

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



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										24110813		21.11.2024		
CUSTOMER SPECIFICATION										HEAT NO.		GRADE		SIZE (mm)		REDUCTION RATIO		LENGTH (mm)		COLOUR CODE		INVOICE NO.		QTY (MT)		BUNDLE		VEHICLE NO.								
DANA Specifications QF1001, Rev No.02, Dtd: 12.05.2020										51964		20MNCRS		70 DIA		10.39:1		5910+40		Yellow + Brown		SE24Y-10423		36.500		17		RJ53GA064								
L 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	AN2Ra66	H2 (ppm)	N2 (ppm)	O2 (ppm)	-	-	-	-	-	-	-	
Min	0.150	0.150	1.000	-	0.015	1.000	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Actual	0.195	0.240	1.200	0.013	0.021	1.270	0.011	0.017	0.030	-	0.007	0.0033	0.019	0.0003	0.0009	0.0005	0.0010	0.0001	0.0001	0.0010	0.0001	0.0001	0.0050	0.001	4.0	1.23	75.1	15.4	-	-	-	-	-	-	-	
II. PHYSICAL PROPERTIES															III. JOMINY HARDENABILITY (in HRC)																					
TENSILE PROPERTIES (Quenched & Tempered) (ASTM A370)										IMPACT TEST (Charpy)					HARDNESS					(Distance Unit: mm) (Standard: ASTM A255)																
YS (MPa)		UTS (MPa)		% EL		% RA		V-Notch (2mm) (Joules)		As Rolled (BHN)																										
Min	930	1230		7		-		25		Min	-																									
Max	-	1570		-		-		-		Max	240																									
Actual	1042	1247		15.2		43.1		37.2		Actual	165-171																									
IV. METALLOGRAPHY															V. OTHER TESTS																					
INCLUSION RATING (ASTM E45 Method A)										INCLUSION RATING (As per DIN 50602)			GRAIN SIZE		TOTAL DECARB (mm)		MACROSTRUCTURE		STEP DOWN		UPSET		100% Bars Checked by UT - Found OK													
A		B		C		D		DS		S		O		S + O		(ASTM E112)		ASTM E-1077		(ASTM E-381)		(IS 4075)		-		100% Bars Checked by MPI - Found OK & Material is free from surface defects										
Spec	2.0	1.5	2.0	1.0	0.5	0.5	1.0	1.0	-	-	-	-	-	-	-	5-8	0.60 Max	C2,R3,S3 Max		-		-		-		100% Bars checked for Mix-Up by PMI & Spark - Found OK										
Actual	1.0	0.5	0.5	0	0	0	0.5	0	-	-	-	-	-	-	-	7	0.24	Better Than C2R2S2		OK		-		-		Material is free from Radioactive contamination										
VI. REMARKS:																																				
Dimension tolerance: as per IS 3739 Grade - 1																																				
Microstructure: Uniform Ferrite + Pearlite																																				
Banding is OK As per UNI B449																																				
The material is comply with ROHS (Pb,Cd,Hg,Cr+6) permissible limits.																																				
Material is conforming to the customer specification.																																				
Inspection Certificate as per EN10204:2004, type 3.1																																				
Arshad Khan Prepared By										NAVEEN M Reviewed & Issued By										Ranjan Das Authorised Signatory																