



KALYANI STEELS LTD - HOSPET DIVISION
Hospet Road, Ginigera - 583228 Taluk & Dist : Koppal, Karnataka.
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TEST CERTIFICATE



CUSTOMER : S S B ENGINEERS PVT LIMITED				Invoice.No: 9043037042		PROCESS ROUTE:				TC NO. K202252 DATE:29.03.2025									
CUSTOMER SPECIFICATION NO		HEAT NO		GRADE		SECTION (IN mm)		COLOR CODE		SUPPLY CONDITION		LENGTH (IN Mtrs.)		OVALITY (IN mm)		NO.OF PIECES		QUANTITY (MTS)	
Q.F: 1001,Rev 02, Date : 12.05.2020		K202252		40CRM04		70 ROUND		FULL YELLOW		AS ROLLED		5 TO 6 MTR		AS PER IS 3739		230		41.400	

CHEMICAL COMPOSITION

%C	%Si	%Mn	%P	%S	%Ni	%Mo	%Cr	%Cu	%Al	%Sn	%V	N ₂ ppm	O ₂ ppm	H ₂ ppm	%Ti	Ca ppm	B ppm	%As	%Sb	%Al ₂ O ₃
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 0.4280	0.2090	0.8530	0.0100	0.0260	0.0300	0.1650	1.1660	0.0120	0.0260			77.000	15.000	1.500		10.0000	1.0000			

MECHANICAL PROPERTIES

TENSILE VALUES				IMPACT		HARDNESS		JOMINY VALUES (HRC)										D.I.	
YS (NMM)	UTS (NMM)	%EL	%RA	STRENGTH (IZOD/CHARPY)		(BHN)		J1.5mm	J3mm	J5mm	J7mm	J9mm	J11mm	J13mm	J15mm	J20mm	J25mm	J30mm	VALUE
ReQ 835.00N/mm	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 872.00	1069.00	16.1		92.00 J				59.0	58.5	58.0	57.0	55.0	54.5	53.0	51.5	47.5	46.0	42.0	

METALLURGICAL PROPERTIES

SPARK/ SPECTRAL, TITEST	STEP DOWN TEST	MACRO ETCH RESULTS(ASTM E-381)	INCLUSION RATING (ASTM - E - 45)												GRAIN SIZE (ASTM E-112)	SURFACE DEFECT LEVEL (mm)	CORE HARDNESS (OILQUENCHII (HRC)	UPSET TEST RESULTS	TOTAL DEPTH OF DECARBURIZATION IN mm
			Method 'A' Plate I(Worst Fields)																
			A			B			C			D							
			T	H	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	1.0	5 to 8	OK	NA	NA	NA	0.60 mm Min		
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	NA	0.38			

REMARKS: 1. BLANK SIZE: 200X200MM2. REDUCTION RATIO: 1:10.39.

2. MPI TEST: 100% DONE & FOUND OK.

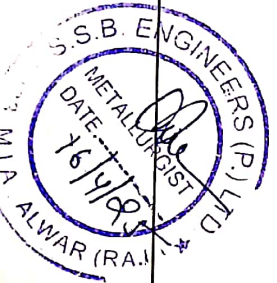
3. BANDING: OK, 4. MICROSTRUCTURE: OK.

4. ULTRASONIC TEST: 100% DONE & FOUND OK.

5. "MATERIAL IS FREE FROM RADIOACTIVE ELEMENTS".

PREPARED BY

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



AUTHORISED SIGNATORY

K.POMESH(Sr.GM-QAD)