MILL TEST CERTIFICATE

Anjar Works

JSW Steel Limited

SURVEY NO - 659, VILLAGE - VARSAMEDI, TA. - ANJAR (KUTCH) GUJARAT INDIA - 370110

IS- 2062
CM/L- 7945703

TEST CERTIFICATE NO. : JSW/PCMD/717485008
DATE : 30.12.2024

CUSTOMER : MOUNTING RENEWABLE POWER LIMITED
P. O. NO. : MRPL STEEL 2024 IN P Date - 24.10.2024
SPECIFICATION : EN 10025-2 : 2019 / IS 2062 : 2011
GRADE : S355J0+N / E350B0
UT STD. : EN10160 S2 E3
Impact Temp.(°C) : 0

Sr. No.	Plate / Coil No.	Heat No.	Thk (MM)	Width (MM)	Length (MM)	Weight (MT)	Mechanical Properties (Transverse Tensile) 1 YS* (MPa)	1 UTS (MPa)	1 %EL 5.65√a	1 %RA	2 YS* (MPa)	2 UTS (MPa)	2 %EL 5.65√a	2 %RA	Bend (Transverse)	CHARPY V-NOTCH IMPACT TEST (Joules) Longitudinal 1	2	3	AVG	Grain size (ASTM E112)	Z - Direction Test (Through Thickness) 1	2	3	AVG	Y Groove Crackability Test				NDTT	Remarks
Specified Requirement						**Min**	**355**	**490**	**22**	**---**	**355**	**490**	**22**	**---**	**≤25-2T, >25-NA**		**---**		**27**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
						Max	**---**	**630**	**---**	**---**	**---**	**630**	**---**	**---**			**---**		**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
1	24LP0383A1	B035276	32.50	2980	14051	10.683	399	554	27	---	405	572	26	---	---	236	241	259	245	---	---	---	---	---	---	---	---	---	---	---	---
2	24LP0631A1	A036588	21.50	2980	14151	7.117	434	537	31	---	428	531	32	---	OK	224	194	199	206	---	---	---	---	---	---	---	---	---	---	---	---
3	24LP0650B1	B035105	15.20	2982	12725	4.528	434	569	27	---	423	562	22	---	OK	208	233	257	233	---	---	---	---	---	---	---	---	---	---	---	---
4	24LP0696B1	B035065	17.00	2421	14048	4.539	422	549	25	---	407	551	26	---	OK	217	220	168	202	---	---	---	---	---	---	---	---	---	---	---	---
5	24LP0737A1	A036646	25.60	2980	14051	8.415	425	550	29	---	416	542	30	---	---	224	216	200	213	---	---	---	---	---	---	---	---	---	---	---	---
6	24LP0817B1	A035215	15.60	2982	13436	4.907	451	569	28	---	436	567	27	---	OK	156	142	129	142	---	---	---	---	---	---	---	---	---	---	---	---

Chemical Composition (%)

HEAT ANALYSIS	Heat No.	C	Mn	S	P	Si	Cr	Ni	Cu	Ti	V	Nb	Mo	Al	N	Ca	B	Nb+Ti+V	Cu+Ni	Cr+Mo+Cu+Ni	Al/N	CE**	Pcm
Specified Requirement	**Min**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**0.020**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
	Max	**0.200**	**1.600**	**0.030**	**0.030**	**0.550**	**---**	**---**	**0.550**	**---**	**---**	**---**	**---**	**---**	**0.0120**	**---**	**---**	**0.250**	**---**	**---**	**---**	**0.45**	**---**
	B035276	0.155	1.410	0.002	0.017	0.230	0.019	0.008	0.016	0.019	0.005	0.025	0.001	0.049	0.0060	0.0010	0.0000	0.049	0.024	0.044	8.17	0.40	0.24
	A036588	0.156	1.370	0.004	0.018	0.183	0.014	0.005	0.010	0.017	0.005	0.027	0.001	0.045	0.0070	0.0020	0.0000	0.049	0.015	0.030	6.43	0.39	0.23
	B035105	0.157	1.350	0.003	0.018	0.201	0.030	0.009	0.010	0.018	0.005	0.030	0.004	0.050	0.0060	0.0010	0.0000	0.053	0.019	0.053	8.33	0.39	0.23
	B035065	0.150	1.370	0.004	0.018	0.189	0.029	0.014	0.009	0.022	0.002	0.028	0.006	0.050	0.0060	0.0010	0.0000	0.052	0.023	0.058	8.33	0.39	0.23
	A036646	0.164	1.370	0.001	0.015	0.195	0.028	0.007	0.014	0.018	0.005	0.025	0.001	0.050	0.0060	0.0010	0.0000	0.048	0.021	0.050	8.33	0.40	0.24
	A035215	0.156	1.366	0.002	0.018	0.203	0.018	0.007	0.008	0.020	0.004	0.026	0.001	0.045	0.0060	0.0010	0.0000	0.050	0.015	0.034	7.50	0.39	0.23

PRODUCT ANALYSIS	Heat No.	C	Mn	S	P	Si	Cr	Ni	Cu	Ti	V	Nb	Mo	Al	N	Ca	B	Nb+Ti+V	Cu+Ni	Cr+Mo+Cu+Ni	Al/N	CE**	Pcm
Specified Requirement	**Min**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**0.020**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
	Max	**0.200**	**1.600**	**0.030**	**0.030**	**0.550**	**---**	**---**	**0.550**	**---**	**---**	**---**	**---**	**---**	**0.0120**	**---**	**---**	**0.250**	**---**	**---**	**---**	**0.45**	**---**
	B035276	0.152	1.397	0.002	0.017	0.226	0.019	0.008	0.016	0.019	0.005	0.025	0.001	0.048	0.0059	0.0010	0.0001	0.049	0.024	0.044	8.14	0.39	0.23
	A036588	0.159	1.377	0.004	0.018	0.187	0.014	0.005	0.010	0.017	0.005	0.028	0.001	0.046	0.0074	0.0020	0.0002	0.050	0.015	0.030	6.48	0.39	0.24
	B035105	0.154	1.337	0.003	0.018	0.197	0.029	0.009	0.010	0.018	0.005	0.029	0.004	0.049	0.0059	0.0010	0.0000	0.052	0.019	0.052	8.31	0.39	0.23
	B035065	0.147	1.358	0.004	0.018	0.186	0.028	0.014	0.009	0.022	0.002	0.027	0.006	0.049	0.0059	0.0010	0.0001	0.051	0.023	0.057	8.31	0.38	0.22
	A036646	0.162	1.355	0.001	0.015	0.192	0.028	0.007	0.014	0.018	0.005	0.025	0.001	0.049	0.0059	0.0010	0.0000	0.048	0.021	0.050	8.31	0.40	0.24
	A035215	0.160	1.373	0.002	0.018	0.208	0.018	0.007	0.008	0.020	0.004	0.027	0.001	0.046	0.0061	0.0010	0.0002	0.051	0.015	0.034	7.54	0.39	0.24

IT IS CERTIFIED THAT THE MATERIAL DESCRIBED ABOVE FULLY CONFIRM TO EN 10025-2:2019 & EQUIVALENT TO IS 2062:2011.
CHEMICAL COMPOSITION & MECHANICAL PROPERTIES OF THE PRODUCT AS TESTED IN ACCORDANCE WITH THE SCHEME OF TESTING AND INSPECTION CONTAINED IN BIS CERTIFICATION MARKS LICENCE NO. CM/L-7945703 ARE AS INDICATED ABOVE AGAINST EACH ORDER NO.
PLAESE REFER TO EN 10025-2:2019 & IS 2062:2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS.

Note :
1) Test Certificate confirms to EN 10204 : 2004 Type 3.1
2) Process Route : SLAB (BOF-LHF-RH-CCM-Fully Killed(Al&Si Killed))-Hot Rolling.
3) Supply Condition : Normalized rolled
4) Mechanical Properties are certified at Room Temperature unless specified.
5) Ultrasonic Test are satisfactory as per : EN10160 S2 E3
6) Dimensions are satisfactory as per EN10029:2010 Class B,Table - 1,2,3
7) Surface condition as per EN10163-2 Class B,Subclass-3,
8) Weight calculation for plates is as per Theoretical Calculation

Legend : YS : Yield Strength, UTS :Ultimate Tensile Strength, EL : % Elongation, RA : Reduction in Area, Thk : Thickness, NDTT: Nil Ductility Transition Test, Min : Minimum, Max : Maximum, NA: Not Applicable, S: Simulated Post-weld Heat Treatment Test,Sat : Satisfactory,WBBT-Weld bead bend test YS*=t≤16-355, 16<t≤40-345, 40<t≤63=335,63<t≤80=325, CE= 0.47 for t>30 mm**

DEE Forum India Private Limited QA/QC

(Quality Assurance & Control Dept)

AUTHORISED SIGNATORY

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