



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	1745	SECTION :-	60	HAET NO :-	52869	INVOICE NO. :-	SE 244-12722												
DATE :-	06/01/25	STEEL SUPPLIER :-	SLR	REC.QTY :-	14730	INVOICE DATE :-													
GRADE	16Mn05	STEEL TC NO :-	524121573	NO. OF BARS :-															
(01)	Process / Mfg Route	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Al	%Cu	%As	%Sb	%V	%Pb	%Ca	%Nb	%Ti	%B
Chemistry		0.13	1.0	0.15	0.015	—	0.8	—	—	0.02	—	—	—	—	—	—	—	—	—
Min		0.18	1.3	0.4	0.03	0.02	1.1	0.3	0.1	0.05	0.3	—	—	—	—	0.002	—	—	0.0005
Max		0.166	1.26	0.25	0.02	0.017	1.064	0.07	0.008	0.028	0.04	0.001	0.001	0.006	0.001	0.0005	0.002	0.004	0.0004
Mill Tc Value		0.17	1.26	0.253	0.022	0.017	1.085	0.08	0.003	0.024	0.008	—	—	0.003	—	—	0.002	0.005	0.0004
Spectro Value																			

(02)	Bar Size (As per WL...)	Qty : 10 % OF Total Heat	Diameter/Section Size (In mm)									
No of Bar Checked	10											
S.NO.	1	2	3	4	5	6	7	8	9	10	11	12
60	59.9	59.8	59.7	59.6	59.5	59.4	59.3	59.8	59.7	59.6		

(03)	Gas Content (PPM): As per Mill Tc	N2	H2	O2
Min	60	—	—	—
Max	120	2.5	2.0	—
Value	82.5	1.18	15.1	—
Mill Tc				

(04)	Steel Supply Condition:	AS ROLLED
------	-------------------------	-----------

(05)	MACRO	(i)	Internal soundness Sample : (ASTM E381 or as per customer)	S3	R3	C2
			Value Obs.	232	232	232
		(ii)	Dendrite structure 01 sample :			
		(iii)	Step Down Test Sample : (IS4075 or as per customer)	OK		

(06)	Micro structure As Rolled :	Micro structure : (or as per customer)
		Mill Tc
		SSB
		F+P
		F+P

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

(08)	INCLUSION RATING (IS 14163 /ASTM: E45A OR REQUITED BY CUSTOMER)	A	B	C	D	DS			
		Sulphide	Aluminate	Silicate	Oxide				
		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	0.5	0.0
	SSB	1.5	0.5	0.5	0.0	0.0	0.0	0.5	0.0

(09)	GRAIN SIZE :	Spec. :-	Mill Tc	SSB
	(ASTME112 / IS-4748)			

(10)	JOMINY HARDENBILITY	Distance	5/15	5/5	5/10	5/15	5/20	5/25	5/30						
	IS-3848 /ASTMA255	Specified	39-44	31.5-40	29-35.5	25-31.5	22.5-29	21-27.5	20-26.5						
	(As per required by Customer)	Mill Tc	41.9	38.7	32.1	26.4	23.8	21.7	20.3						
		Observed													

(11)	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	IMPACT VALUE
		N/mm2 /MPA	/MPA			CHARRY	IZOD
	Specified	1030-1370	735 min.	8	25		
	Observed	1068	932	16.9	38.5		
	As Rolled Hardness	1	2	3	4	5	
	(BHN (Max / Min)	166	168	171	173	175	
	(If Required in TDC /Customer)						

(12)	VISUAL :	(i)	Surface Condition	100 % Bars Checked	OK	NO (Rust, Gas cutting, cracks)
		(ii)	Heat No.	100 % Bars Checked	OK	(52869)
		(iii)	Color Code.	100 % Bars Checked	OK	HAUT PINK + GREEN

(13)	REDUCTION RATIO :	Specify	BLOOM SIZE -	200X200	REDUCTION RATIO :	14,15:1
	(If Required in TDC /Customer)	As Per Mill TC				

(14)	DECARB LEVEL :	(AS PER IS 6396 / ASTM E1077)	Specified	0.36 max		
	(If Required in TDC /Customer)		Observed	PD	0.22	FD

(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.	Mill Tc Date	Verified By :
	(If Required in TDC /Customer)				

(18)	MIX-UP TEST	Verified By Mobile Spectro /X-Ray Gun/Spark Test			
	(If Required in TDC /Customer)	Accepted	✓	Rejected	

Other Remarks	
---------------	--

Checked By	Approved By