

BSL**SPECTRO LAB**

&

METALLURGICAL TESTING CENTRE

(A Unit of BSL Castings Pvt. Ltd.)

(NABL ACCREDITED LAB)

WORKS & OFFICE :

PLOT NO. 263, SECTOR-24

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CERTIFICATE NO.
T - 1452 & T- 1453**TEST REPORT**

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

Ordered to : M/s. Nov Sara India (P) Ltd.
 7/1, Pritam Road, Unit - II,
 Dehra Dun - 248001

Report No. 152023
 Ref. No. Nil

D.O.T. : 16.09.2010
 D.O.R. : 16.09.2010
 J.O. No. : 46674

Sample Description Sample No. - 5203, Heat No. - R-552, Dia - 56.0mm

RESULTS

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

Sample ID; J.O.No. - 46674/3

<u>Element</u>	<u>%</u>
Carbon	0.063
Silicon	0.554
Sulphur	0.016
Phosphorus	0.033
Manganese	1.637
Nickel	10.15
Chromium	16.82
Molybdenum	2.071
Vanadium	0.056
Copper	0.413
Tungsten	0.059
Cobalt	0.162
Aluminium	<0.01
Titanium	<0.02
Iron	67.95



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

Checked By

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



PARVATI LTD.

Regd Office & Works : 27, Rajasthani Udyog Nagar, G. T. Karnal Road,
NEW DELHI - 33, Phone : 91 - 11 - 27691481, 1282, 1283 Fax : 91 - 11 - 27691909

TEST CERTIFICATE

Customer Name & Destination : M/S. NOV SARA INDIA P.LTD.		T.C.NO.:P- 829	Date : 7.9.10	ORDER NO : VERBAL		
Material Specification	Manufacturing Route	Supply Condition	Size	PCS	Colour Code	Weight (Mt)
AISI-316	INDUCTION FURNACE	AS ROLLED	56 MM	113	BLUE	

CHEMICAL ANALYSIS IN PERCENTAGE

ELEMENTS		C	Mn	Si	S	P	Cr	Ni	Mo	N	NB		Size	Pcs.
Specification	Min.													
	Max.													
Heat No.	Grade													
R-550	AISI-316	.066	1.54	.54	.014	.033	16.74	10.14	2.05	.0570			56 MM	25
R-551	AISI-316	.063	1.58	.58	.016	.035	16.91	10.09	2.07	.0566			56 MM	25
R-552	AISI-316	.071	1.52	.51	.014	.031	16.66	10.11	2.02	.0592			56 MM	25
R-553	AISI-316	.069	1.54	.53	.015	.033	16.84	10.06	2.02	.0604			56 MM	25
R-554	AISI-316	.070	1.52	.55	.014	.032	16.69	10.10	2.04	.0586			56 MM	13

ULTRASONIC TESTING
ACC. STD : 6mm FBH

REMARKS : NA

MECHANICAL PROPERTIES : TEST STD ASTM A370

	Test Condition	UTS (N/MM ²)	YS (N/MM ²)	% EL	% RA	Hardness (BHN)	
						Min.	Max.
SPEC	-	-	-	-	-	-	-
RESULT	-	-	-	-	-	-	-

METALLURGICAL TEST RESULT

Grain Size
E 112

IMPACT TESTING :

INCLUSION RATING ASTM E - 45					Test Temp :	Test Std :	Average
A	B	C	D		Sr. No	Impact Energy (J)	
					1	-	
Thin	-	-	-	-	2	-	
Thick	-	-	-	-	3	-	

JOMINY HARDENABILITY : ASTM - 3848

MACROSTREAK FLAW TEST (IS - 4075)

DIST mm/Inch	J	J	J	J	J	J	Macro Test (ASTM E - 381)	1 st Step	2 nd Step	3 rd Step
ACTUAL HRC										

Visual Inspection :

Remarks

- Impact Testing as per DINEN 10015 - 1
- Ultrasonic testing as per ASTM A 388
- Material is free from residual radioactive elements.
- Lead not added during manufacturing.

For Parvati Ltd.

WE CONFIRM THAT THE TEST
CERTIFICATE FINDINGS ARE
CORRECT & RESULTS ARE
AS PER STANDARD /
CUSTOMER'S REQUIREMENTS

Chemist

[Signature]

Authorized Signatory (Q.C.)

