requirements</b>		<b>Vendor to submit / confirm</b>	<b>Vendor's reply</b>
<b>1</b>	<b><u>For Plate manufacturer:</u></b>			
	a	Vendor must be having Bureau of Indian Standard (BIS) approval for manufacturing of carbon steel plates of IS 2062 Grade E250BR.	BIS Certificate / BIS Certification number	
	b	Enquiry plate will be supplied as per BHEL enquiry specification and dimension.	Vendor's confirmation required	
	c	Plates above 12 mm thickness shall be supplied in normalized or an equivalent condition.	Vendor's confirmation required	
<b>2</b>	<b><u>For trader / stockist / reseller:</u></b>			
	a	Vendor to submit their past experience for supply of <u>carbon steel / alloy steel plates against at least one purchase order in last seven years on enquiry issue date.</u>	<ul style="list-style-type: none"> <li>➤ At least one purchase order copy and its correlated test certificates.</li> <li>➤ Invoice / dispatch documents of above purchase order.</li> </ul>	
	b	Enquiry plates shall be supplied from BIS approved plate manufacturer for IS 2062, Grade E250BR and dimension only.	Vendor's confirmation required	
	c	Enquiry plate will be supplied as per BHEL enquiry specification and dimension.	Vendor's confirmation required	
	d	Plates above 12mm thickness shall be supplied in normalized or an equivalent condition.	Vendor's confirmation required	

<b>Sl. No.</b>	<b>Quality Requirement</b>	<b>Vendor's confirmation (Y/N)</b>
01	PRE-DISPATCH INSPECTION BY BHEL AS PER BHEL APPROVED <b>QUALITY PLAN (QA/PMD/002 REV 00 dated 14.06.2025).</b> <u>(Vendor to endorse the attached Quality plan as applicable with their sign and stamp as a mark of confirmation of QP clauses).</u>	

**Signature with stamp**

**Name:**

**Name of Firm:**

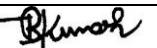
**Designation:**

**Date:**

**QUALITY PLAN  
(QA/PMD/002 Rev 00)**

MANUFACTURER'S NAME AND ADDRESS			QUALITY PLAN					TO BE FILLED BY BHEL		TO BE FILLED BY BHEL								
BHEL	VENDOR'S NAME	ITEM	AS PER PO		QP NO.	QA/PMD/002												
			DRG. NO.	AS PER PO		00 DATED 14.06.2025												
		SPEC.	AS PER PO															
		REV	AS PER PO			Page 1 of 2												
		SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY	REMARKS						
1		2		3	4	5	6	7	8	9	D	10	11					

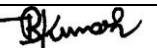
1.	IN CASE OF PROCUREMENT OF PLATES, FLATS, ROUNDs (CS), BARs (CS), STRIPs ETC IS PROCURED DIRECTLY FROM OEM.											
1A	RECEIVING MATERIAL INSPECTION	IDENTIFICATION & VERIFICATION OF MILL TEST CERTIFICATES	CRITICAL	VERIFICATION OF MILL TC	100%	BHEL SPEC	BHEL SPEC	MILL TC / IR	✓	P	V	1. CO-RELATED ORIGINAL (SEALED AND SIGNED BY OEM) OR CO-RELATED COMPUTER-GENERATED MATERIAL TEST CERTIFICATE (MTC), ORIGINATED FROM OEM 2. EVERY PLATE, , FLATS, ROUNDs (CS), BARs (CS), STRIPs ETC MUST HAVE IDENTIFICATION MARKING OF STEEL MANUFACTURER AS PER APPLICABLE SPECIFICATION/ STANDARD. 3) CO-RELATION WITH TC ALONG WITH CORRELATED INVOICE TO BE PROVIDED WITH SUPPLY OF THE ITEMS. 4) IF MENTIONED IN PO/ BHEL ENGG PQR, MANUFACTURER MUST BE BIS APPROVED VENDOR FOR APPLICABLE SIZE AND GRADE. 5) MANUFACTURING DATE ON THE TEST CERTIFICATE (TC) SHOULD BE ON OR AFTER THE DATE OF THE BHEL PURCHASE ORDER (PO) PLACEMENT

		 <p>LEGEND: ! RECORDS IDENTIFIED WITH 'TICK' UNDER COULMN "D" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR/VENDOR IN QA DOCUMENTATION. M: MANUFACTURER / SUBCONTRACTOR B: BHEL N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER</p>	FOR CUSTOMER USE		
MANUFACTURER/SUBCO NTRACTOR				APPROVED BY	

MANUFACTURER'S NAME AND ADDRESS			QUALITY PLAN					TO BE FILLED BY BHEL		TO BE FILLED BY BHEL								
BHEL	VENDOR'S NAME	ITEM	AS PER PO		QP NO.	QA/PMD/002												
			DRG. NO.	AS PER PO		00 DATED 14.06.2025												
		SPEC.	AS PER PO															
		REV	AS PER PO			Page 2 of 2												
		SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY	REMARKS						
1	2		3	4	5	6	7	8	9	D	10	11						

2.	IN CASE OF PROCUREMENT OF PLATES, FLATS & STRIPs IS PROCURED FROM TRADER/STOCKIST.											
2A	RECEIVING MATERIAL INSPECTION	IDENTIFICATION & VERIFICATION OF MILL TEST CERTIFICATES	CRITICAL	VERIFICATION OF MILL TC	100%	BHEL SPEC	BHEL SPEC	MILL TC / IR	✓	P	V	1. CO-RELATED ORIGINAL (SEALED AND SIGNED BY OEM) OR CO-RELATED COMPUTER-GENERATED MATERIAL TEST CERTIFICATE (MTC), ORIGINATED FROM OEM 2. MILL TC (AS PER BHEL ORDERING DOCUMENTS) SHALL BE FROM MANUFACTURER IDENTIFIED IN PO 3. EVERY PLATEs, , FLATS, ROUNDs (CS), BARs (CS), STRIPs ETC MUST HAVE IDENTIFICATION MARKING OF STEEL MANUFACTURER AS PER APPLICABLE SPECIFICATION/ STANDARD. 4) CO-RELATION WITH TC ALONG WITH CORRELATED INVOICES (FROM STEEL MANUFACTURER TO BIDDER) TO BE PROVIDED WITH SUPPLY OF THE ITEMS. 5) IF MENTIONED IN PO/ BHEL ENGG PQR, MANUFACTURER MUST BE BIS APPROVED VENDOR FOR APPLICABLE SIZE AND GRADE. 6) MANUFACTURING DATE ON THE TEST CERTIFICATE (TC) SHOULD BE ON OR AFTER THE DATE OF THE BHEL PURCHASE ORDER (PO) PLACEMENT.

NOTE: 1) BHEL TO REVIEW ALL THE REMAINING TCs AS PER ORDERING DRAWING / SPEC / DOCUMENTS (AS APPLICABLE).

		 <p><b>LEGEND:</b> ! RECORDS IDENTIFIED WITH 'TICK' UNDER COULMN "D" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR/VENDOR IN QA DOCUMENTATION. M: MANUFACTURER / SUBCONTRACTOR B: BHEL N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER</p>	FOR CUSTOMER USE		
MANUFACTURER/SUBCO NTRACTOR				APPROVED BY	

**(Self-Certification for local content)**

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH  
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04<sup>TH</sup>  
JUNE, 2020 AND SUBSEQUENT ORDER(S)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

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To,

(BHEL HEEP Haridwar)

Dear Sir,

**Sub:** Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04<sup>th</sup> June, 2020 and subsequent order(s).

**Ref:** 1) GeM Bid Specification No: .....

2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... (*specify the name of the organization here*) has a local content of \_\_\_\_\_ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' \*\* as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

1. \_\_\_\_\_ 2. \_\_\_\_\_

3. \_\_\_\_\_ 4. \_\_\_\_\_

...

Thanking you,  
Yours faithfully,

**(Signature, Date & Seal of  
Authorized Signatory of the Bidder)**

**\*\* - Strike out whichever is not applicable.**

**Note:**

1. Bidders to note that above format, duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

**(Specification)**

**AA10119 Rev:15  
& Standard AA0850120**



# CORPORATE PURCHASING SPECIFICATION

AA10119

Rev No. 15

PAGE 1 of 2

## STRUCTURAL STEEL - WELDABLE QUALITY (PLATES, SECTIONS, STRIPS, FLATS AND BARS)

### ORDERING DESCRIPTION

#### **1.0 GENERAL:**

The material shall conform to IS 2062 – 2011, E250-Gr.BR (with mandatory Impact Test) or DIN EN 10025-2:2005, Gr. S275JR and comply with following additional requirements.

#### **2.0 APPLICATION:**

For general engineering purposes, suitable for welding.

#### **3.0 CONDITION OF DELIVERY:**

- 3.1 Bars & Sections shall be supplied in Hot rolled in straight lengths without twists and bends.
- 3.2 The material shall be supplied as per IS: 2062 – 2011, E250 Gr.BR (with mandatory Impact Test) or as per DIN EN 10025-2:2005 Gr. 275JR.
- 3.3 Any other additional requirement as per BHEL Purchase order.

#### **4.0 DIMENSIONS AND TOLERANCES:**

##### **4.1 Sizes:**

Material shall be supplied to the dimensions specified in BHEL Order.

##### **4.2 Tolerances:**

The tolerances on hot rolled material shall comply with IS: 1852 or any other equivalent national standard.

##### **4.3 Straightness for hot rolled bars:**

Unless otherwise specified, the permissible deviation in straightness shall not exceed 5 mm in any 1000 mm length.

#### **5.0 TEST SAMPLES:**

The selection of test pieces for all tests like Chemical, Mechanical etc. shall be as per IS: 2062, E250-Gr.BR or DIN EN 10025-2, Gr. S275JR.

Revisions: Clause No. 1, 3, 5 & 8 revised (as per MOM of 38th MRC meeting), Clause 10 added			<b>APPROVED:</b> INTERPLANT MATERIAL RATIONALISATION COMMITTEE – MRC(S&GPS)		
Rev No.15	Amd No.	Reaffirmed	Prepared HPEP, Hyderabad	Issued Corp.R&D	Dt. of 1 <sup>st</sup> Issue June, 1976
Dt:11-03-2014	Dt:	Year:			

AA10119  
Rev No. 15  
PAGE 2 of 2

# CORPORATE PURCHASING SPECIFICATION



## 6.0 ULTRASONIC EXAMINATION:

Plates shall be ultrasonically examined in accordance with BHEL standard AA0850120 (or ASTM-A435) as detailed below and shall comply with the acceptance standards specified therein.

### 6.1 For plates above 40 mm thick:

Shall be ultrasonically examined unless when otherwise specified in order.

## 7.0 TEST CERTIFICATES:

Unless otherwise specified, three copies of test certificates shall be supplied.

In addition, the supplier shall ensure to enclose one copy of the test certificate along with their dispatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information:

AA10119 - Rev.No.15/ IS: 2062-Gr: BR (with mandatory Impact test) or DIN EN 10025-2, Gr. S275JR,

BHEL order No.

Melt No, Size & Quantity, Batch No with heat treatment details, Results of Chemical analysis,

Mechanical tests & NDT, Supplier's name, Identification No, TC No, Signature of Competent Authority, etc.

## 8.0 PACKING AND MARKING:

Plates shall be transported suitably to avoid damage during transit.

Each plate shall be marked with Melt No. Material grade and specification, BHEL Order No, Supplier's Name Identification No, Size & weight, on any one corner and encircled with paint preferably of white colour.

## 9.0 REJECTION AND REPLACEMENT

If the material does not comply with the requirements of this specification during receipt inspection at BHEL or if any defect is found during further processing of material, BHEL reserves the right to reject the whole consignment and the supplier shall replace the material free of cost. The rejected material shall be taken back by the supplier after fulfilling the commercial terms and conditions.

## 10.0 REFERRED STANDARDS (Latest publications including amendments):

1) IS: 1852                    2) ASTM - A435                    3) AA0850120

24/6/14

CS-721



# CORPORATE STANDARD

AA 085 01 20

PAGE 1 OF 3

## STRAIGHT BEAM ULTRASONIC EXAMINATION OF STEEL PLATES FOR PRESSURE VESSELS

### 1.0 SCOPE:

1.1 This standard covers the examination procedures and acceptance standards for straight beam, pulse echo, ultrasonic, examination of rolled carbon and alloy steel plates, 12.5 mm and above in thickness, of fully killed, pressure vessel quality. It was developed to assure delivery of steel plates free of gross internal discontinuities such as pipe, ruptures or laminations and is to be used whenever the corporate purchasing specification states that the plates are to be subjected to ultrasonic examination.

① 1.2 This standard is generally based on ASTM A 435 - 1982 (Reapproved 1987).

### 2.0 PERSONNEL REQUIREMENT:

Personnel performing non-destructive examination and evaluation shall be qualified to the recommended practice SNT-TC-1A or any other recognised practice.

### 3.0 APPARATUS- EQUIPMENT CHARACTERISTICS:

① For clause 3.1, 3.2, 3.3 & 3.4 see Page 3 of 3  
3.1 The manufacturer shall furnish suitable ultrasonic equipment and qualified personnel necessary for performing the test. The equipment shall be of the pulse echo straight beam type. The transducer shall be 20 to 30 mm diameter or 25.4 mm square. The test shall be performed by one of the following methods, direct contact, immersion or liquid column coupling.

### 4.0 TEST CONDITIONS:

4.1 The examination shall be conducted in an area free from operations that interfere with proper functioning of the equipment.

4.2 The plate surface shall be sufficiently clean and smooth to maintain a reference back reflection from the opposite side of the plate at least 50% of full scale during scanning.

4.3 The surface of plates inspected by this method may be expected to contain a residue of oil or rust or both. Any specified identification which is removed when grinding to achieve proper surface smoothness shall be restored.

### 5.0 PROCEDURE:

5.1 Ultrasonic examination shall be made on either major surface of the plate. Acceptance of defects in close proximity may require inspection

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It must not be used directly or indirectly in any way detrimental to the interest of the company.

CS-327	Revisions: Cl. 7.8 of MOM of WG (NDT)			Approved: INTERPLANT STANDARDIZATION COMMITTEE- WG (NDT)		
	Rev. No. 01	Amd. No. 01	Reaffirmed	Prepared TIRUCHY	Issued CORP. R&D	Date NOV. '78
	Dt. Nov. '92	Dt. 29.10.99	Year: 2002			



from the second major surface. Plates ordered in the quenched and tempered condition shall be tested following heat treatment.

5.2 A nominal test frequency of 2 to 4 MHz is recommended. Thickness, grain size or microstructure of the material and the nature of the equipment or method may require a higher or lower test frequency. However, frequencies, less than 1 MHz may be used only on agreement with BHEL. A Clear, easily interpreted trace pattern should be produced during the examination.

5.3 Conduct the examination with a test frequency and instrument adjustment that will produce a minimum 50 to a maximum 75% of full scale reference back reflection from the opposite side of a sound area of the plate.

5.4 Scanning shall be continuous along perpendicular grid lines on nominal 230 mm centres, or at the manufacturer's option, shall be continuous along parallel paths, transverse to the major plate axis, on nominal 100 mm centres, or shall be continuous along parallel paths parallel to the major plate axis, on 75 mm or smaller centres. A suitable couplant such as ~~water soluble~~ oil, or ~~water~~ shall be used.

5.5 Scanning lines shall be measured from the center or one corner of the plate. An additional path shall be scanned within 50 mm of all edges of the plate on the scanning surface.

5.6 Where grid scanning is performed and complete loss of back reflection accompanied by continuous indications is detected along a grid line, the entire surface area of the square adjacent to this indication shall be scanned continuously. Where parallel path scanning is performed and complete loss of back reflection accompanied by continuous indications is detected, the entire surface area of 230 x 230 mm square centred on this indication shall be scanned continuously. The true boundaries where this condition exists shall be established in either method by the following technique: Move the transducer away from the centre of the discontinuity until the heights of the back reflection and discontinuity indications are equal. Mark the plate at a point equivalent to the centre of the transducer. Repeat the operation to establish the boundary.

#### 6.0 ACCEPTANCE STANDARD:

6.1 Any discontinuity indication causing a total loss of back reflection which cannot be contained within a circle, the diameter of which is 75 mm or one half of the plate thickness, whichever is greater is unacceptable. Total loss of back reflection means loss of back reflection up to 5% of screen height.

6.2 BHEL representative may witness the test.

Acceptable adjacent discontinuity indications shall be separated from each other by a distance equal to or larger than the larger of the adjacent discontinuity indications unless the adjacent defects can be contained in a circle of diameter equal to the acceptance standard for a single defect.

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 It must not be used directly or indirectly in any way detrimental to the interest of the company.



# CORPORATE STANDARD

AA 085 01 20

PAGE 3 OF 3

## 7.0 MARKING:

7.1 Plates accepted in accordance with this specification shall be identified by stamping UT: AA 085 01 20 or in some other manner adjacent to marking required by the relevant corporate purchasing specification.

## 8.0 SUPPLEMENTARY REQUIREMENTS:

8.1 Any supplementary requirements according to ASTM A 435, if required, will be specified in the purchase order.

### 3.1 Frequency range:

The ultrasonic equipment shall be suitable for operating at frequencies within the range of 0.5 to 6 MHz.

### 3.2 Sensitivity:

The sensitivity of the equipment shall be tested to ensure that the number of full screen back wall echoes is not less than that given below, when the appropriate probe is placed on the metallised surface of plastic insert of the Indian Standard reference block (IS:4904) IIW block.

Frequency, MHz	Min. No. of full screen back wall echoes
1	5
2	4
4 to 6	2

### 3.3 Resolution:

The resolution of the equipment and probe combined shall be such as to show separately indications of the three grooves in the IIW-VI block.

### 3.4 Transducer:

The transducer shall be 20-30 mm dia or 25.4 mm square. The test shall be performed by one of the following methods:

- a) Direct contact
- b) Immersion
- c) Liquid column coupling.

**NO DEVIATION CERTIFICATE**

## **CERTIFICATE OF NO DEVIATION**

(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

## Subject: **No Deviation Certificate**

Ref: 1) GeM Bid No: .....  
2) All other pertinent issues till date

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred GeM Bid.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

**(Signature, date & seal of authorized  
representative of the bidder)**

Date:

Place: