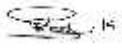



SLR METALIKS LTD

Sy.No. 632, NarayanaDevarakere, HB Halli Tq, Bellary District, 583 222



TEST CERTIFICATE

CUSTOMER	VE COMMERCIAL VEHICLES LIMITED					PROCESS ROUTE		BLOOM SIZE (mm)		TRUCK NO		PB05S9546		TC NO		18051011											
						BF-EOF-LRF-VD-CCM-RMS		200X200		INVOICE NO		SE18Y-02505		DATE		25.05.2018											
CUSTOMER SPECIFICATION					HEAT NO		GRADE		SECTION (mm)		NO OF BUNDLES		QUANTITY (Mt)		LENGTH (IN Mtr)												
-					5744		20MnCr5		75 RCS		5		10.950		4 TO 6												
SUPPLY CONDITION		REDUCTION RATIO													COLOR CODE												
AS ROLLED		7.1: 1													Half Red Half White with Blue Dot												
CHEMICAL COMPOSITION																											
%	C	Si	Mn	P	S	Cr	Mo	Ni	Al	SoI Al	V	Ti	Cu	B	Nb	Ca	As	Sb	Sn	Pb	W	Bi	Co	Zr			
Min	0.17	0.15	1.10	-	-	1.00	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Max	0.22	0.40	1.40	0.035	0.035	1.30	-	-	0.040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Actual	0.17	0.24	1.13	0.013	0.026	1.019	0.007	0.017	0.025	-	0.005	0.0018	0.017	0.0004	0.0011	0.0009	0.0014	0.0009	0.0013	0.001	0.0018	0.0002	0.005	0.001	-		
	H2(ppm)	N2(ppm)	O2(ppm)	CE	DI	Bsol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Max	2	90	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Actual	1.42	88.3	15.8	0.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
PHYSICAL PROPERTIES																											
Test Condition																											
Tensile	YS		UTS		%EL	%RA	Impact Strength (J)		Hardness	Rolled	Quench	Jominy Values (In HRC)	J4/16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Min	-		-		-	-	-		BHN	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Max	-		-		-	-	-		BHN	220			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Actual	-		-		-	-	-		BHN	178-182			35	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inclusion Rating (As per ASTM E-45)												Grain Size (ASTM E112)	Decarb (mm)	Banding (Microns)	Step Down	UPSet	Macro etch (ASTM E-381)	SURFACE DEFECTS									
																		100% UT & MPI & SPARK DONE									
																		FREE FROM RADIOACTIVE ELEMENTS									
																		FREE FROM DEFECTS									
Spec	2.5	1.0	2.0	1.0	2.0	1.0	2.0	1.0	5-8	1% of dia Max	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Actual	2.0	1.0	1.0	-	-	-	1.0	-	7	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dimension tolerance as per IS 3739 Grade-I. Remarks: Uniform Pearlite + Ferrite.																											
 PREPARED BY CHANDRASHEKAR B												 AUTHORISED SIGNATORY C.M.WALVEKAR															