

Report NO.	1774	SECTION :-	8mm	HAET NO. :-	6909	INVOICE NO. :-	5807									
DATE :-	20/3/25	STEEL SUPPLIER :-	As per spec	REC QTY :-	1.5460 kg	INVOICE DATE :-	20/3/25									
GRADE :-	20Mn2SiAl	STEEL TC NO. :-	5188	NO. OF BARS :-	79											
Process / Mfg Route	EAF + LF + TM + CM + FMS															
Chemistry	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Al	%Cu	%As	%Sb	%V	%Nb	%Ti	%B
Min	0.150	1.00	0.00	0.020	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	0.300	1.300	0.300	0.035	0.025	1.300	0.300	0.12	0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mill Tc Value	0.161	1.280	0.240	0.021	0.018	1.23	0.087	0.062	0.034	0.198	0.00	0.00	0.00	0.00	0.00	0.00
Observed Value	0.174	1.292	0.252	0.022	0.018	1.230	0.096	0.062	0.032	0.188	0.00	0.00	0.00	0.00	0.00	0.00
Bar Size	(As per WI...) Qty: 10 % Of Total Heat															
Area of Bar Checked	S.NO. 1 2 3 4 5 6 7 8 9 10 11 12															
	Diameter/Section Size (in mm) 80.1 80.0 80.3 80.5 80.2 80.4 80.3 80.0 80.4 80.1 80.2 80.5															
Gas Content (PPM): As per Mill Tc	N2 H2 O2															
	Min 90 PPM 90 PPM 90 PPM															
	Max Value 108 0.946 14															
Steel Supply Condition:	Hot Rolled															
MACRO	(I) Internal soundness Sample : (ASTM E381 or as per customer) Value Obs. S2 R2 C2															
	(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 SSB P4 F P1 F															
ULTRASONIC TEST (AS PER ASTM A388) :	Mill Tc OK															
INCLUSION RATING (IS 14163 / ASTM: E45A OR REQUIRED BY CUSTOMER)																
	A Sulphide B Aluminate C Silicate D Oxide DS															
	TN TK TN TK TN TK TN TK TN TK TN TK															
Cust Spec. If Any	9.0 1.0 2.0 0.0 2.0 0.0 2.0 0.0 2.0 1.0															
Mill Tc	1.5 0.0 0.5 0.0 0.0 0.0 0.0 0.0 1.0 0.0															
SSB	1.5 0.0 0.5 0.0 0.0 0.0 0.0 0.0 1.0 0.0															
GRAIN SIZE : (ASTME112 / IS-4748)	Spec: 5-8 Mill Tc 7.0 SSB 6.5															
JOMINY HARDENBILITY IS-3848 / ASTM A255 (As per required by Customer)	Distance 5 10 25 Specified 29-43 35-39 27-31 Mill Tc 43 38 29 Observed 43 38 28															
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 %EL IMPACT VALUE CHERRY IMPACT VALUE IZOD															
	Specified Observed															
As Rolled Hardness (BHN (Max / Min) (If Required in TDC / Customer)	1 2 3 4 5 222 224 226 224 231															
VISUAL :	(i) Surface Condition 100 % Bars Checked OK															
	(ii) Heat No. 100 % Bars Checked OK															
	(iii) Color Code. 100 % Bars Checked OK															
REDUCTION RATIO : Specify 6:1 Min BLOOM SIZE 240x240 REDUCTION RATIO: 11.5 : 1 (If Required In TDC / Customer) As Per Mill TC																
DECARB LEVEL : (AS PER IS 6395 / ASTM E1077) (If Required In TDC / Customer)	Specified 0.4 mm Max Observed PD 0.16 FD															
UPSETABILITY TEST (AS PER IS 10167) :	OK															
Test Certificate verified for Each Heat no :	Available & OK Not Available Not Conforming															
TDC / Customer STD (If Required In TDC / Customer)	SSB/TDC/ Mill Tc No. 5928 Mill Tc Date 20/3/25 Verified By: [Signature]															
WOK-UP TEST (If Required In TDC / Customer)	Verified By Mobile Spectro / X-Ray Gun / Spark Test Accepted [Signature] Rejected															
Other Remarks																
Checked By [Signature]	Approved By [Signature]															