

INSTITUTE FOR AUTO PARTS & HAND TOOLS TECHNOLOGY

(UNDP/UNIDO ASSISTED PUNJAB GOVT. PROJECT)

A-9, PHASE-V, FOCAL POINT, LUDHIANA-141010. (INDIA)

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Testing & Evaluation Deptt.

FM 02/00/03/ 08/ 2002

TEST CERTIFICATE

Spark Emission Spectroscopic Analysis

Port No. : 2012/5593

Date of Receipt : 24/11/2012

Customer : M/s

Sharn. Steel(P) Ltd.
Ph-VII, Focal Point,
Ludhiana.

Date of Test : 24/11/2012

Work Order No.: 38915

Type of Sample : Cut Pc of Steel Sample 784 , Qty:-01

Ref. (if any)

NIL

Instrument Used : Spark Emission Spectrometer BAIRD, DVG, USA

Environmental condition : Temperature: 24°C , % Relative Humidity: 45-60

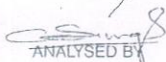
H- No :- S-784

Test Method : ASTM E415-2008

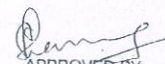
Observation

(Element concentration in percentage)

Test No.	C	Si	Mn	P	S
Q-1059	0.08	0.13	0.40	0.020	0.012


ANALYSED BY

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APPROVED BY
S.K. SHARMA
Asst. Pr, IAHT, LUDHIANA.

TERMS : 1. Sample shall be retained only for 90 days.

2. The results listed refer only to the tested sample and indicated parameters, Endorsement of product is neither inferred nor implied.

3. This test reports can not be reproduced wholly or in parts and cannot be used as an evidence in the court of law and shall not be used in advertising media without the written approval of General Manager, Institute for Auto Parts & Hands Tools Technology, Ludhiana.

4. Total Liability of our laboratory is limited to the invoiced amount. No liability shall be accepted after the sample is taken back by the customer.



SHARU STEELS (P) LTD.

B-48 & D-251, Phase-VII, Focal Point, LUDHIANA - 141 010.
E-mail : info@sharusteels.com & sales@sharusteels.com

QUALITY ASSURANCE DEPARTMENT METALLURGICAL TEST REPORT

TEST CERTIFICATE

F-QCD-(



M/S. SARA SAE PRIVATE LIMITED UNIT NO.4 BACK SIDE RADHA SWAMI SATSANG GHAR, VILLAGE MAHAL ROAD,G.T. ROAD, GORAYA (PUNJAB)	T.C. No. 2513 Invoice No. 1846 Truck No. PB29-9605	Date 25-11-2012
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GRADE	SIZE	HEAT NO.	MANUFACTURING ROUTE	COLOUR CODE	SUPPLY COND.N.	QNTY. M.T.	NO. OF PCS.
SAR1008	68MM	S-784	L/HT	GREY	AS ROLLED	6.420	LOOSE

CHEMICAL COMPOSITION IN PERCENTAGE

	C	Mn	S	P	Si	Ni	Cr	Mo	V	Al	Cu	Sn	Ti	B	Ca
Min.	-														
Max.	-														
Actual	0.09	0.42	0.014	0.022	0.14					0.026					

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		Decarb. (MM)	Micro-Structure	P+T	O ₂	
T	H	T	H	T	H	T	H				N ₂	
STD												
MAX												
ACTUAL	1.0		1.5		1.0		1.0	0.5			H ₂	

MECHANICAL PROPERTIES

	U.T.S.	Y.S.	EL %	RA %	Impact Value	Hardness B.H.N. / R _b	MACRO	ULTRASONIC TEST	MIX UP TEST
Reqd.							OK	OK	OK
Actual									

HARDENABILITY (HRC) AS PER IS : 3848

Distance										
Reqd.										
Actual										

Remarks :