

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-AMLC-RMS				200x200		As Rolled				25021251		SEP24Y-15638		22-Feb-2025																													
CUSTOMER SPECIFICATION				HEAT NO.		GRADE		SIZE (mm)		REDUCTION RATIO		LENGTH (mm)		COLOUR CODE		QUANTITY (MT)		VEHICLE NO.																													
TDS No.01, Rev No.01,Rev date:07.03.2021(Ref Std: DANA QF 1001, Rev-03,Date 14.0				54187		35CRMN5		70 DIA		10.39:1		5500 TO 6000 MM		ORANGE		31.850		JH05DK0399																													
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	0.330	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	0.367	0.260	1.070	0.012	0.025	1.242	0.011	0.018	0.032	0.029	0.006	0.0037	0.017	0.0001	0.0006	0.0006	0.0010	0.0001	0.0001	0.0010	0.0001	0.0001	0.0057	0.001	4.160	1.39	77.2	14.1																			
2. PHYSICAL PROPERTIES																		3. JOMINY HARDENABILITY (in HRC)																													
TENSILE PROPERTIES (Quenched & Tempered) ASTM B8						IMPACT TEST						HARDNESS						JOMINY DISTANCE UNIT: mm (STANDARD: -)																													
YS MPa	UTS MPa	% EL		-		As Rolled (BHN)						J1.5						J3	J5	J7	J9	J11	J13	J15	J20	J25	J30	-		-																	
Min	685	880	12	-		Min						52.5						52.0	51.0	50.0	47.5	45.5	44.0	42.5	39.5	37.5	36.0	-		-																	
Max	-	1080	-	-		Max						58.0						58.0	57.0	56.0	55.0	54.0	53.0	50.0	48.0	46.0	-		-																		
Actual	965	1045	21.4	-		Actual						212-217						-	Actual	57.5	56.6	55.7	54.2	52.3	51.8	50.5	46.3	44.0	40.7	38.5	-																
4. METALLOGRAPHY																		5. OTHER TESTS																													
INCLUSION RATING (ASTM E45-13)						DIN RATING (As Per DIN 50602)						GRAIN SIZE						TOTAL DECARB (%)						MACRO-STRUCTURE						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																	
T	H	T	H	T	H	H	H															(ASTM E-381)		(IS 4075)						100% Bars checked for Mix-Up by PMI & Spark - Found OK																	
Spec	2.0	1.5	2.0	1.0	0.5	0.5	1.0	1.0													0.6%of dia Max		C2,S2,R2 Max		-				Material is free from radioactive contamination																		
Actual	1.0	0.5	0.5	0.0	0.0	0.0	0.5	0.0													7		0.21		Better Than C2R2S2																						
6. REMARKS																		6. TDS No. 01, Rev No. 01, Rev date 07.03.2021 (Ref Std: DANA QF 1001, Rev 03, Date 14.06.2024)																													
1. Dimension tolerance: 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																																															
Anil Kumar B V Prepared By				Prashant Reviewed & Issued By				Prashant Angadi Authorised Signatory																																							