



**KALYANI STEELS LTD - HOSPET DIVISION**  
**Hospet Road, Ginigera - 583228 Taluka & Dist : Koppal, Karnataka.**  
**Telephone : 08539 - 286603-08 (6lines) Telefax : 08539 -286611**  
**TEST CERTIFICATE**

CUSTOMER : S S B ENGINEERS PVT LIMITED					PROCESS ROUTE			TC NO. K202254 DATE.29.03.2025		
					EOF-LRF-VD-CCM(EMS + AMLC)-R MILL			TRUCK NO:		
CUSTOMER SPECIFICATION NO	CUSTOMER P.O.NO.	HEAT NO	GRADE	SECTION ( IN mm )	COLOR CODE	SUPPLY CONDITION	LENGHT ( IN Mtrs. )	OVALITY ( IN mm )	NO.OF PIECES	QUANTITY
Q.F 1001,Rev 03,Date : 14.06.2024		K202254	40CRMO4	80 ROUND	FULL YELLOW	AS ROLLED	5 TO 6 MTR	AS PER IS 3739		

**CHEMICAL COMPOSITION**

	%C	%Si	%Mn	%P	%S	%Ni	%Mo	%Cr	%Cu	%Al	%Sn	%V	N <sub>2</sub> ppm	O <sub>2</sub> ppm	H <sub>2</sub> ppm	%Ti	CaPPM	Bppm	%As	%Sb	%Pb
REQ	0.380/0.450	0.150/0.400	0.600/0.900	0.035Max	0.020/0.040	0.300Max	0.150/0.250	0.900/1.200	0.300Max	0.020/0.050			60.0/120.0	15.0Max	2.00Max		10.000Max	5.000Max			
ACT	0.4290	0.1740	0.8450	0.0170	0.0200	0.0210	0.1610	1.1490	0.0130	0.0210			90.000	11.000	1.490		7.0000	1.0000			

**MECHANICAL PROPERTIES**

	TENSILE VALUES				IMPACT STRENGTH (IZOD/CHARPY)	HARDNESS (BHN)	JOMINY VALUES (HRC)											D.I. VALUE
	YS (NMM)	UTS (NMM)	%EL	%RA			J1.5mm	J3mm	J5mm	J7mm	J9mm	J11mm	J13mm	J15mm	J20mm	J25mm	J30mm	
REQ	835.00Min	1030.00/1230	10.00Min		25.00Min J		55.5/61	55.5/61	55/61	54/60	53.5/60	51.5/59	49.5/59	48/58	44/56	41/53	39.5/51	
ACT	878.00	1084.00	15.8		90.00 J		59.0	58.0	57.0	56.0	55.0	54.0	53.5	52.5	49.5	46.0	44.0	

**METALLURGICAL PROPERTIES**

	SPARK/ SPECTRAL TEST	STEP DOWN TEST	MACRO ETCH RESULTS(ASTM E-381)	INCLUSION RATING (ASTM - E - 45 ) Method 'A' Plate I(Worst Fields)								GRAIN SIZE (ASTM E-112)	SURFACE DEFECT LEVEL (mm)	CORE HARDNESS (OILQUENCH (HRC)	UPSET TEST RESULTS	TOTAL DEPTH OF DECARBURIZATION IN mm
				A		B		C		D						
				T	H	T	H	T	H	T	H					
REQ	OK	NA	C2R3S3Max	2.0	1.5	2.0	1.0	0.5	0.5	1.0	1.0	5 to 8	OK	NA	NA	0.60 mm Max
ACT	OK	NA	<C2/R3/S3	1.5	0.5	0.5	0.0	0.0	0.0	1.0	0.5	7.0	OK	NA	NA	0.38

REMARKS: 1.BLOOM SIZE:200X200MM2.REDUCTION RATIO:1:7.96. 2.MPI TEST:100% DONE & FOUND OK. 3.BANDING: OK, 4.MICROSTRUCTURE : OK. 4.ULTRASONIC TEST : 100% DONE & FOUND OK. 5."MATERIAL IS FREE FROM RADIOACTIVE ELEMENTS".																
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PREPARED BY

QF.NO.HS / QA/ 10.01 DG.Rev.01 Dtd : 23.02.2015

AUTHORISED SIGNATORY

K.POMESH(GM-QAD)