

# TEST CERTIFICATE



RNS-STRM

CUSTOMER NAME	PROCESS ROUTE			BLOOM SIZE (mm)	SUPPLY CONDITION		T/C NO.	INVOICE NO.	DATE
M/S SSB ENGINEERING PVT	MBF-EOF-LRF-VD-CGM-EMS-AMLC-RMS			200x200	As Rolled		25030197	SE24Y-11462	05-Mar-2025
CUSTOMER SPECIFICATION	HEAT NO.	GRADE	SIZE (mm)	REDUCTION RATIO	LENGTH (meter)	COLOUR CODE	QUANTITY (MT)	BUNDLE	VEHICLE NO.
Refer Remarks	54465	35CRMN5	70 DIA	10.39:1	5.50 - 6.00	ORANGE	23.030	11	JH65DJ0699

## 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	Al/Ni Ratio	H <sub>2</sub> (ppm)	N <sub>2</sub> (ppm)	O <sub>2</sub> (ppm)	
%	0.330	0.150	0.800	-	0.015	1.000	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.100	-	60.0	-
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	0.381	0.255	1.060	0.011	0.023	1.270	0.009	0.018	0.025	-	0.007	0.0039	0.020	0.0003	0.0007	0.0006	0.0010	0.0001	0.0005	0.0010	0.0001	0.0001	0.0055	0.001	3.160	1.35	79.3	14.1	

## 2. PHYSICAL PROPERTIES

TENSILE PROPERTIES (Quenched & Tempered) ASTM E8M				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	-	-
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	240	58.0	58.0	57.0	56.0	55.0	54.0	54.0	53.0	50.0	48.0	46.0	-	-
Actual	974	1051	20.9	-	Actual	210-218	57.0	56.1	55.2	54.1	53.3	52.3	50.9	50.1	46.2	44.5	42.3	-	-

#### 4. METALLOGRAPHY

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		-								
T	H	T	H	T	H	T	H	S	O	S+O	(ASTM E112)	SAE 1419 0.6% of dia Max	(ASTM E-381)	(IS 4075)	-	100% Bars Checked by MPI - Found OK & free from surface defects		
Spec	2.0	1.5	2.0	1.0	0.5	0.5	1.0	1.0	-	-	-	5-8	C2,S2,R2 Max	-	-	Material is free from radioactive contamination		
Actual	1.0	0.5	0.5	0	0	0	1.0	0	-	-	-	7.5	Better Than C2R2S2	OK	-			

## 6. REMARKS

1. Dimension tolerance: as per IS 3739 Grade - 1	6. TDS No. 01, Rev No. 01, Rev date 07.03.2021
2. Microstructure: Uniform Ferrite + Pearlite	7. (Ref Std: DANA QF 1001, Rev 03, Date 14.06.2024)
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	—

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