



RAW MATERIAL INCOMING INSPECTION REPORTS

Issue no. : 01, 01.07.2018
Rev. no. : 02, 11.05.23

REPORT NO	1748	SECTION :-	80mm	HAET NO :-	K1992-97	INVOICE NO -	9043035691
DATE :-	11/01/2025	STEEL SUPPLIER :-	Kalyani	REC.QTY :-	40870	INVOICE DATE	
GRADE	20Mn25	STEEL TC NO :-		NO. OF BARS :-			
Q1)	Process/Mfg Route						
Chemistry	%C	%Mn	%Si	%P	%Cr	%Ni	%Mo
Aln	0.15	1.0	0.15	0.015	1.0	-	-
Max	0.2	1.3	0.4	0.02	1.3	0.3	0.1
Mill Tc Value	0.19	1.25	0.297	0.016	0.016	0.018	0.007
Spectro Value	0.19	1.268	0.284	0.021	0.016	0.018	0.006
	%Al	%Cu	%As	%Sb	%V	%Pb	%Ca
	0.02	-	-	-	-	-	-
	0.05	0.30	-	-	-	-	10
	0.024	0.013	-	-	-	-	80
	0.009	-	-	-	0.004	-	0.003
							0.004
							0.003
							0.003
							0.003

32) Bar Size (As per WI...) Qty: 10 % Of Total Heat Diameter/Section Size(In mm)

SNO	1	2	3	4	5	6	7	8	9	10	11	12
80	79.9	79.8	79.7	79.6	79.5	79.6	79.7	79.5	79.8	79.9		

33) Gas Content (PPM): As per Mill Tc

	N2	H2	O2
Min	60	-	-
Max	120	2.5	20
Value	77	1.52	13

34) Steel Supply Condition: AS Rolled

35) MACRO (i) Internal soundness Sample: (ASTM E381 or as per customer) S3 R3 C2
Value Obs. < S3 < R3 < C2

(ii) Dendrite structure O1 sample: OK

(iii) Step Down Test Sample: (IS4075 or as per customer) OK

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

37) ULTRASONIC TEST (AS PER ASTM A388): 100% OK
Mill Tc

38) INCLUSION RATING (IS 14163 / ASTM: E45A OR REQUITRED BY CUSTOMER)

	A Sulphide		B Aluminate		C Silicate		D Oxide		DS	
	TN	TK	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		

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

40) JOMINY HARDENBILITY IS-3848 / ASTM A255 (As per required by Customer)

Distance	515	55	510	515	520	525	530
Specified	41-46	38-4	32-38	29-35	27-33	25-32	24.5-31
Mill Tc	45.5	42.5	38	35	32	31	28.5
Observed	44	42	39	36	33	31	29

41) MECHANICAL PROPERTIES: (If Required in TDC /Customer)

	As per IS:1608/ ASTM A 370			As per IS: 1757	
	U.T.S N/mm2 /MPA	Y.S N/mm2 /MPA	%EL	IMPACT VALUE CHARRY	IMPACT VALUE IZOD
Specified	1230-1570	930 Min	7 Min	25 Min J	
Observed	1276	1009	14.9	78 J	

As Rolled Hardness (BHN (Max / Min))

1	2	3	4	5
183	185	187	183	193

42) VISUAL: (i) Surface Condition 100 % Bars Checked OK NO (RWT, Crack, Grov (4Htg))
(ii) Heat No. 100 % Bars Checked OK (K1992-97)
(iii) Color Code. 100 % Bars Checked OK Paint Red + white

43) REDUCTION RATIO: Specify 1:7 Min BLOOM SIZE - 200x200 REDUCTION RATIO: 1:7.96
(If Required in TDC /Customer) As Per Mill TC

44) DECARB LEVEL: (AS PER IS 6396 / ASTM E1077)

Specified	0.60
Observed	0.41

45) UPSETIBILITY TEST (AS PER IS 10167):

46) Test Certificate verified for Each Heat no: OK

47) TDC / Customer STD SSB/TDC/ Mill Tc No. Mill Tc Date Verified By:
(If Required in TDC /Customer) QF1001, Rev.3 K1992-97 5/01/25

48) 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"/>
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Other Remarks: OK

Checked By: OK Approved By: OK