
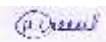


SLR METALIKS LTD

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



TEST CERTIFICATE

CUSTOMER	HIMTECHNO FORGE		PROCESS ROUTE		BLOOM SIZE	TRUCK NO	MP13 H 0516		TC NO	1712413																	
			BF-EOF-LRF-VD-CCM-RMS		200X200	INVOICE NO	SE17Y-09412		DATE	15/12/2017																	
CUSTOMER SPECIFICATION				HEAT NO	GRADE	SECTION	NO OF BUNDLES	QUANTITY	LENGTH (IN MTR)																		
HTFL/2017-2018/03/25.08.2017, BGL.TS.01 Rev No:11 Date:10/10/2013				3276	16MnCr5	75 RCS	11	21.500	4 TO6																		
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	0.14	0.15	1.00	-	0.020	0.80	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Max	0.19	0.35	1.30	0.035	0.035	1.10	-	-	0.060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Actual	0.185	0.25	1.196	0.014	0.028	1.063	0.01	0.023	0.032	-	0.006	0.0027	0.021	0.0004	0.0011	0.0008	0.0018	0.0014	0.0016	0.002	0.0021	0.0002	0.0065	0.001	-		
	H2(ppm)	N2(ppm)	O2(ppm)	CE	DI	Bsol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Min	-	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Max	2	100	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Actual	1.2	73.8	16.5	0.598	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
PHYSICAL PROPERTIES																											
Test Condition																											
Tensile	UTS (Kg/mm2)		YS (Kg/mm2)		%EL	%RA	Impact Strength		Hardness	Rolled	Quench	Jominy Values (In HRC)	J1.5mm	J5mm	J6.35mm	J10mm	J15mm	J20mm	J30mm	-	-	-	-	-	-		
Min	110		90		7	-	-		BHN	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-		
Max	140		-		-	-	-		BHN	240	-		-	-	-	-	-	-	-	-	-	-	-	-	-		
Actual	112		93		13.2	-	-		BHN	178-183	-		44.3	42.5	39.5	33	29.2	27.8	21.5	-	-	-	-	-	-		
Inclusion Rating (As per ASTM E-45)												Grain Size (ASTM E112)	Decarb (mm)	Banding	Step Down	UPSet	Macro	SURFACE DEFECTS									
																		100% MPI, UT & SPARK DONE FOR ALL HEATS									
																		Radiation Level : <30µR /hr									
																		FREE FROM DEFECTS									
Spec	A	H	T	H	T	H	T	H	6-8		1% OF DIA Max	-	As per TDC	-		C2R2S2		FREE FROM DEFECTS									
Actual	2.0	0.5	1.0	-	-	-	1.0	-	6		0.22	-	OK	-		Better than C2,R2,S2		OK									
Remarks: 100% SPARK & SPECTRAL DONE, FREE FROM RADIOACTIVE MATERIAL.																											
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">  PREPARED BY CHANDRASHEKAR.B </div> <div style="text-align: center;">  AUTHORISED SIGNATORY C.M.WALVEKAR </div> </div>																											