	BHEL – Tiruchirappalli - 620014, India. Quality Assurance Department TECHNICAL DELIVERY CONDITIONS	DOC No: TDC:6:386 Rev: 03 Effective Date: 26/06/2023 Page: 1 of 2
Product: STRUCTURAL QUALITY PLATES FOR BOILER STRUCTURES OF PROJECTS: TELANGANA (2x800 MW) - CUST No: 1819, 1820, 1429 , PATRATU (3x800 MW) - CUST No: 1828, 1829, 1830 ,TALCHER (2x660 MW) CUST No: 1732, 1733		

Record of revisions:

Rev 00: 15/06/2017 - Fresh issue

Rev 01: 07/12/2017 – Cl 2 modified, Cl 3 modified to remove controlled rolling, Cl 4 modified to remove normalizing rolling grain size requirement, Cl 6 and Cl 9(c) modified, Cl 9 (f) removed.

Rev 02: 19/07/2018 – Projects modified to include Patratu (3x800 MW) project.

Rev 03: 20/06/2023 – Talcher project added in title, Editorial corrections made in Cl 6 & 9. Clause 8.i., modified to include coil form plate for thickness upto 25mm, Clause 8.ii newly added.

1. MATERIALS:

All the codes, standards, specifications, procedures, etc., referred in this TDC shall be of latest revision as on the date of Purchase Order, unless specified otherwise.

Specification for Plates : IS 2062,
Grades : IS 2062 E 250 Gr BR & E 350 Gr B0;
Additional Requirement : As listed below (Supplementary to Specification)
Size and Qty. : As per Purchase order (PO)

2. CHEMICAL COMPOSITION AND PROCESS:

IS 2062 E 250 Gr BR & E 350 Gr B0: Fully killed; In addition, for plates of $t > 40$ mm: Vacuum degassing shall be done.

3. HEAT TREATMENT:

For plates of thickness lesser than and including 12mm: As rolled

For plates of thickness beyond 12 mm to and including 40 mm: Normalizing Rolling

For plates of thickness greater than 40 mm: Furnace normalized.

4. MECHANICAL TESTS

- All mandatory tests as per the specification.
- Frequency of all tests: As per material specification.

5. ADDITIONAL MECHANICAL TEST

IS 2062 E250 Gr BR: Impact Testing shall be done at room temperature & acceptance as per material specification.

6. NON DESTRUCTIVE TEST

Ultrasonic Test: For all plates of thickness >40 mm, testing as per ASTM A578.

Acceptance Level: ASTM A578 Level B-S2.


7. FINISH AND REPAIR

Plates shall be free from all mill scales, edge crack and other injurious defects. Repairs by fusion welding is prohibited. Mechanical removal of defects permitted subject to meeting minimum thickness and smooth surface.

8. MARKING (by mill)

1. Specification, 2. Grade, 3. Melt number, 4. Maker's emblem/Code/ Identification

- All plates of thickness > 25 mm 1 to 4 shall be maintained by hard stamping.
 - For plates of thickness >10 mm and upto 25mm (produced from plate / coil) form 1, 2, 3, 4 shall be maintained by paint stenciling/ink jet painting/ hard stamping/ engraving. In case of paint stenciling/ink jet painting, markings to be done along length of the plate at periodic intervals. Suppliers should ensure high life of the printing details.
 - All plates of thickness ≤ 10 mm (as rolled)1,2,3,4 shall be maintained by paint stenciling.
 - Plates of thickness ≤ 10 mm (produced from strip in coil form): 1, 2, 3, 4 by paint stenciling on the top of each pile/ packet.
2. Additionally, Plate number, PO No (in case of BHEL PO only), buyer name & Weight also shall be painted/stenciled on all the products.

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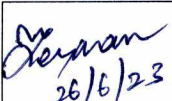
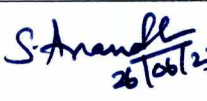


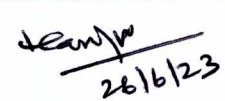
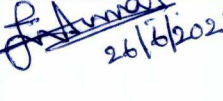
9. INSPECTION AND CERTIFICATION:

Products must be inspected & tested at supplier's works. Test certificate in English shall accompany each product with following details:

- Purchase Order No (BHEL PO only), TDC No. & Rev No, Test certificate No. & Date, Size, Plate number and Quantity-Melt wise.
- Specification and Grade with applicable year of code, Heat Number, Steel making process, de-oxidation process, vacuum degassing.
- Chemistry including trace elements, Carbon equivalent and Heat treatment details.
- Mechanical test Results, Impact values, NDE results with reference and acceptance standards.
- Acceptance limits (for chemistry & mechanical properties) shall be mentioned along with actual test results.

Notes:

- This TDC shall be read along with SIP:NP:14 (latest), for POs placed by outsourcing on OVM/ACF vendors.
- Refer TDC:0:301 (Latest revision) for the requirements of other structural material specifications which are not covered in this TDC.**
- End use:** These plates are meant for use in structural applications for Telangana (2x800 MW) project including Auxiliary boilers ,Patratu project (3x800 MW) and Talcher project (2x660 MW).

 26/6/23	 26/06/23	 26/06/23	 26/6/23	 26/6/23	 26/6/2023
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