National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)

CERTIFICATE OF ACCREDITATION

MECHANICAL LABORATORY, JINDAL STAINLESS (HISAR) LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

Hot Rolling Division, O.P. Jindal Marg, Hisar, Haryana

in the field of

TESTING

Certificate Number TC-7074

Issue Date 27/03/2018 **Valid Until** 26/03/2020

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL

N. Venkateswaran
Program Director

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Anil Relia
Chief Executive Officer

National Accreditation Board for Testing and Calibration Laboratories

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SCOPE OF ACCREDITATION

Laboratory	**Mechanical Laboratory, Jindal Stainless (Hisar) Limited, Hot Rolling Division, O.P. Jindal Marg, Hisar, Haryana**
Accreditation Standard	**ISO/IEC 17025: 2005**
Certificate Number	**TC-7074**
Validity	**27.03.2018 to 26.03.2020**

Last Amended on --

MECHANICAL TESTING

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	**MECHANICAL PROPERTIES OF METALS**			
1.	**Ferrous Material Alloys & Products**	Tensile Strength	IS 1608: 2005 (RA 2017) ASTM A 370: 2017 ASTM E 8: 2016a	100 MPa to 2300 MPa
		0.2% proof stress Yield strength		100 MPa to 2200 MPa
		% Elongation		0.4 % to 80.0 %
		% Reduction area		5.0 % to 80.0 %
		Charpy impact test V Notch (At ambient temp. & up to (-)196 deg. C)	IS 1757 (Part 1): 2014 ASTM A 370-2017 ISO 148-1-2016 ASTM E 23 – 16b	2 J to 240 J
		Rockwell Hardness	IS 1586 (Part 1): 2012 ASTM A 370: 2017	60 HRBW to 100 HRBW 20 HRC to 70 HRC
		Bend	ASTM A 370: 2017 ASTM A 480: 2017 ASTM E 290: 2014 IS 1599: 2012 (RA 2017)	Qualitative (Mandrel diameter in mm: 6, 7, 8, 9, 9.5, 10, 12, 14, 16, 18, 20, 24, 25)
II.	**METALLOGRAPHY TEST**			
1.	**Austenitic stainless steel**	Estimation of grain size by Microscopic comparison method	ASTM E-112: 2013 IS 4748: 2009	ASTM No. 1.0 to 10.0 at 100 X
		Non metallic Inclusion Rating -Method A & E	ASTM E-45-2013 IS 4163: 2004	A,B,C,D (Thin & Thick) 0.5 to 3.0 at 100X
		Intergranular test Practice A Practice E	ASTM A 262: 2015 IS 10461 (Part 2): 1994 (RA 2007)	Qualitative 250X 500X 1T/180° Etching area upto 190mm^2
		Intergranular corrosion Method A	ISO 3651-2-1998	1T/180° (Qualitative)

Sreeram Pinnamaraju
Convenor

N. Venkateswaran
Program Director