SLR Metaliks Limited

Sy.No.632, Narayanadevarakere, H.B.Halli, Tq. Bellary District, 583 222

SLR metaliks Powered by Passion

TEST CERTIFICATE

CUSTOMER NAME	PROCESS ROUTE	BLOOM SIZE (mm)	SUPPLY CONDITION	TC NO.	DATE
M/S SSB ENGINEERS PVT	MBF-EOF-LRF-VD-CCM-EMS-AMLC-RMS	200x200	As Rolled	25010424	11.01.2025

CUSTOMER SPECIFICATION	HEAT NO.	GRADE	SIZE (mm)	REDUCTION RATIO	LENGTH (mm)	COLOUR CODE	INVOICE NO.	QTY (MT)	BUNDLE	VEHICLE NO.
QF 1001, Rev3, Dtd 14.06.2024	53030	16MNCR5	80 DIA	7.96:1	5500 TO 6000MM	PINK + GREEN	SE24Y-13367	8.370	5	JH05DJ9679

I. CHEMICAL COMPOSITION

%	C	Si	Mn	P	S	Cr	Mo	Ni	Al	-	V	Ti	Cu	B	Nb	Ca	As	Sb	Sn	Pb	W	Bi	Co	Zr	AlN2Ratio	H2 (ppm)	N2 (ppm)	O2 (ppm)	-	-	-	-	-	-	-	-
Min	0.130	0.150	1.000	-	0.015	0.800	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	60.0	-	-	-	-	-	-	-	-
Max	0.180	0.400	1.300	0.020	0.030	1.100	0.100	0.300	0.050	-	-	-	0.300	0.0005	-	0.0010	-	-	-	-	-	-	-	-	-	2.50	120.0	20.0	-	-	-	-	-	-	-	-
Actual	0.177	0.264	1.230	0.011	0.027	1.040	0.010	0.015	0.026	-	0.006	0.0032	0.018	0.0004	0.0009	0.0005	0.0010	0.0001	0.0005	0.0010	0.0001	0.0001	0.0067	0.001	3.8	1.81	69.3	15.2	-	-	-	-	-	-	-	-

II. PHYSICAL PROPERTIES

	TENSILE PROPERTIES (Quenched & Tempered) (ASTM A370)				IMPACT TEST (Charpy) (ASTM E23) (Quenched & Tempered)	HARDNESS		
	YS (MPa)	UTS (Mpa)	% EL	-	(RT) V-Notch (2mm) (Joules)		As Rolled (BHN)	
Min	735	1030	8	-	25	Min	-	-
Max	-	1370	-	-	-	Max	260	-
Actual	1047	1163	16.2	-	36.4	Actual	162-166	-

III. JOMINY HARDENABILITY (in HRC)

(Distance Unit: mm) (Standard : IS 3848)

	J1.5	J5	J10	J15	J20	J25	J30	-	-	-	-	-	-	-	-	-
Min	39.0	35.0	29.0	25.0	22.5	21.0	20.0	-	-	-	-	-	-	-	-	-
Max	44.0	39.0	35.5	31.5	29.0	27.5	26.5	-	-	-	-	-	-	-	-	-
Actual	42.0	37.8	29.5	26.9	24.0	22.0	20.9	-	-	-	-	-	-	-	-	-

IV. METALLOGRAPHY

	INCLUSION RATING (ASTM E45 Method A)									INCLUSION RATING (As per DIN 50602)			GRAIN SIZE	TOTAL DECARB (mm)
	A		B		C		D		DS	-				
	T	H	T	H	T	H	T	H		S	O	S+O	(ASTM E112)	ASTM E-1077
Spec	2.0	1.5	2.0	1.0	0.5	0.5	1.0	1.0	-	-	-	-	5-8	0.60 Max
Actual	1	0.5	0.5	0	0	0	0.5	0.5	-	-	-	-	7	0.24

V. OTHER TESTS

MACROSTRUCTURE	STEP DOWN	UPSET
C2,S3,R3 Max	-	-
Better Than C2R2S2	OK	-

100% Bars Checked by UT - Found OK

100% Bars Checked by MPI - Found OK & Material is free from surface defects

100% Bars checked for Mix-Up by PMI & Spark - Found OK

Material is free from Radioactive contamination

VI. REMARKS:

1. Dimension tolerence: as per IS 3739 Grade - 1
2. Microstructure: Uniform Ferrite + Pearlite
3. Banding is Ok As per UNI 8449:1983 Grade IV.
4. 100% MPI done as per ASTM E1444-12 & found Ok.
5. 100% UT done as per ASTM A388 & found Ok.
6. The material is comply with ROHS (Pb,Cd,Hg,Cr+6) permissible limits.
7. Material is conforming to the customer specification.
8. Inspection Certificate as per EN10204:2004, type 3.1

S B ENGINEERS (P) LTD METALLURGIST 14/11/24

Anil Kumar B V		NAVEEN M		Ranjan Das
Prepared By		Reviewed & Issued By		Authorised Signatory