
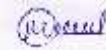


SLR METALIKS LTD

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	PB11BY4025		TC NO	1805593																				
			BF-EOF-LRF-VD-CCM-RMS		200X200	INVOICE NO	SE18Y-02027		DATE	14.05.2018																				
CUSTOMER SPECIFICATION				HEAT NO	GRADE	SECTION (mm)	NO OF BUNDLES	QUANTITY (Mt)	LENGTH (IN Mtr)																					
-				733	20MnCr5	56 DIA	2	4.620	4 TO 6																					
SUPPLY CONDITION		REDUCTION RATIO							COLOR CODE																					
AS ROLLED		16.2: 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	-	1.10	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Max	0.22	0.40	1.40	0.035	0.035	1.30	-	-	0.040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Actual	0.20	0.197	1.13	0.018	0.032	1.105	0.006	0.015	0.024	-	0.007	0.0011	0.013	0.00025	0.0006	0.0016	0.0014	0.00028	0.00053	0.001	-	-	0.0058	0.001	-					
	H2(ppm)	N2(ppm)	O2(ppm)	CE	DI	Bsol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Max	3	90	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Actual	1.72	79.0	17	0.582	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
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	161-165	-		-	38.9	-	-	-	-	-	-	-	-	-	-	-	-				
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		6-8		1% of dia Max		-		-		-		C2R2S2		FREE FROM DEFECTS	
Actual	2.0		1.0		1.0		-		-		-		1.0		-		6		0.19		-		-		-		Better than C2,R2,S2		OK	
Remarks:		Dimension tolerance as per IS 3739 Grade-I.																												
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">  PREPARED BY SEETHARAMA K </div> <div style="text-align: center;">  AUTHORISED SIGNATORY C.M.WALVEKAR </div> </div>																														