

**BSL****SPECTRO LAB****METALLURGICAL TESTING CENTRE**

(A Unit of BSL Castings Pvt. Ltd.)

(NABL ACCREDITED LAB)

**TEST REPORT****WORKS & OFFICE :**PLOT NO. 263, SECTOR-24  
FARIDABAD-121005 (INDIA)

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CERTIFICATE NO.

T - 1452 &amp; T- 1453

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

to:	M/s. Nov Sara India (P) Ltd.	Report No.	147106	D.O.T. :	08.07.2010
	7/1, Pritam Road, Unit - II,	Ref. No.	Nil	D.O.R. :	07.07.2010
	Dehra Dun - 248001			J.O. No. :	45416
Description	Sample No. - 4979, Heat No. - S-445A				

**RESULTS**

**Chemical Analysis** (Fe Base - LAS)  
Protocol : ASTM E 1507 (By O.E.S)

Sample ID; J.O.No. - 45416/40

<u>Element</u>	<u>%</u>
Carbon	0.093
Silicon	0.066
Sulphur	0.013
Phosphorus	0.035
Manganese	0.373
Nickel	<0.05
Chromium	<0.05
Molybdenum	<0.05
Vanadium	<0.04
Copper	0.010
Tungsten	<0.02
Cobalt	<0.03
Aluminium	0.012
Magnessium	<0.01
Titanium	<0.02
Iron	99.33

Checked By



**Authorised Signatory**  
( Q.M. / T.M. )

1. The result listed refer only to the tested samples and applicable parameters, Endorsement of product is neither inferred nor implied.
2. Total Liability of our Laboratory is limited to the invoiced amount. No liability will be accepted after the sample is taken back.
3. \*Not Covered under NABL Scope.
4. This report can not be used as an evidence in a court of law.
5. Samples will be destroyed after 15 days.
6. Any Complaints about this report should be communicated within 7 days of issue of this report.
7. This report shall not be reproduced except in full, without the written permission of the Laboratory.





# SHARU STEELS (P) LTD.

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

E-mail : info@sharusteels.com

E-mail : sharusteels@connect2.dsl.net

**QUALITY ASSURANCE DEPARTMENT  
METALLURGICAL TEST REPORT**

F-QCD-03



Customer  
Address

NOV SARA INDIA PRIVATE LIMITED  
DEHRADUN UTTARAKHAND

Date

25-08-2010

## TEST RESULTS

CERTIFICATE NO. :

GRADE :

SIZE :

SAMPLE NO. :

HEAT NO. :

COLOUR CODE :

QTY/NO. OF BARS

MULTIPLE/FIX LENGTH

1404/08-2010

SAE 1008

40X40 MM

1

S 445

ORANGE

### A. CHEMICAL ANALYSIS :

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

Obtained

0.08 0.42 0.030 0.035 0.15

0.029

### B. METALLOGRAPHIC CHARACTERISTICS :

Inclusion Rating :

(In accordance with IS : 4163)

A

Thin Thick

B

Thin Thick

C

Thin Thick

D

Thin Thick

1.5

1.5

1.0

2.0

Grain Size

:

High

Low

(In accordance With IS : 4748)

7

### C. MACRO RESULTS :

(In accordance With ASTM E-381)

OK

### 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

8200-MT

REMARKS :