



TEST CERTIFICATE

000356168

Issued to :

JSW STEEL LIMITED
607, 6TH FLOOR
BHIKAJI CAMA BHAWAN
BHIKAJI CAMA PLACE
NEW DELHI --

J.O.No. 501-171-3905
Reg.No. 1369443
Date 28-01-2015
GC-01 (REV-04)



Kind Attn: MR VIKRAM GUPTA , DY MANAGER

Your Ref.No. -

Sample Particulars :

Date 21.01.2015

One Sample described as TMT Bar- JSW TMT PLUS, Grade FE 500D dia 8 mm was received.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH.
The sample particulars provided in the Test Certificate are based on the declaration by the Party.

TEST RESULTS

(As Per IS: 1786-2008 with amendment No.2)

| S.No. | Tests | Observation | Requirement Grade Fe-500D | Conformity | Protocol Adopted |
|---|---|--------------|---------------------------------------|------------|---------------------|
| A. Chemical Tests (% by wt.) | | | | | |
| 1. | Carbon | 0.16 | 0.25 Max. | Yes | IS:228 Pt 1-2002 |
| 2. | Sulfur | 0.012 | 0.040 Max | Yes | IS:228 Pt 9-2004 |
| 3. | Phosphorus | 0.022 | 0.040 Max | Yes | IS:228 Pt 3-2002 |
| 4. | Sulfur + Phosphorus | 0.034 | 0.075 Max | Yes | IS: 1786-2008 |
| B. Physical Tests | | | | | |
| 1. | TS/YS ratio ¹ | 1.13 | ≥ 1.10, but TS not less than 565.0 | Yes | IS: 1786-2008 |
| | Tensile Strength , N/mm ² | 672 | | Yes | IS:1608-2005 |
| 2. | Yield Stress , N/mm ² | 593 | 500 Min. | Yes | IS: 1608-2005 |
| 3. | Elongation (%) (Gauge Length 5.65 Sq Root Area) | 25.0 | 16.0 Min. | Yes | IS: 1608-2005 |
| 4. | Bend Test | Satisfactory | To satisfy the test | Yes | IS: 1599-2012 |
| 5. | Rebend test | Satisfactory | To satisfy the test | Yes | IS: 1786-2008 |
| 6. | Mass per metre run (Kg) | 0.397 | Not less than 0.363 | Yes | IS: 1786-2008 |
| Deformations & Surface Characteristics | | | | | |
| a. | Mean ribs area in mm ² /mm length | 1.35 | 0.96 Min. | Yes | IS: 1786-2008 |
| b. | Mean projected area of transverse ribs in mm ² /mm length | 1.35 | 0.32 Min. | Yes | IS: 1786-2008 |

Remarks: The sample conforms to IS: 1786-2008 with amendment No.2 for Grade FE 500 D.

Note: 1 - TS/YS ratio refers to ratio of tensile strength to the yield stress of the test piece.

D.O.R.: 21/01/2015

D.O.C.: 28/01/2015

H. Groum
AUTHORISED SIGNATORY
(EMPLOYEE CODE: 5065)