



RAW MATERIAL INCOMING INSPECTION REPORTS

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

Report NO	1742	SECTION :-	90	HAET NO :-	A32994	INVOICE NO.-	A1/24-25/00/65											
DATE :-	27/12/2024	STEEL SUPPLIER :-	A2089	REC.QTY :-	5430/9	INVOICE DATE:-												
GRADE :-	20mm 85	STEEL TC NO :-	2024-25/002343	NO. OF BARS :-														
(01)	Process/Mfg Route																	
Chemistry	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Al	%Cu	%As	%Sb	%V	%Pb	%Ca	%Nb	%Ti	%B
Min	0.15	1.0	0.15	0.015	-	1.0	-	-	0.02	-	-	-	-	-	0.001	-	-	0.0005
Max	0.20	1.3	0.4	0.03	0.02	1.3	0.3	0.1	0.05	0.3	-	-	-	-	-	-	-	0.0004
Mill Tc Value	0.19	1.135	0.24	0.026	0.02	1.18	0.11	0.035	0.03	0.13	-	-	0.004	-	0.001	-	-	0.0004
Spectro Value	0.192	1.2	0.238	0.025	0.019	1.165	0.114	0.032	0.026	0.138	-	-	0.004	-	-	0.002	0.015	0.0003

(02)	Bar Size	(As per WI...)	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		
				90	89.9	89.8	89.7	89.6	89.5	89.4	89.2	89.1	89.2	89.5				

(03)	Gas Content (PPM): As per Mill Tc				N2	H2	O2											
					Min	60	7	7										
					Max	120	2.5	20										
					Value													
					Mill Tc	73	0.87	11.0										

(04)	Steel Supply Condition:	AS Hot Rolled
------	-------------------------	---------------

(05)	MACRO	(i)	Internal soundness Sample : (ASTM E381 or as per customer)	S B	R 3	C 2
			Value Obs.	2 S1	2 R1	2 C2
		(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

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

(08)	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	1.6	0.5	0.5	1.0	1.0		
Mill Tc	1.5	0.5	0.5	0.0	0.0	0.0	1.0	0.0		
SSB	1.5	0.5	0.5	0.0	0.0	0.6	1.0	0.0		

(09)	GRAIN SIZE :	Spec:-	5-8	Mill Tc	6-7	SSB	6.5
	(ASTME112 / IS-4748)						

(10)	JOMINY HARDENBILITY	Distance	51.5	55	510	515	520	525	530									
	IS-3848 /ASTMA255	Specified	41-46	78-44	72-38.5	73-35.5	77-33.5	75.5-32	74.5-31									
	(As per required by Customer)	Mill Tc	45.5	45.5	36.5	31	28.5	27	26									
		Observed	44	42	36	30	28	28	25									

(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
	N/mm2 /MPA		N/mm2 /MPA				IMPACT VALUE CHARRY
	Specified		1230-1570		930 Min.		7 Min.
	Observed		1292		1128		8.9
	As Rolled Hardness (BHN (Max / Min) (If Required in TDC /Customer)						
	1	2	3	4	5		
	181	183	185	187	189		

(12)	VISUAL	(i)	Surface Condition	100 % Bars Checked	OK	No / RWT, Gals (4th Ag, 299K)
		(ii)	Heat No.	100 % Bars Checked	OK	(A32994)
		(iii)	Color Code.	100 % Bars Checked	OK	(Yellow & Brown)

(13)	REDUCTION RATIO :	Specify	7:1 Min	BLOOM SIZE -	250 x 250	REDUCTION RATIO :	9.83:1
	(If Required in TDC /Customer)	As Per Mill TC					

(14)	DECARB LEVEL :	(AS PER IS 6396 / ASTM E1077)	Specified				
	(If Required in TDC /Customer)		Observed	PD	0.18	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
------------	-------------