SLR METALIKS LIMITED

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

RNS-SLRM

TEST CERTIFICATE

CUSTOMER NAME	PROCESS ROUTE			BLOOM SIZE (mm)	SUPPLY CONDITION		TC NO.	INVOICE NO.	DATE
M/S SSB ENGINEERING PVT	MBF-EOF-LRF-VD-CCM-EMS-AMLC-RMS			200x200	As Rolled		25030359	SE24Y-16625	08-Mar-2025
CUSTOMER SPECIFICATION	HEAT NO.	GRADE	SIZE (mm)	REDUCTION RATIO	LENGTH (meter)	COLOUR CODE	QUANTITY (MT)	BUNDLE	VEHICLE NO.
Refer Remarks	54466	35CRMN5	60 DIA	14.15:1	5.50 - 6.00	ORANGE	32.420	16	RJ02GC5355

1. 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	AlN2 Ratio	H2 (ppm)	N2 (ppm)	O2 (ppm)
Min	0.330	0.150	0.800	-	0.015	1.000	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.100	-	60.0	-
Max	0.400	0.400	1.100	0.020	0.030	1.300	0.100	0.300	0.050	-	-	-	0.300	0.0005	-	0.0010	-	-	-	-	-	-	-	-	-	2.50	120.0	20.0
Actual	0.378	0.260	1.080	0.013	0.024	1.264	0.007	0.018	0.034	-	0.006	0.0035	0.018	0.0003	0.0008	0.0007	0.0010	0.0001	0.0007	0.0010	0.0001	0.0001	0.0056	0.001	4.150	1.16	82.4	13.9

2. PHYSICAL PROPERTIES

	TENSILE PROPERTIES (Quenched & Tempered) ASTM E8M				IMPACT TEST -	HARDNESS		
	YS MPa	UTS Mpa	% EL	-			As Rolled (BHN)	
Min	685	880	12	-	-	Min	-	-
Max	-	1080	-	-	-	Max	240	-
Actual	970	1065	19.5	-	-	Actual	209-215	-

3. JOMINY HARDENABILITY (in HRC)

JOMINY DISTANCE UNIT: mm (STANDARD: -)

	J1.5	J3	J5	J7	J9	J11	J13	J15	J20	J25	J30	-	-
Min	52.5	52.0	51.0	50.0	47.5	45.5	44.0	42.5	39.5	37.5	36.0	-	-
Max	58.0	58.0	57.0	56.0	55.0	54.0	54.0	53.0	50.0	48.0	46.0	-	-
Actual	57.5	56.2	55.7	54.0	52.5	52.0	49.1	48.3	44.2	41.6	39.3	-	-

4. METALLOGRAPHY

	INCLUSION RATING (ASTM E45-13)									DIN RATING (As Per DIN 50602)			GRAIN SIZE	TOTAL DECARB
	A		B		C		D		DS	-				(%)
	T	H	T	H	T	H	H	H		S	O	S+O	(ASTM E112)	SAE J419
Spec	2.0	1.5	2.0	1.0	0.5	0.5	1.0	1.0	-	-	-	-	5-8	0.6%of dia Max
Actual	1.5	0.5	0.5	0	0	0	1.0	0	-	-	-	-	8	0.20

5. OTHER TESTS

MACRO-STRUCTURE	STEP DOWN	UPSET
(ASTM E-381)	(IS 4075)	-
C2,S2,R2 Max	-	-
Better Than C2R2S2	OK	-

100% Bars Checked by UT - Found OK

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

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

Material is free from radioactive contamination

6. REMARKS

1. Dimension tolerence: as per IS 3739 Grade - 1
2. Microstructure: Uniform Ferrite + Pearlite
3. The material is comply with ROHS (Pb,Cd,Hg,Cr+6) permissible limits.
4. Material is conforming to the customer specification.
5. Inspection Certificate as per EN10204:2004, type 3.1
6. TDS No. 01, Rev No. 01, Rev date 07.03.2021
7. (Ref Std: DANA QF 1001, Rev 03, Date 14.06.2024)

Arshad Khan
Prepared By

Mruthyunjaya
Reviewed & Issued By

S.S.B ENGINEERS (P.) LTD. METALLURGIST DATE 11/3/25 ALWAR (RAJ.)

Prakash Angadi
Authorised Signatory