

HAPPY FORGINGS LIMITED, LUDHIANA

METTALURGICAL TEST REPORT

RAW MATERIAL BILLET/FORGINGS

(FROM SUB CONTRACTOR)

(DOC. NO. FM:HT-LB-11)

CUSTOMER	M/s	Ve Commercial (Dewas)					
STEEL MILL	M/S	RL Steels			REPORT NO.	17-4219	
CHALLAN NO.					DATE	03.03.2018	
HEAT NO.		2-VYY-4			SECTION SIZE	115DIA	
GRADE		EN-353			NO. OF BARS/BILLET		
QTY					LENGTH RANGE	4.5 TO 5.5 MTRS	
PART NO.		56141			COLOUR CODE	YELLOW+BLUE+WHITE	

CHEMICAL PROPERTIES

SPEC.	C%	Mn%	Si%	S%	P%	Cr%	Ni%	Mo%
MIN.		0.5				0.75	1	0.08
MAX	0.2	1	0.35	0.05	0.05	1.25	1.5	0.15
HFL OBSERVED	0.187	0.937	0.245	0.021	0.02	1.07	1.03	0.136

PHYSICAL PROPERTIES

INTERNAL SOUNDNESS	C2 R1 S1
GRAIN FLOW	
SURFACE HARDNESS(BHN)	
UPSETTING TESTING	OK

METALLOGRAPHY

GRAIN SIZE-ASTM E-112	ASTM-7							
INCLUSION RATING WORST FIELD AS PER ASTM E-45	A		B		C		D	
	TK	TN	TK	TN	TK	TN	TK	TN
	0.5	1.5	0	0.5	0	0	0	1

JOMINY TRASVELET

DISTT.		J11MM						
SPEC.		34-38						
HFL OBSERVED HRC		35.5						

REMARKS MILL T. C. ENCLOSED

AUTHORISED SIGNATURE