

**BSL****SPECTRO LAB**CERTIFICATE NO.  
T - 1452 & T - 1453**METALLURGICAL TESTING CENTRE**( A Unit of BSL Castings Pvt. Ltd. )  
( NABL ACCREDITED LAB )**TEST REPORT****WORKS & OFFICE :**PLOT NO. 263, SECTOR-24,  
FARIDABAD - 121 005 (INDIA)  
Ph. No. : 0129-4189800  
FAX No. : +91-129-4065535  
E.mail : castings@bsltd.net

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

Issued to :	M/s. Sara Sae (P) Ltd. 7/1, Pritam Road, Unit - II Dehra Dun - 248001	Report No.	9002	D.O.T. :	23.08.2013
Sample Description. :	Sample No. - 8614, Heat No. - D-3391, Dia - 50.0mm			Ref. No.	Nil
				D.O.R. :	21.08.2013
				J.O. No. :	2411

**RESULTS****Chemical Analysis** (Fe Base - SS)  
Protocol : ASTM E 1086:2008 (By O.E.S)

Sample ID: J.O.No. - 2411/2

<u>Element</u>	<u>%</u>
Carbon	0.058
Silicon	0.523
Sulphur	0.020
Phosphorus	0.035
Manganese	1.121
Nickel	10.10
Chromium	16.45
Molybdenum	2.108
Copper	0.348
Tungsten	0.041
Cobalt	0.168
# Niobium	0.035
# Titanium	0.016

Checked By

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

**Note :**

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.
8. # Results found outside the range of NABL accredited scope.

## MATERIAL TEST CERTIFICATE

(As per Indian Boiler Regulation 169)

CERTIFICATE NO.:	KSL-4654/13-14	CUSTOMER: M/S SARA SEA PRIVATE LIMITED JALANDHAR (PUNJAB)
DATE:	05.08.2013	
HEAT NO.:	D 3391	
SPECIFICATION:	AISI 316	
INVOICE NO. & DATE:	4413 DT 03.08.13	

SL. NO.	ITEM DESCRIPTION	QTY.
1	Round Dia 50 MM	62
	Grade Color Code: Pink	

## CHEMICAL COMPOSITION

PERCENT	REQD. MIN.	REQD. MAX	ACTUAL VALUE
C		0.08	0.068
Mn		2.00	1.11
Si		1.00	0.58
P		0.045	0.041
S		0.030	0.018
Cr	16.00	18.00	16.64
Ni	10.00	14.00	10.09
Mo	2.00	3.00	2.08
V			0.03
Ti			0.01
Cu			0.39
Al			0.01

## Remarks:

- 1) Steel melting process: Electric furnace-Argon purged ladle bottom poured "under inert atmosphere"
- 2) Steel is fully killed with Al/Si alloys and is made to fine grain practice.
- 3) Surface quality of ingot is acceptable and free from harmful defect.
- 4) No mercury / Lead added during steel melting process.

We have satisfied ourselves that steel melting has been done and tested in accordance with the requirement of Indian Boiler Regulation, 1950. We further certify that the particulars entered herein are correct

Approval Certificate No-130, dt 4<sup>th</sup> June, 2012 as "Well-Known Steel Maker"

Valid up to 1<sup>st</sup> March 2017

Authorized Signatory

