

Report NO	1716	SECTION :-	80	HAET NO :-	50447	INVOICE NO :-	56242-07706	
DATE :-	25/9/24	STEEL SUPPLIER :-	SLR	REC.QTY :-	1860 kg	INVOICE DATE :-	20/9/24	
GRADE :-	16Mn CR5	STEEL TC NO :-	24090604	NO. OF BARS :-	1			
(01)	Process / Mill Route							
Chemistry	%C	%Mn	%Si	%S	%P	%Cr	%Ni	
Min	0.13	1.0	0.15	0.015	-	0.8	-	
Max	0.18	1.3	0.17	0.02	1.1	0.3	0.1	
Mill Tc Value	0.164	1.22	0.155	0.026	0.02	1.025	0.07	
Spectro Value	0.16	1.28	0.223	0.028	0.043	1.072	0.078	
(02)	Bar Size (As per WI...) Qty: 10 % Of Total Heat							
No of Bar Checked	Diameter/Section Size (In mm)							
	S.NO.	1	2	3	4	5	6	
		80	79.9	79.8	79.7	79.6	79.5	
(03)	Gas Content (PPM): As per Mill Tc							
	N2		H2		O2			
	Min		60		70			
	Max		120		25			
	Value		89.5		1.06			
	Mill Tc		15.3					
(04)	Steel Supply Condition: AS Rolled							
(05)	MACRO (i) Internal soundness Sample : (ASTM E381 or as per customer)							
	Value Obs. 53 R3 C2							
	(ii) Dendrite structure 01 sample :							
	(iii) Step Down Test Sample : (IS4075 or as per customer)							
(06)	Micro structure As Rolled :							
	Micro structure : (or as per customer)							
	Mill Tc F + P							
	SSB F + P							
(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	
	Sulphide		Aluminate		Silicate		Oxide	
	TN	TK	TN	TK	TN	TK	TN	TK
Cust Spec.If Any	1.2	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	1.0	0
SSB	1.5	0.5	0.05	0.0	0.0	0.0	1.0	0.0
(09)	GRAIN SIZE : Spec:- 5-8 Mill Tc 8.0 SSB 7.0							
(10)	JOMINY HARDENBILITY IS-3848 /ASTMA255 (As per required by Customer)							
	Distance	51.5	75	101	151	201	251	301
	Specified	20-44	35-39	29-35	25-21	22.5-18	21-17	20-16
	Mill Tc	42.5	78	32	28.3	24.2	21.2	21.2
	Observed	42	37	32	28	23	22	20
(11)	MECHANICAL PROPERTIES : (If Required in TDC /Customer)							
	As per IS:1608/ ASTM A 370				As per IS: 1757			
	U.T.S		Y.S		%EL		IMPACT VALUE	
	N/mm2 /MPA		N/mm2 /MPA				CHARRY	
	Specified		1030-1370		8		25	
	Observed		1162		1033		38.5	
	As Rolled Hardness (BHN (Max / Min) (If Required in TDC /Customer)							
	1	2	3	4	5			
	173	175	177	179	181			
(12)	VISUAL :							
	(i)	Surface Condition	100 % Bars Checked	ok	NO (crack, Gas (Hydro), rust)			
	(ii)	Heat No.	100 % Bars Checked	ok	(50447)			
	(iii)	Color Code.	100 % Bars Checked	ok	pink & green			
(13)	REDUCTION RATIO : Specify BLOOM SIZE - 200x200 REDUCTION RATIO : 7.96 : 1							
(14)	DECARB LEVEL : (AS PER IS 6396 /ASTM E1077)							
	Specified		0.6					
	Observed		PD		0.20			
(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 (If Required in TDC /Customer)							
	SSB/TDC/		Mill Tc No.		Mill Tc Date		Verified By :	
(18)	MIX-UP TEST (If Required in TDC /Customer)							
	Verified By Mobile Spectro /X-Ray Gun/Spark Test							
	Accepted		Rejected					
	Other Remarks							
	Checked By							
	Approved By							