

1427	SECTION: 70mm	HAET NO.: K196244	INVOICE NO.: 9043034606
20/10/24	STEEL SUPPLIER: Kalyani	REC.QTY.: 34780	INVOICE DATE: 23/10/2024
4035M04	STEEL TC NO.: K196244	NO. OF BARS: -	

Process / Mill Route	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Al	%Cu	%As	%Sb	%V	%Pb	%Ca	%Nb	%Ti	%B
0.36	0.6	0.15	0.02	-	0.9	-	0.15	0.02	0.02	-	-	-	-	-	-	-	-	-
0.45	0.9	0.4	0.04	0.035	1.2	0.3	0.25	0.05	0.3	-	-	-	-	-	10.0	-	-	5.0
0.419	0.83	0.188	0.025	0.019	1.152	0.022	0.156	0.066	0.012	-	-	-	-	-	6.0	-	-	1.0
0.436	0.837	0.124	0.03	0.02	1.1	0.023	0.168	0.026	0.002	-	-	0.003	-	-	0.002	0.004	0.004	0.004

Bar Size (As per WI-)	Qty: 10 % Of Total Heat	Diameter/Section Size (In mm)										
S.NO.	1	2	3	4	5	6	7	8	9	10	11	12
70	70.1	70.2	70.3	70.2	70.1	70.2	70.3	70.1	70.4	70.1		

Gas Content (PPM): As per Mill Tc	N2	H2	O2
Min	60	-	-
Max	120	2.0	15
Value	81	1.53	10
Mill Tc			

Steel Supply Condition:	AS ROLLED
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MACRO	(i) Internal soundness Sample: (ASTM E381 or as per customer)	S3 R3 C2
	Value Obs.	L33 CR3 C22
	(ii) Dendrite structure 01 sample:	
	(iii) Step Down Test Sample: (IS4075 or as per customer)	OK

Micro structure As Rolled:	Micro structure: (or as per customer)
	Mill Tc OK
	SSB OK

ULTRASONIC TEST (AS PER ASTM A388):	Mill Tc 100% OK
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INCLUSION RATING (IS 14163 / ASTM: E454 OR REQUIRED BY CUSTOMER)									
	A Sulphide		B Aluminate		C Silicate		D Oxide		DS
	TN	TK	TN	TK	TN	TK	TN	TK	
Cust Spec If Any	2.0	1.5	2.0	1.0	0.5	0.5	1.0	1.0	
Mill Tc	1.5	0.5	0.5	0.0	0.0	0.0	1.0	0.5	
SSB	1.5	0.5	0.5	0.0	0.0	0.0	1.0	0.5	

GRAIN SIZE:	Spec: 5-8	Mill Tc 7.0	SSB 6.5
(ASTME112 / IS-4748)			

JOMINY HARDENBILITY IS-3848 / ASTM A255 (As per required by Customer)	Distance	5.5	5.3	5.5	5.7	5.9	5.11	5.13	5.15	5.20	5.25	5.20
Specified	55.5-61	55.5-61	55.5-61	54-60	53.5-66	51.5-59	49.5-50	48-58	44-56	41-53	39.5-51	
Mill Tc	60	59.5	58.5	57	56.5	55.5	53.5	52.5	49	46.5	44.5	
Observed	59	58	57	57	55	53	52	50	46	44	42	

MECHANICAL PROPERTIES: (If Required in TDC / Customer)				As per IS: 1608 / ASTM A 370		As per IS: 1757	
		U.T.S	Y.S	N/mm2	%EL	IMPACT VALUE CHARRY	IMPACT VALUE IZOD
		N/mm2 / MPA	/MPA				
Specified		1030-1230	835 min		10 min		25 min J
Observed		1065	874		15.8		94.5

As Rolled Hardness (BHN (Max / Min) (If Required in TDC / Customer))					
	1	2	3	4	5

VISUAL:	(i) Surface Condition	100 % Bars Checked	OK No Gas (44H2, Rust, crack)
	(ii) Heat No.	100 % Bars Checked	OK (K196244)
	(iii) Color Code.	100 % Bars Checked	OK (Full yellow)

REDUCTION RATIO:	Specify	BLOOM SIZE - 200X200	REDUCTION RATIO: 1:10:39
(If Required in TDC / Customer)	As Per Mill TC		

DECARB LEVEL: (AS PER IS 6396 / ASTM E1077)	Specified	0.6 mm
(If Required in TDC / Customer)	Observed	PD 0.38 FD

UPSETIBILITY TEST (AS PER IS 10167):			
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Test Certificate verified for Each Heat no:	Available & Ok	Not Available	Not Conforming
	OK		

TDC / Customer STD	SSB/TDC/	Mill Tc No.	Mill Tc Date	Verified By:
(If Required in TDC / Customer)				

MIX UP TEST (If Required in TDC / Customer)	Verified By Mobile Spectro / X-Ray Gun / Spark Test
	Accepted <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>

Other Remarks	
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Checked By	Approved By