



# SLR METALIKS LIMITED

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

## TEST CERTIFICATE



RNS-SLRM

CUSTOMER NAME		PROCESS ROUTE		BLOOM SIZE		SUPPLY CONDITION				TC NO.		INVOICE NO.		DATE																
M/S SSB ENGINEERS PVT.LTD.		MBF-EOF-LRF-VD-CCM(EMS-AMLO)-RMS		200x200		As Rolled				25030094		SE24Y-16358		03-Mar-2025																
CUSTOMER SPECIFICATION				HEAT NO.	GRADE	SIZE (mm)	REDUCTION RATIO	LENGTH (mm)	COLOUR CODE	QUANTITY (MT)	BUNDLE	VEHICLE NO.																		
Refer Remarks				54445	20MNCR5	70 DIA	10.39:1	5500 TO 6000	Yellow + Brown	5.270	03	RJ19CF 5010																		
1. CHEMICAL COMPOSITION																														
%	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Alsol	V	Ti	Cu	B	Nb	Ca	As	Sb	Sn	Pb	W	Bi	Co	Zr	AlN2 Ratio	H2 (ppm)	N2 (ppm)	O2 (ppm)		
Min	0.150	0.150	1.000	-	0.015	1.000	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.100	-	60.0	-	
Max	0.200	0.400	1.300	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	0.183	0.241	1.230	0.015	0.022	1.230	0.006	0.018	0.027	0.024	0.007	0.0031	0.018	0.0004	0.0007	0.0006	0.0020	0.0001	0.0009	0.0010	0.0001	0.0001	0.0056	0.001	3.100	1.21	87.2	15.1		
2. PHYSICAL PROPERTIES																3. JOMINY HARDENABILITY (in HRC)														
TENSILE PROPERTIES (Quenched & Tempered) ASTM A370						IMPACT TEST ASTM E23		HARDNESS				JOMINY DISTANCE UNIT: mm (STANDARD: IS 3848)																		
						(Charpy) (V-Notch 2mm) Joules																								
								As Rolled (BHN)																						
YS MPa	UTS MPa			% EL		% RA																								
Min	930	1230		7		-		25				Min 41.0 38.0 32.0 29.0 27.0 25.5 24.5 - - - - -																		
Max	-	1570		-		-		240				Max 46.0 44.0 38.5 35.5 33.5 32.0 31.0 - - - - -																		
Actual	1130	1245		17.5		45.2		Actual 163-168				Actual 43.3 41.6 33.7 31.3 28.3 26.3 25.2 - - - - -																		
4. METALLOGRAPHY																5. OTHER TESTS														
INCLUSION RATING (ASTM E45 Method A)						DIN RATING (As Per DIN 50602)				GRAIN SIZE		TOTAL DECARB (mm)		MACRO-STRUCTURE		STEP DOWN		UPSET		1. 100% Bars Checked by UT - Found OK										
																				2. 100% Bars Checked by MPI - Found OK & free from surface defects										
A		B		C		D		DS												100% Bars checked for Mix-Up by PNil & Spark - Found OK										
T	H	T	H	T	H	H	H	H		S	O	S+O	(ASTM E112)	ASTM E-1077	(ASTM E-381)	(IS 4075)	-	-	-	Material is free from radioactive contamination										
Spec	2.0	1.5	2.0	1.0	0.5	0.5	1.0	1.0	-	-	-	-	5-8	0.60mm Max	C2,R3,S3 Max	-	-	-	-											
Actual	1.0	0	0.5	0	0	0	0.5	0.0	-	-	-	-	7	0.20	Better Than C2R2S2	OK	-	-	-											
6. REMARKS																														
1. Cust Spec DANA Specifications QF1001, Rev No.03, Dtd: 14.06.2024																6. Material is conforming to the customer specification.														
2. Dimension tolerance: as per IS 3739 Grade - 1																7. Inspection Certificate as per EN10204:2004, type 3.1														
3. Microstructure: Uniform Ferrite + Pearlite																														
4. Banding is Ok As per UNI 8449																														
5. The material is comply with ROHS (Pb,Cd,Hg,Cr+6) permissible limits.																														
Divakar H Prepared By																Malleesh Naik M Reviewed & Issued By														
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