# JINDAL STEEL & POWER LIMITED

Works:Chhendipada Road,SH- 63, At\Po : Jindal Nagar, Dist : Angul (ODISHA)-759111 INDIA
Email:qclabpm.ang@jindalsteel.com
Registered Office:Post box No. 6 ,O P Jindal Marg ,Hisar (Haryana)
Corporate Office :Jindal Center,12 Bhikaji Cama Palace, New Delhi -110066 INDIA
Phone No.:-(06761) 254191-95; Fax :-06761 -254141-44

CE
0045
13
0045 - CPR - 1835

**INSPECTION CERTIFICATE**

**Test Certificate No. 0470**
**To, M/s ZIMMER STAAL BVBA,**
**GROTE MARKT 41, 2500 LIER (BELGIUM)**

**Date : 11.04.2022**

**TEST RESULTS**

**Process of Manufacture : EAF->LRF->VD->CCM->RHF->Hot rolling**
(EAF - Electric Arc Furnace / LRF: Ladle Refining Furnace / VD : Vaccum Degassing / CCM : Continuous Casting Machine/ RHF : Re-Heating Furnace)

**Supply Condition: Normalizing Rolling**
**Deoxidation :Fully Killed**

**Material Grade : EN10025-2 S355J2+N & AD 2000W1:2006, Plate Dimension -Thickness x Width x Length : 15.00MMX3000MMX12000MM**

| Heat No | Plate No | No.of Pcs. | Wt. MT | L/P | Chemical Analysis (L : Ladle & P : Product) | | | | | | | | | | | | | | | Mechanical Properties | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | <=25mm Flat & >25mm Round Sample | | | | Impact (V Notch Charpy) Value at(J), Size:(10*10*55)mm | | | | | |
| | | | | | %C | %Mn | %S | %P | %Si | %Al | %Cu | %V | %Nb | %Ti | %Mo | %Ni | %B | %Cr | N2(ppm | CE | YS(Mpa | UTS(Mpa | %EL* | Orien. | I | II | III | Avg | Temp °C | Orien. |
| A21201 | 03A0, 03B0, 03D0, 18A0, 18B0, 16A0, 17A0, 17B0, 17D0, 18D0, 16B0, 16D0, 06A0, 06B0, 06D0, 09A0, 09B0, 09D0, 10A0, 10B0, 13A0, 13B0, 13D0, 10D0, 07A0, 07B0, 07D0, 08A0, 08B0, 08D0, 04A0, 04B0, 04D0, 05A0, 05B0, 05D0, 14A0, 14B0, 14D0, 15A0, 15B0, 15D0, 12A0, 12B0, 12D0 | 45 | 190.755 | L | 0.185 | 1.40 | 0.003 | 0.022 | 0.24 | 0.021 | 0.005 | 0.001 | 0.006 | 0.003 | 0.001 | 0.011 | 0.0003 | 0.018 | 56 | 0.42 | 426 | 533 | 30 | T | 180 | 164 | 152 | 165.33 | -20 | L |
| | | | | P | 0.173 | 1.43 | 0.002 | 0.019 | 0.24 | 0.025 | 0.006 | 0.001 | 0.007 | 0.004 | 0.001 | 0.010 | 0.0003 | 0.015 | 60 | 0.41 | 432 | 574 | 26 | T | 138 | 158 | 170 | 155.33 | -20 | L |
| | | | | | | | | | | | | | | | | | | | | | 411 | 551 | 27 | T | 89 | 83 | 72 | 81.33 | -20 | L |

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**Remarks :**

1. Test Certificate as per EN 10204, 2004 Type 3. 1
2. Material mentioned above also conforms to EN10025-2 S355J2+N & AD 2000W1:2006.
3. Material also conforms to TDC Doc. No. : JSPL/ANGUL/TDC/- 0012A; Rev.02, Dt.:14.01.2021
4. Dimensional Tolerance: Thickness tolerance found satisfactory as per EN 10029:2011 of Class B
5. Surface Inspection: As per EN10163:2005 class A Subclass 3
6. Flatness: As per EN10029:2011 Class N (L Type)
7. Test Piece: Chemical as per EN ISO 14284:2003, Tensile as per DIN EN ISO 6892-1:2009 & Impact as per DIN EN ISO 148-1:2011
8. CE (IIW) : C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
9. Orientation of Sample: Tensile is Transverse & Impact is Longitudinal to rolling direction
10. In Chemical Analysis column, L stands for Ladle Analysis & In Mechanical Properties Column, L stands for Longitudinal Direction
11. **The Plates described here in have been delivered in accordance with EN 10025-2 & AD2000 W1:2006 (Certificate No.: 07-203-1409-wp-2121/16) & authorised inspector stamp as "**

**Approved acc. to AD2000-Merkblatt WO and certified acc. to PED (97/23/EC) by Certification Body for Pressure Equipment of TUV NORD Systems (notified body, reg. No.:0045)**

We hereby certify that Material described herein has manufactured and tested with satisfactory results in accordance with the requirements of the above said material specification
UltraSonic Examination : All the above plates are ultrasonically tested as per EN10160:1999 S1E1 and found ok

Purchase Reference & Date: PROV/EXP/PLT/11073A/LOT 2 /16.02.2022
" DOP can be viewed at www.jindalsteelpower.com", DOP No.: JSPL/CE/PL/S355J2
* Gauge Length: 5.65(SO)1/2

JINDAL STEEL & POWER LTD. JINDAL STEEL & POWER ANGUL

**Deepak Prasad**
**Authorised Signatory**
**TSD PlateMill**

**For, JINDAL STEEL & POWER LIMITED**