



BHUPENDRA STEELS (P) LIMITED
SPECTRO LAB & METALLURGICAL TESTING CENTRE

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NEW DELHI (INDIA)

TEST REPORT

BSL/SPECTRO/5.10F-01/01/00

M/s. Sara Services & Engineers (P) Ltd
7/1, Pritam Road, Division - II,
Dehra Dun - 248001

Report No.

62626

D.O.T. :

24.09.2006

Ref. No.

227

D.O.R. :

24.09.2006

Description Heat No. -B-84

J.O. No. :

26256

RESULTS

Chemical Analysis

Sample ID: J.O.No. - 26256/2

By Spectrometer (ASTM E1507, 1998)

<u>Element</u>	<u>%</u>
Carbon	0.100
Silicon	0.149
Sulphur	0.011
Phosphorus	0.018
Manganese	0.492
Nickel	<0.05
Chromium	<0.05
Molybdenum	<0.05
Vanadium	<0.04
Copper	0.065
Tungsten	<0.02
Cobalt	<0.02
Aluminium	<0.03
Titanium	0.018
Iron	<0.02
	98.37

Checked By



Authorised Signatory

STENO 1030

PRINTED LAB.



SHARU STEELS (P) LTD.

B-48 & D-251, Phase-VII, Focal Point, LUDHIANA - 141 010.

E-mail : sharusteels@connect2.dsl.net

AN ISO - 9001 : 2000 CERTIFIED COMPANY

QUALITY ASSURANCE DEPARTMENT

METALLURGICAL TEST REPORT



Customer Address : SARA SERVICES & ENGINEERS PVT. LTD.
DEHRA DUN (U.A.)

Date : 14-09-2006

TEST RESULTS

CERTIFICATE NO. : 1186/09-2006
GRADE : -
SIZE : INGOT
SAMPLE NO. : 1
HEAT NO. : S 84
COLOUR CODE :
QTY/NO. OF BARS :
MULTIPLE/FIX LENGTH :

A. CHEMICAL ANALYSIS :

C	Mn	S	P	Si	Ni	Cr	Mo	V	Al	Cu.	Ti	B
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Spec : Low-High

0.09 0.38 0.029 0.028 0.22

Obtained

METALLOGRAPHIC CHARACTERISTICS :

Inclusion Rating : A Thin B Thick C Thin D Thick
(In accordance with IS : 4163) Thin Thick Thin Thick Thin Thick

Grain Size : High Low
(In accordance With IS : 4748)

C. MACRO RESULTS :
(In accordance With ASTM E-381)

D. JOMINY HARDENABILITY : (In accordance with IS : 3848)

E. OTHER SPECIAL TESTS :

F. MECHANICAL PROPERTIES :

Tensile Strength	Yield Strength	% Elongation	% Area Reduction	Impact Horizontal/ Vertical	Hardness High/ Low
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REMARKS :