

**TEST CERTIFICATE**



RNS-SLRM

CUSTOMER NAME	PROCESS ROUTE	BLOOM SIZE (mm)	SUPPLY CONDITION	TC NO.	INVOICE NO.	DATE
N/S SSB ENGINEERS PVT.LTD.	MBF-EOF-LRF-VD-COM(EMS-AMLC)-RMS	200x200	As Rolled	25040434	SE25Y-20517	14-Apr-2025
CUSTOMER SPECIFICATION	HEAT NO.	GRADE	SIZE (mm)	REDUCTION RATIO	LENGTH (meter)	COLOUR CODE
DANA Specifications QF1001, Rev No.03, Dtd: 14.06.2024	55196	20MNCR5	80 DIA	7.96:1	5.50 - 6.00	Yellow + Brown
QUANTITY (MT)	QUANTITY (MT)	BUNDLE	VEHICLE NO.			
4.810			03			

1. CHEMICAL COMPOSITION																	
%	C	Si	Mn	P	S	Cr	Mo	Ni	Al	V	Ti	Cu	B	Nb	Ca	As	Sb
Mln	0.150	0.150	1.000	-	0.015	1.000	-	-	0.020	-	-	-	-	-	-	-	-
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	0.180	0.270	1.230	0.014	0.019	1.220	0.011	0.022	0.031	0.007	0.0031	0.018	0.0004	0.0011	0.0006	0.0010	0.0012
3. JOMINY HARDENABILITY (in HRC)																	
JOMINY DISTANCE UNIT: mm (STANDARD: IS 3848)	J1.5	J5	J10	J15	J20	J25	J30	-	-	-	-	-	-	-	-	-	-
Actual	43.0	41.0	33.0	29.6	28.1	26.3	25.4	-	-	-	-	-	-	-	-	-	-

2. PHYSICAL PROPERTIES									
TENSILE PROPERTIES (Quenched & Tempered) ASTM A370					IMPACT TEST ASTM E23				
YS MPa	UTS MPa	% EL	% RA	(Charpy) (V-Notch 2mm) Joules	HARDNESS				
Mln	930	1230	7	-	As Rolled (BHN)				
Max	-	1570	-	-	Min				
Actual	1152	1261	15	45.5	Max				
					Actual				

4. METALLOGRAPHY									
INCLUSION RATING (ASTM E45 Method A)					DIN RATING (As Per DIN 50602)				
A	B	C	D	DS	GRAIN SIZE				
T	H	T	H	H	S				
Spec	2.0	1.5	2.0	1.0	0.5	1.0	1.0	-	-
Actual	1.5	0.0	0.5	0.0	0.0	1.0	0.0	-	-

5. OTHER TESTS									
1. 100% Bars Checked by UT - Found OK					2. 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 tolerance: as per IS 3739 Grade - 1					6. Inspection Certificate as per EN10204:2004, type 3.1				
2. Microstructure: Uniform Ferrite + Pearlite									
3. Barding is Ok As per UNI 8449									
4. The material is comply with ROHS (Pb,Cd,Hg,Cr+6) permissible limits.									
5. Material is conforming to the customer specification.									
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