



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



CUSTOMER : S S B ENGINEERS PVT LIMITED				Invoice.No: 9700005707		PROCESS ROUTE			TC NO. K196244 DATE.07.10.2024		
CUSTOMER SPECIFICATION NO				HEAT NO	GRADE	SECTION (IN mm)	COLOR CODE	SUPPLY CONDITION	LENGHT (IN Mtrs.)	OVALITY (IN mm)	NO.OF PIECES
Q F 1001,Rev 02,Date : 12.05.2020				K196244	40CRMO4	70 ROUND	FULL YELLOW	AS ROLLED	5 TO 6 METER	AS PER IS 3739	91
											QUANTITY (MTS)
											16.130

CHEMICAL COMPOSITION

	%C	%Si	%Mn	%P	%S	%Ni	%Mo	%Cr	%Cu	%Al	%Sn	%V	N ₂ ppm	O ₂ ppm	H ₂ 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	0.4190	0.1880	0.8590	0.0190	0.0250	0.0220	0.1560	1.1520	0.0120	0.0260			81.000	10.000	1.530		6.0000	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	874.00	1065.00	15.8		94.00 J	60.0	59.5	58.5	57.0	56.5	55.5	54.5	52.5	49.0	46.5	44.5	

METALLURGICAL PROPERTIES

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	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 Mx		
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		
5."MATERIAL IS FREE FROM S.A.D.I.C.H.I.E ELEMENTS"																		

5 "MATERIAL IS FREE FROM RADIOACTIVE ELEMENTS"

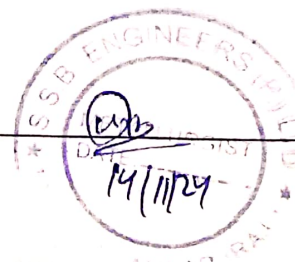
REMARKS 1 BLOOM SIZE 200X200MM2.REDUCTION RATIO 1:10.39.

2 MPI TEST:100% DONE & FOUND OK.

3 BANDING :OK, 4.MICROSTRUCTURE : OK.

4 ULTRASONIC TEST : 100% DONE & FOUND OK.

PREPARED BY



AUTHORISED SIGNATORY

K. POMEESH(Sr.GM-QAD)