Anjar Works

MILL TEST CERTIFICATE

JSW Steel Limited

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

IS- 2062
CM/L- 7945703

TEST CERTIFICATE NO. : JSW/PCMD/717472719
DATE : 29.12.2024

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	24LP0366A1	B035370	33.00	2980	14051	10.847	430	535	27	---	422	531	28	---	---	281	266	243	263	---	---	---	---	---	---	---	---	---	---	---
2	24LP0522A1	A034379	17.50	2980	14051	5.752	396	511	29	---	397	514	31	---	OK	194	228	221	214	---	---	---	---	---	---	---	---	---	---	---
3	24LP0543A1	B036311	21.50	2980	14151	7.117	409	536	24	---	426	552	28	---	OK	342	327	348	339	---	---	---	---	---	---	---	---	---	---	---
4	24LP0685A1	A036351	24.50	2980	14051	8.053	413	548	24	---	423	548	27	---	OK	247	223	265	245	---	---	---	---	---	---	---	---	---	---	---
5	24LP0693A1	A036588	24.50	2980	14151	8.110	434	537	31	---	428	531	32	---	OK	224	194	199	206	---	---	---	---	---	---	---	---	---	---	---

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**	**---**
	B035370	0.135	1.430	0.003	0.015	0.208	0.022	0.011	0.011	0.026	0.003	0.034	0.001	0.055	0.0050	0.0020	0.0000	0.063	0.022	0.045	11.00	0.38	0.22
	A034379	0.147	1.360	0.004	0.011	0.182	0.016	0.005	0.009	0.017	0.004	0.026	0.001	0.042	0.0050	0.0020	0.0000	0.047	0.014	0.031	8.40	0.38	0.22
	B036311	0.162	1.370	0.001	0.017	0.197	0.028	0.011	0.020	0.021	0.005	0.026	0.001	0.050	0.0060	0.0010	0.0000	0.052	0.031	0.060	8.33	0.40	0.24
	A036351	0.160	1.360	0.003	0.012	0.194	0.020	0.007	0.010	0.020	0.005	0.025	0.001	0.044	0.0050	0.0010	0.0000	0.050	0.017	0.038	8.80	0.39	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

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**	**---**
	B035370	0.134	1.416	0.003	0.015	0.206	0.022	0.011	0.011	0.026	0.003	0.034	0.001	0.054	0.0049	0.0020	0.0000	0.063	0.022	0.045	11.02	0.38	0.21
	A034379	0.150	1.367	0.004	0.011	0.186	0.016	0.005	0.009	0.017	0.004	0.027	0.001	0.043	0.0058	0.0020	0.0000	0.048	0.014	0.031	8.43	0.38	0.23
	B036311	0.159	1.358	0.001	0.017	0.193	0.027	0.011	0.020	0.021	0.005	0.026	0.001	0.049	0.0059	0.0010	0.0001	0.052	0.031	0.059	8.31	0.39	0.24
	A036351	0.157	1.348	0.003	0.012	0.191	0.020	0.007	0.010	0.020	0.005	0.025	0.001	0.043	0.0049	0.0010	0.0001	0.050	0.017	0.038	8.78	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	0.0071	0.0020	0.0002	0.050	0.015	0.030	6.48	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

Printed on: : 29.12.2024