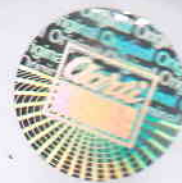




AARTI STEELS LIMITED
 Registered Office : G.T.Road, Miller Ganj, Ludhiana.
 Works : Focal Point, LUDHIANA - 141010. (INDIA)
 Phone no. :- 0161-3006200 Fax :- 0161-3006250
 MANUFACTURER'S OF :- CARBON ALLOYS & SPECIAL STEELS
- : TEST CERTIFICATE :-



-: Original :-

M/S.- THE HI-TECH GEARS LTD
 PLOT NO.24,25,26.SECT-7
 IMT,MANESAR.GURGOAN.

T.C.NO. 6829 Date :- 13/12/2017 16:59:56
 Invoice No. 9117
 Truck No. HP12B-7774

GRADE	SIZE	HEAT NO.	MANUFACTURING ROUTE	COLOUR CODE	SUPPLY COND.N.	QTY. (MT)	NO. OF PCS.
SAE 8620-H	50 DIA	5780	E.A.F.+L.F.+V.D.+CCM+EMS	BROWN + WHITE	AS ROLLED	15.490	163

-: CHEMICAL COMPOSITION IN PERCENTAGE :-

	C	Mn	S	P	Si	Ni	Cr	Mo	V	Al	Cu	Sn	Ti	B	Ca
Min	0.1700	0.6000	0.0200	--	--	0.3500	0.3500	0.1500	--	--	--	--	--	--	--
Max	0.2300	0.9500	0.0400	0.0200	0.3000	0.7500	0.7000	0.2500	0.0200	0.0450	0.3500	--	0.0100	--	--
Actual	0.2150	0.7800	0.0300	0.0160	0.1900	0.5300	0.5560	0.2100	0.0026	0.0240	0.0850	0.0110	0.0027	0.0004	0.0007

-: METALLURGICAL RESULTS :-

INCLUSION RATING IS : 4163/JK CHART/ASTM E-45A									Aust.Grain Size ASTM No. (E-112)	7	Gas Content (ppm)	
A		B		C		D						
T	H	T	H	T	H	T	H					
STD	3.0	2.0	2.5	1.5	1.0	1.0	1.5	1.0	Decarb. (MM)	0.10	O2	18
MAX											N2	78
ACTUAL	1.5	0.5	0.5	0.0	0.0	0.0	1.0	0.0	Micro- Structure	P+F+B	H2	.923

MECHANICAL PROPERTIES (ASTM A-370/IS-1608)
 TEST CONDITION (N / H & T)

MACRO ULTRASONIC TEST MIX UP TEST

	U.T.S.	Y.S.	EL%	RA%	Impact Value	Hardness B.H.N./Rb	BETTER THAN C2,R2,S2 MAX LEVEL AS PER PLATE 1st OF ASTM-E-381	100 % DONE OK	SPARK TEST 100% DONE OK
Reqd.	-	-	-	-	-	-			
Actual	-	-	-	-	-	174-183			

-: HARDENABILITY (HRC) AS PER IS : 3848 :-

Distance	J1/16	J2/16	J3/16	J4/16	J5/16	J6/16	J7/16	J8/16	J9/16	J10/16	J12/16
Required	-	-	-	33-44	-	-	-	-	-	-	-
Actual	45.5	44	40.5	36	31.5	28	26	24.5	-	-	-

Remarks :- REDUCTION RATIO=13.0,100% MOBILE SPECTRO DONE OK (X-RAYS)
 MATERIAL CONFORMS TO MS: 3006-1,ISSUE DATE:4/27/08,REV # : D

SURFACE SATISFACTORY,DI VALUE=2.04"(1.80-2.30),%NB: 0.0052

Note :- TESTED FOR RADIOACTIVE CONTAMINATION OK

[Signature]