

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

(A Unit of BSL Castings Pvt. Ltd.)

(NABL ACCREDITED LAB)

IFICATE NO.  
52 & T- 1453**TEST REPORT**

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

to :	M/s. Nov Sara India (P) Ltd.	Report No.	149847	D.O.T. :	16.08.2010
	7/1, Pritam Road, Unit - II,	Ref. No.	Nil	D.O.R. :	14.08.2010
	Dehra Dun - 248001			J.O. No. :	46123
Description	Sample No. - 5110, Heat No. - S-493 C				

**RESULTS**

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

Sample ID: J.O.No. - 46123/27

<u>Element</u>	<u>%</u>
Carbon	0.067
Silicon	0.142
Sulphur	0.012
Phosphorus	0.027
Manganese	0.421
Nickel	<0.05
Chromium	<0.05
Molybdenum	<0.05
Vanadium	<0.04
Copper	0.022
Tungsten	<0.02
Cobalt	<0.03
Aluminium	0.028
Titanium	<0.02
Iron	99.22



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.dslnet

QUALITY ASSURANCE DEPARTMENT

METALLURGICAL TEST REPORT

F-QCD-03



Customer  
Address

NOV SARA INDIA PRIVATE LIMITED  
DEHRADUN, UTTARAKHAND

Date

05-10-2010

## TEST RESULTS

CERTIFICATE NO. :  
GRADE :  
SIZE :  
SAMPLE NO. :  
HEAT NO. :  
COLOUR CODE :  
QTY/NO. OF BARS  
MULTIPLE/FIX LENGTH

1750/10-2010  
SAE 1008  
56 MM  
3  
S 493  
YELLOW

### A. CHEMICAL ANALYSIS :

C	Mn	S	P	Si	Ni	Cr	Mo	V	Al	Cu	Ti	B
Spec : Low-High	-	-	-	-	-	-	-	-	-	-	-	-
Obtained	0.08	0.42	0.030	0.035	0.20			0.026				

### B. METALLOGRAPHIC CHARACTERISTICS :

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

2.8 1.0 1.5 1.5

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
------------------	----------------	--------------	------------------	-----------------------------	--------------------

3845 H.C

### REMARKS :

For any Quality related issue please contact  
Mr. Karanpal Singh (Technical Director)  
Mobile : 98141-31268  
Mr. J. P. Singh (Manager Q/C & Mkt.)  
Mobile : 98550-82559

Approved By :  
  
AUTHORISED SIGNATORY

CHECKED BY

\*\*\*\*\*