



## RAW MATERIAL INCOMING INSPECTION REPORTS

D.C. No. : F/05/01  
Issue No. : 01, 01.07.2018  
Rev. No. : 02, 11.05.23

Report NO	750	SECTION :-	80mm	HAET NO :-	53030	INVOICE NO :-	SE247-13367
DATE	14/01/25	STEEL SUPPLIER :-	SLR	REC.QTY :-	8370 kg	INVOICE DATE :-	
GRADE :-	16MnCr5	STEEL TC NO :-	25070424	NO. OF BARS :-			

1) Process / Mfg Route

Chemistry	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Al	%Cu	%As	%Sb	%V	%Nb	%Ti	%B
in	0.18	1.0	0.15	0.015	-	0.8	-	-	0.02	-	-	-	-	-	-	-
ax	0.18	1.3	0.14	0.02	0.02	1.1	0.3	0.1	0.05	0.30	-	-	-	0.001	-	0.005
III Tc Value	0.177	1.23	0.264	0.027	0.011	1.04	0.015	0.01	0.026	0.018	0.001	0.0001	0.006	0.001	0.005	0.009
Electro Value	0.148	1.2	0.263	0.023	0.014	1.046	0.016	0.011	0.025	0.007	-	-	0.002	-	0.004	0.009

2) Bar Size (As per WI...) Qty: 10 % Of Total Heat

3) of Bar Checked 10

S.NO.	1	2	3	4	5	6	7	8	9	10	11	12
80	79.3	79.8	79.7	79.6	79.5	79.6	79.4	79.6	79.8	79.8		

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

	N2	H2	O2
Min	60	7	7
Max	120	2.5	20
Value	69.3	1.81	15.2
Mill Tc			

4) Steel Supply Condition: AS ROLLED

5) MACRO

(i) Internal soundness Sample : (ASTM E381 or as per customer) Value Obs. S3 R3 C2  
C52 C22 C22

(ii) Dendrite structure O1 sample:

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

6) Micro structure As Rolled:

Micro structure : (or as per customer)

Mill Tc Ferrite + Pearlite

SSB Ferrite + Pearlite

7) ULTRASONIC TEST (AS PER ASTM A388):

Mill Tc 100% OK

8) INCLUSION RATING ( IS 14163 / ASTM: E45A OR REQUIRED BY CUSTOMER )

	A		B		C		D		DS	
	Sulphide		Aluminate		Silicate		Oxide			
	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	1.0	0.5	0.5	0.0	0.0	0.0	0.5	0.5		
SSB	1.0	0.5	0.5	0.0	0.0	0.0	0.5	0.5		

9) GRAIN SIZE : Spec.: 5-8 Mill Tc 7-0 SSB 6-5

10) JOMINY HARDENILITY IS-3848 / ASTM A255 (As per required by Customer)

Distance	37.5	75	112.5	150	187.5	225	262.5	300						
Specified	39.44	35.39	29.33	25.31	22.5-28	21-27.5	20-26.5							
Mill Tc	42	37.8	29.5	26.8	24	22	20.9							
Observed	41	38	30	26	25	23	21							

11) 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	1030-1370	735 min.	8	25	
Observed	1163	1047	16.2	36.9	

As Rolled Hardness (BHN (Max / Min) (If Required in TDC / Customer))

1	2	3	4	5
163	165	167	165	171

12) VISUAL :

(i) Surface Condition 100 % Bars Checked OK NO (403 CHANG, CARGIS, RUST)

(ii) Heat No. 100 % Bars Checked OK (53030)

(iii) Color Code. 100 % Bars Checked OK (BLACK + GREEN)

13) REDUCTION RATIO : Specifiy 7:1 BLOOM SIZE - 200x200 REDUCTION RATIO : 7.96:1

(If Required in TDC / Customer) As Per Mill TC

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

Specified	0.60 max
Observed	0.24

(If Required in TDC / Customer)

15) UPSETIBILITY TEST (AS PER IS 10167):

16) Test Certificate verified for Each Heat no :

Available & Ok	Not Available	Not Conforming
OK		

17) TDC / Customer STD SSB/TDC/ Mill Tc No. 25070424 Mill Tc Date 14/1/25 Verified By: MANIA

(If Required in TDC / Customer) QF 1001, Rev 3.

18) MIX-UP TEST (If Required in TDC / Customer)

Verified By Mobile Spectro / X-Ray Gun / Spark Test

Accepted	✓	Rejected	
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Other Remarks

Checked By

Approved By