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REF.WO.NO. 65002-A-517-01  
REF.DRG.NO. 3 469 00 01756

SIGN/DATE

INVENTORY NO.

DRG. NO. 3 469 00 01756

102

103

104


105

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NOTES:-

- WHEN REFERRING THIS DRAWING PLEASE QUOTE MVAR & W.O. NO.
- 320 DIA. TWIN BI-DIRECTIONAL ROLLERS MOUNTED AT 1676 mm RAIL GAUGE IN BOTH DIRECTION ARE PROVIDED FOR MOVEMENT OF REACTOR AT SITE AND ROLLERS ARE TO BE REMOVED BEFORE ERECTION
- PAINTING AT OUTSIDE THE REACTOR TANK & COOLER CONTROL CABINET IS AS PER SHADE NO. 631 OF IS:5.
- WIRING FROM INSTRUMENT CTS. ETC. ARE NOT SHOWN FOR CLARITY.
- FOUNDATION BOLTS ARE IN THE SCOPE OF BHEL SUPPLY.
- FOR PART LIST OF OGA REFER DRAWING NO. 3 469 00 02033.
- DIMNS. SHOWN THUS  ARE OVERALL SHIPPING DIMENSIONS EXCLUSIVE OF PACKING.
- DIMENSIONS SHOWN ARE WITH REF.TO PLINTH LEVEL. PLEASE NOTE THAT PLINTH LEVEL IS 450 MM ABOVE THE GROUND LEVEL.
- FOR TANK COVER BOLTED REFER DETAIL 'B' SHT. NO. 03.

IMPORTANT NOTE :-

- THE DESIGN FEATURES SHOWN ON THIS DRAWING (GENERALLY INLINE WITH IEC : 60076-6 APPLICABLE STANDARD & AGREED CUSTOMER SPECIFICATION) MEETS THE STATUTORY, REGULATORY & SAFETY REQUIREMENTS WITH RESPECT TO EARTHING ARRANGEMENT, DANGER & OTHER LABELS, CLEARANCES IN AIR PROVISION FOR PRESSURE RELIEF DEVICE, GAS ACTUATED RELAY AND ANTI-EARTHQUAKE CLAMPING ARRANGEMENT.

MIN. AIR CLEARANCES (IN MM)

|                |        |        |
|----------------|--------|--------|
|                | 420 KV | 145 KV |
| PHASE TO PHASE | 4000   | NA     |
| PHASE TO EARTH | 3500   | 1050   |

TABLE

SUB ASSY. MK NOS.

| SUB ASSY | MK-01 | MK-02 | MK-03 | MK-04 | MK-05 | MK-06 | MK-07 | MK-08 | MK-09 | MK-10 | MK-11 | MK-12 | MK-13 | MK-14 | MK-15 | MK-16 | MK-17 | MK-18 | MK-19 | MK-20 | MK-21 | MK-22 | MK-23 | MK-24 | MK-25 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QTY.     | 002   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 001   | 002   | 001   | 001   | 001   |

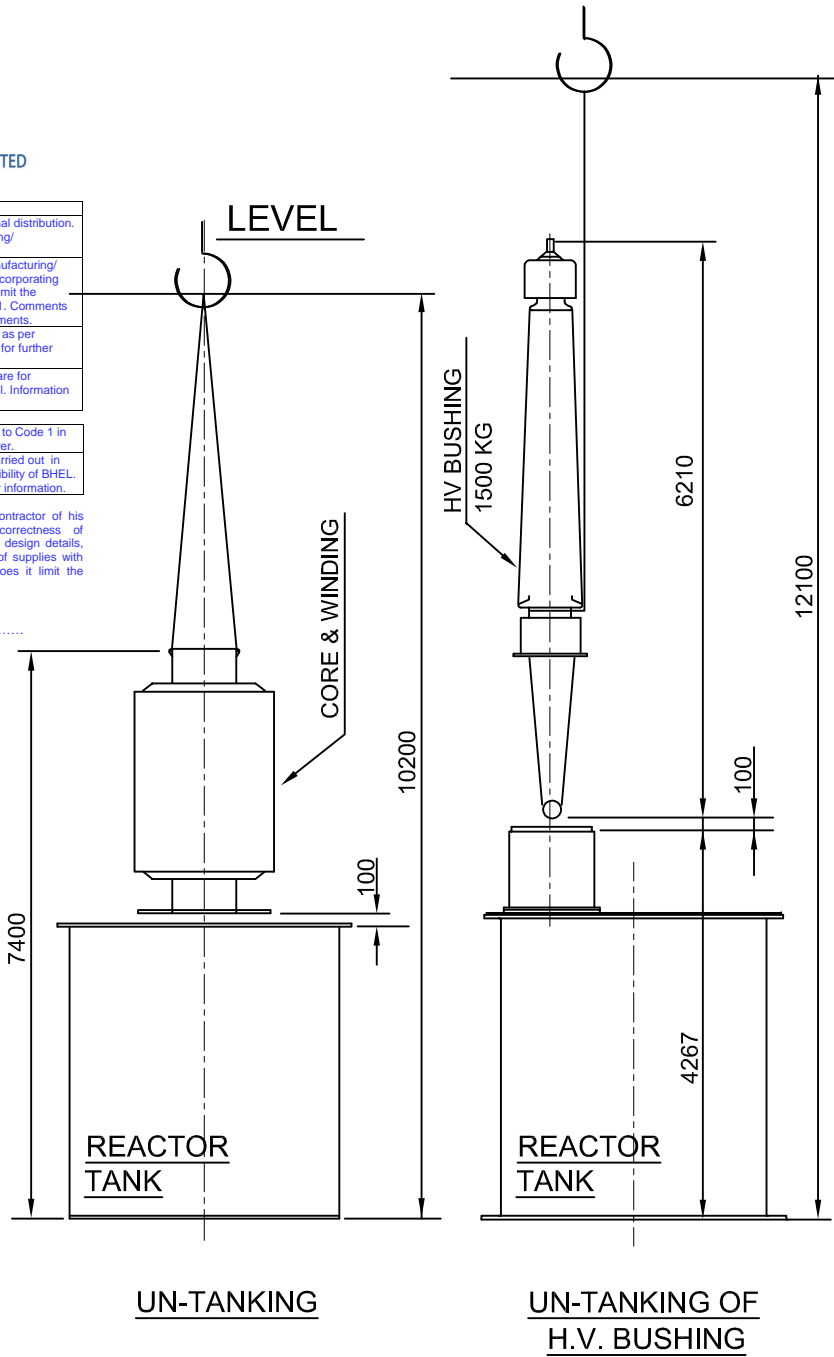
TATA CONSULTING ENGINEERS LIMITED  
VENDOR DRAWING STATUS

| CATEGORY                                  | DESCRIPTION   |
|---|---|
| <input checked="" type="checkbox"/> CAT-1 | Drawing/documents approved for final distribution. BHEL will proceed with manufacturing/ fabrication/construction.  |
| <input type="checkbox"/> CAT-2            | Drawing/documents cleared for manufacturing/ fabrication/construction subject to incorporating the comments given. BHEL to resubmit the drawing for Approval in Category – 1. Comments will be marked on the drawing documents. |
| <input type="checkbox"/> CAT-3            | Drawing document will be corrected as per comment and resubmitted by BHEL for further review/checking.  |
| <input type="checkbox"/> CAT-4            | Drawing document of this category are for information only and not for approval. Information furnished on the document is noted.  |

Note :  
1. It is mandatory to close documents with Code 2 & 3 to Code 1 in agreed contract period or 2 weeks, whichever is lower.  
2. Any design changes / modification required to be carried out in Code 4 Drawings / Documents shall be the responsibility of BHEL. BHEL to resubmit reflecting the Design Changes for information.

Approval conveyed herein neither relieves the Vendor/Contractor of his contractual obligations, and his responsibilities for correctness of dimensions, materials of construction, weights, quantities, design details, assembly fits, performance requirements and conformity of supplies with the Indian Statutory Laws as may be applicable, nor does it limit the purchaser's rights under the contract.

Reviewed by S.S. Satish Date .....



TYPE OF PRODUCT 2 X 125 MVAR, 420KV, 3-PHASE, ONAN, SHUNT REACTOR.

PROJECT 2X660MW TANGEDCO UDANGUDI THERMAL POWER PROJECT STAGE-I.

OWNER TAMILNADU GENERATION & DISTRIBUTION CORPORATION LTD

OWNER'S CONSULTANT TATA CONSULTING ENGINEERS LIMITED, BENGALURU

|       |       |      |      |      |
|-------|-------|------|------|------|
| DRN.  | MKP   | NAME | SIGN | DATE |
| CHD.  | KD/AJ | NAME | SIGN | DATE |
| APPD. | KD/AJ | NAME | SIGN | DATE |

DRG. NO. 3 469 00 02032  
SHEET 01 OF 04

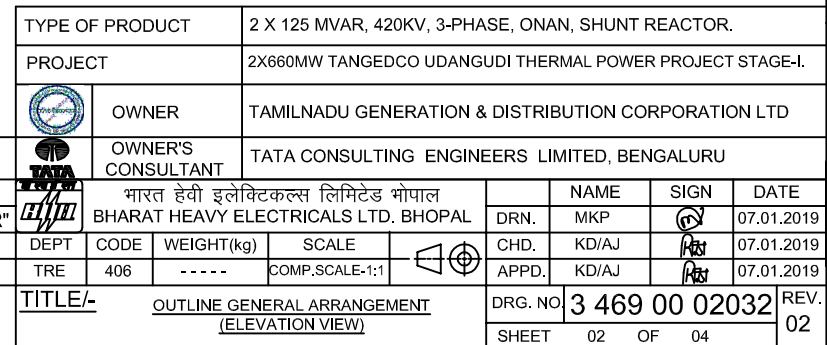
REV. 02




BHEL DRAWING/DOCUMENT NO BP-DG-435-305-0001

ADDITIONAL INFORMATION  
WO: 67023-A-517-01  
STATUS OF DRAWING "PR"  
DISTRIBUTION OF PRINTS  
TRE-1, TRM-3








PO. NO. CE/PROJ.II/SE/C/UTPP/EE/E/LOI/D.179/2017  
DTD 07.12.2017.

TITLE/-  
OUTLINE GENERAL ARRANGEMENT



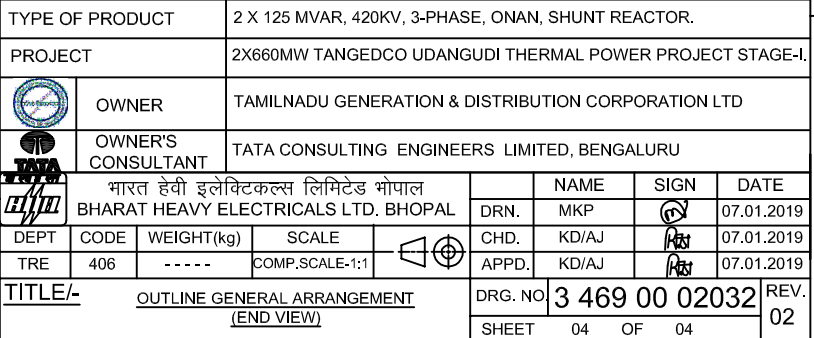
| REV  | DATE | ALT.  |  |  | REV  | DATE | ALT.  |  |  | REV  | DATE  | ALT.  | MKP   |  | REV  | DATE   | ALT.  | MKP   | -SD- |
|------|------|-------|--|--|------|------|-------|--|--|------|---|-------|-------|---|------|--|-------|-------|------|
|      |      | CKD.  |  |  |      |      | CKD.  |  |  | 02   | 04.10.19  | CKD.  | KD/AJ |  | 01   | 30.07.19   | CKD.  | KD/AJ | -SD- |
|      |      | APPD. |  |  |      |      | APPD. |  |  |      |   | APPD. | KD/AJ |  |      |  | APPD. | KD/AJ | -SD- |
| ZONE |      |       |  |  | ZONE |      |       |  |  | ZONE | COMMENTS INCORPORATED AS PER LETTER NO. 11403A-EL-VDT- 186 DTD.07/08/19 |       |       |   | ZONE | DESIGN BASIS AND SIZING (RATING) OF SHUNT REACTOR ALREADY SPECIFIED IN TECHNICAL SPECIFICATION. ENCLOSED HEREWITH. |       |       |      |




|                             |  |   |
|-----------------------------|--|---|
| BHEL<br>DRAWING/DOCUMENT NO |  | BP-DG-435-305-0001                              |
| ADDITIONAL INFORMATION      |  | WO: 67023-A-517-01                              |
|                             |  | STATUS OF DRAWING "P"<br>DISTRIBUTION OF PRINTS |
|                             |  | TRE-1, TRM-3                                    |
| PO. NO.                     | CE/PROJ.II/SE/C/UTPP/EE/E/LO/D.179/2017<br>DTD 07.12.2017. |   |

|   |   |      |   |                |   |       |                |   |            |         |
|---|---|------|---|----------------|---|-------|----------------|---|------------|---------|
|    | OWNER   |      | TAMILNADU GENERATION & DISTRIBUTION CORPORATION LTD |                |   |       |                |   |            |         |
|    | OWNER'S CONSULTANT  |      | TATA CONSULTING ENGINEERS LIMITED, BENGALURU        |                |   |       |                |   |            |         |
| "  | भारत हेवी इलेक्ट्रिकल्स लिमिटेड भोपाल<br>BHARAT HEAVY ELECTRICALS LTD. BHOPAL |      |   |                |   | NAME  | SIGN           | DATE  |            |         |
|   | DEPT  | CODE | WEIGHT(kg)  | SCALE          |  | DRN.  | MKP            |  | 07.01.2019 |         |
|   | TRE   | 406  | ----  | COMP.SCALE-1:1 |   | CHD.  | KD/AJ          |  | 07.01.2019 |         |
|   |   |      |   |                |   | APPD. | KD/AJ          |  | 07.01.2019 |         |
| TITLE/-   |   |      |   |                | OUTLINE GENERAL ARRANGEMENT<br>(ELEVATION VIEW)                                       |       | DRG. NO        | 3 469 00 02032  |            | REV. 02 |
|   |   |      |   |                |   |       | SHEET 02 OF 04 |   |            |         |

[illegible]

INVENTORY NO.



|      |      |       |  |  |      |      |       |  |  |      |   |       |       |   |      |  |       |       |      |
|------|------|-------|--|--|------|------|-------|--|--|------|---|-------|-------|---|------|--|-------|-------|------|
| REV  | DATE | ALT.  |  |  | REV  | DATE | ALT.  |  |  | REV  | DATE  | ALT.  | MKP   |  | REV  | DATE   | ALT.  | MKP   | -SD- |
|      |      | CKD.  |  |  |      |      | CKD.  |  |  | 02   | 04.10.19  | CKD.  | KD/AJ |  | 01   |  | CKD.  | KD/AJ | -SD- |
|      |      | APPD. |  |  |      |      | APPD. |  |  |      |   | APPD. | KD/AJ |  |      | 30.07.19   | APPD. | KD/AJ | -SD- |
| ZONE |      |       |  |  | ZONE |      |       |  |  | ZONE | COMMENTS INCORPORATED AS PER LETTER NO. 11403A-EL-VDT- 186 DTD,07/08/19 |       |       |   | ZONE | DESIGN BASIS AND SIZING (RATING) OF SHUNT REACTOR ALREADY SPECIFIED IN TECHNICAL SPECIFICATION. ENCLOSED HERewith. |       |       |      |