

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	Aarti steels			REPORT NO.	7781		
CHALLAN NO.					DATE	15.02.2018		
HEAT NO.		6075			SECTION SIZE	65RCS		
GRADE		EN-353			NO. OF BARS/BILLET			
QTY					LENGTH RANGE	4.5 TO 5.5 MTRS		
PART NO.		5354			COLOUR CODE	BLUE+WHITE BASE		

CHEMICAL PROPERTIES

SPEC.	C%	Mn%	Si%	S%	P%	Cr%	Ni%	Mo%
MIN.		0.50				0.75	1.00	0.08
MAXIMUM	0.20	1.00	0.35	0.050	0.050	1.25	1.50	0.15
HFL OBSERVED	0.190	0.96	0.241	0.020	0.015	1.22	1.050	0.116

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

DIST.		J13mm						
SPEC.		36/41						
HFL OBSERVED HRC		39						

REMARKS MILL T. C. ENCLOSED

AUTHORISED SIGNATURE