



**BHARAT HEAVY ELECTRICALS LIMITED**  
**R.C.PURAM, HYDERABAD**

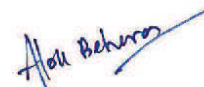
**ADDENDA TO VENDOR STANDARD QUALITY PLAN**

|                               |                                                                                                                                                                                                                                                                  |            |                                                                     |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------|
| ITME DESCRIPTION              | NAVAL BRASS TUBE SHEET                                                                                                                                                                                                                                           |            |                                                                     |
| PO/PR NO :DATE                | 8000094500, 20.07.2020                                                                                                                                                                                                                                           |            |                                                                     |
| BHEL SPEC/DRAWING:            | BHEL SPEC: HE51516 REV 00.                                                                                                                                                                                                                                       |            |                                                                     |
| PROJECT :                     | HRRL VGO RGC COMPRESSOR-TWIN OIL COOLER.                                                                                                                                                                                                                         |            |                                                                     |
| APPLICABLE SVQP:              | HY/QA/VSQP/TCMO/012 REV 01 (Validity of the SQP is extended till the PO delivery Date)                                                                                                                                                                           |            |                                                                     |
| PROJECT SPECIFIC REQUIREMENTS | <ol style="list-style-type: none"><li>1. MATERIAL SHALL CONFORM TO SB171 C46400 OF ASME SEC II PART-B 2019 EDITION.</li><li>2. SHALL BE PROCURED FROM CUSTOMER APPROVED VENDOR LIST.</li><li>3. MATERIALS SHALL BE WITH EN10204 TYPE 3.2 CERTIFICATION</li></ol> |            |                                                                     |
| QA REMARK :                   | <br><b>CH. B. V. SIRISHA</b><br><b>SR. ENGR/ QA</b>                                                                                                                            | 03.08.2020 | STANDARD QAP TO BE FOLLOWED ALONG WITH PROJECT SPECIFIC REQUIREMENT |

|  |                              | <b>BHARAT HEAVY<br/>ELECTRICALS LIMITED<br/>R.C.PURAM, HYDERABAD</b>             |       | <b>STANDARD QUALITY PLAN FOR VENDOR ITEMS</b> |                     |                                  |                                  | <b>QP. NO: HY/QA/VSQP/TCMO/012</b><br><b>Rev. No. : 01</b><br><b>DATE: 05.06.2018</b><br><b>VALID UPTO: 04.06.2020</b><br><b>PAGE 1 OF 2</b> |        |        |   |   |         |
|-----------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------|-------|-----------------------------------------------|---------------------|----------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|---|---|---------|
| SI<br>No                                                                          | Component<br>&<br>Operations | Characteristics                                                                  | Class | Type Of<br>Check                              | Quantum<br>Of Check | Ref Document                     | Acceptance<br>Norms              | Format Of<br>Record                                                                                                                          | *<br>D | Agency |   |   | Remarks |
|                                                                                   |                              |                                                                                  |       |                                               |                     |                                  |                                  |                                                                                                                                              |        | P      | W | V |         |
| 1.0                                                                               | <b>AT SUPPLIERS WORKS</b>    |                                                                                  |       |                                               |                     |                                  |                                  |                                                                                                                                              |        |        |   |   |         |
| 1.1                                                                               | PLATES                       | CHEMICAL COMPOSITION                                                             | MAJOR | CHEMICAL                                      | AS PER SPEC.        | SB 171M & BHEL SPECIFICATION     | SB 171M & BHEL SPECIFICATION     | SUPPLIERS TC                                                                                                                                 | ✓      | 2      |   | 1 |         |
| 1.2                                                                               |                              | REVIEW OF HEAT TREATMENT CHART                                                   | MAJOR | REVIEW                                        | 100%                | SB 171M & BHEL SPECIFICATION     | SB 171M & BHEL SPECIFICATION     | HT CHART                                                                                                                                     | ✓      | 2      |   | 1 |         |
| 1.3                                                                               |                              | MECHANICAL PROPERTIES                                                            | MAJOR | MECH.                                         | AS PER SPEC.        | SB 171M & BHEL SPECIFICATION     | SB 171M & BHEL SPECIFICATION     | SUPPLIERS TC                                                                                                                                 | ✓      | 2      | 1 |   |         |
| 1.4                                                                               |                              | UT EXAM. OF PLATES AFTER MACHINING                                               | MAJOR | NDE                                           | 100%                | SA 578                           | LEVEL B OF SA 578M               | SUPPLIERS TC                                                                                                                                 | ✓      | 2      | 1 |   | NOTE 1  |
| 1.5                                                                               |                              | VISUAL EXAM AND DIMENSIONS                                                       | MAJOR | VISUAL & MEASURT.                             | 100%                | DRAWING, BHEL SPEC. & SB-171M    | DRAWING, BHEL SPEC. & SB-171M    | SUPPLIERS TC                                                                                                                                 | ✓      | 2      | 1 |   | CHP     |
| 1.6                                                                               |                              | FLATNESS                                                                         | MAJOR | MEASURT.                                      | 100%                | DRAWING, BHEL SPEC. & SB-171M    | DRAWING, BHEL SPEC. & SB-171M    | SUPPLIERS TC                                                                                                                                 | ✓      | 2      | 1 |   |         |
| 1.7                                                                               |                              | VERIFICATION OF TCS, IDENTIFICATION OF MATERIAL FOR COMPLETION AS PER SPEC. & QP | MAJOR | VISUAL                                        | 100%                | SB 171M, BHEL SPECIFICATION & QP | SB 171M, BHEL SPECIFICATION & QP | SUPPLIERS TC                                                                                                                                 |        | 2      |   | 1 |         |
| 1.8                                                                               |                              | PACKING AND MARKING                                                              | MAJOR | VISUAL                                        | 100%                | P.O., DRG. & BHEL SPEC.          | P.O., DRG. & BHEL SPEC.          | SUPPLIERS TC                                                                                                                                 | ✓      | 2      |   | 1 | NOTE 4  |
| 2.0                                                                               | <b>AT BHEL</b>               |                                                                                  |       |                                               |                     |                                  |                                  |                                                                                                                                              |        |        |   |   |         |
|                                                                                   |                              | VERIFICATION & CORRELATION OF MATERIAL WITH TC                                   | MAJOR | VISUAL                                        | 100%                | P.O., DRG. & BHEL SPEC.          | P.O., DRG. & BHEL SPEC.          | INSPN. RECORD                                                                                                                                |        | 2      |   | 1 |         |

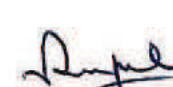
LEGEND:  
P: - PERFORM, W: - WITNESS, V: - VERIFICATION,  
INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS  
APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V.  
\* D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.

PREPARED BY:



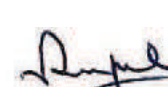
**ALOK BEHERA**  
SR.ENGR/ QA

REVIEWED BY:



**D S SATPUTE**  
AGM /QA

APPROVED BY:



**D S SATPUTE**  
AGM /QA

|  |                              | <b>BHARAT HEAVY<br/>ELECTRICALS LIMITED<br/>R.C.PURAM, HYDERABAD</b> |       | <b>STANDARD QUALITY PLAN FOR VENDOR ITEMS</b>                      |                     |              |                     | <b>QP. NO: HY/QA/VSQP/TCMO/012</b> |   |        |   |   |         |
|-----------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------|-------|--------------------------------------------------------------------|---------------------|--------------|---------------------|------------------------------------|---|--------|---|---|---------|
|                                                                                   |                              |                                                                      |       |                                                                    |                     |              |                     | <b>Rev. No. : 01</b>               |   |        |   |   |         |
|                                                                                   |                              |                                                                      |       | <b>ITEM: NAVAL BRASS TUBE PLATE<br/>BHEL SPEC: HE 51516 Rev.00</b> |                     |              |                     | <b>DATE: 05.06.2018</b>            |   |        |   |   |         |
|                                                                                   |                              |                                                                      |       |                                                                    |                     |              |                     | <b>VALID UPTO: 04.06.2020</b>      |   |        |   |   |         |
|                                                                                   |                              |                                                                      |       |                                                                    |                     |              |                     | <b>PAGE 2 OF 2</b>                 |   |        |   |   |         |
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|                                                                                   |                              |                                                                      |       |                                                                    |                     |              |                     |                                    |   | D      | P | W |         |

**Notes:**

1. UT has to be performed on plates of all thicknesses.
2. All machined surfaces to be protected by applying rust preventive coating to protect from rust for a minimum period of 6 months.
3. All requirements as per BHEL approved specification & drawing/datasheet are to be complied with.
4. Pre Despatch Photographs shall be included in QC Documentation.

**GENERAL NOTES:**

1. This QP should be read along with BHEL Spec, BHEL drawings / approved drawings, data sheet, BOM and PO.
2. Latest revisions of specification / drawings as per P.O., approved drawings & bill of materials are applicable.
3. Any other tests/ checks indicated in specification, P.O., or drawing & any additional checks envisaged by BHEL/TPI to ensure workmanship, finish, aesthetics, etc. shall also be conducted and witnessed/verified by BHEL /TPI / customer as required.
4. All test certificates/ reports reviewed and certified by BHEL/TPI shall be submitted to BHEL as documentation package.
5. Drawing / Data Sheet shall prevail over Quality Plan in case of any contradiction between Quality Plan and Drawing / Data Sheet.
6. Any project / customer specific requirement, like QP approval & Customer/Consultant Inspection, which shall be notified have to be fulfilled by the vendor at the time of execution of order.
7. This QP shall not be applicable to the orders for which QP approval & Inspection by customer/consultant is required.
8. This SQP is not applicable for vendors supplying this item for the first time to BHEL.

**MTC – Mill Test Certificate**

**TC – Test Certificate**

**IR – Inspection Report**

**COC – Certificate of Conformity**

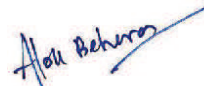
**TPIA – Third Party Inspection Agency appointed by BHEL.**

**PO – Purchase Order**

**LEGEND:**

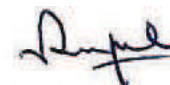
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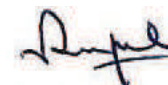
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AGM /QA**

**APPROVED BY:**



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