



SPAN FORGING PVT. LTD.

Manufacturers of : Steel Forging, CNC Turned Components & Gears

Works : Village - Tatarpur (Near Prithla) Teh. Palwal, Distt. Faridabad, Cell : 9810010535

Date.....

Ref. No.....

TEST REPORT

Issued to: M/s NOV-SARA India(P)Ltd.
A/2Sara Ind.Estate Ltd.Chak-
rata Road,Selaqui,Dehradun.

Report No.

980

D.O.T.

1/12/2011

D.O.R

30/11/2011

Sample Description

TEST SAMPLE

Sample No.

6966

Heat No.

R-614

RESULTS

Chemical Analysis

By Spectrometer

Element

%

Carbon	0.054
Silicon	0.507
Sulphur	0.0012
Phosphorus	0.0178
Manganese	1.38
Nickel	10.27
Chromium	16.75
Molybdenum	2.09
Vanadium	0.0583
Copper	0.38
Niobium/Columbium	0.0074
Cobalt	0.212
Aluminium	0.0105
Titanium	0.0093
Iron	68.20

Checked By

Arun Mishra

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. The report can not be used as an evidence in a court of law.
4. Samples will be destroyed after 15 days.
5. Any Complaints about this report should be communicated with in 7 days of issue of this report.
6. This report shall not be reproduced except in full, without the written permission of the Laboratory.
7. *Not Covered under NABL Scope.



PARVATI P.LTD.

Regd Office & Works : 27, Rajasthani Udyog Nagar, G. T. Karnal Road,
NEW DELHI - 33, Phone : 91 - 11 - 47029900 Fax : 91 - 11 - 47029922

TEST CERTIFICATE

Customer Name & Destination : M/S.NOV SARA INDIA P.LTD.		LC NO - P-28	Date : 31.10.11	ORDER NO : VERBAL		
Material Specification	Manufacturing Route	Supply Condition	Size	PCS	Colour Code	Weight (KG)
AISI-316	INDUCTION FURNACE	AS ROLLED	70 MM 40 MM	21 135	BLUE	3400 4295 2880 10575

CHEMICAL ANALYSIS IN PERCENTAGE

ELEMENTS	C	Mn	Si	S	P	Cr	Ni	Mo	N	Size	Pes.
Specification	Min.										
	Max.										
Heat No.	Grade										
R-614	AISI-316	.066	1.54	.49	.014	.029	16.81	10.09	2.05	.0511	40 MM 80
R-615	AISI-316	.057	1.49	.55	.009	.031	16.69	10.14	2.03	.0490	40 MM 55
R-616	AISI-316	.060	1.53	.53	.011	.027	16.62	10.07	2.04	.0560	70 MM 21

ULTRASONIC TESTING
ACC. STD : 6mm FBH

REMARKS : NA

MECHANICAL PROPERTIES : TEST STD ASTM A370

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

METALLURGICAL TEST RESULT

INCLUSION RATING ASTM E - 45

	A	B	C	D
Thin	-	-	-	-
Thick	-	-	-	-

Grain Size
E. 112

Test Temp :

Sr. No

IMPACT TESTING :

Test Std :

Impact Energy (J)

Average

JOMINY HARDENABILITY : ASTM - 3848

DIST mm/inch	J	J	J	J	J	J
ACTUAL HRC						

MACROSTREAK FLAW TEST (IS - 4675)

Macro Test
(ASTM E 381)

1st Step

2nd Step

3rd Step

Visual Inspection :

Remarks

- 1 Impact Testing as per DINEN 10015 - 1
- 2 Ultrasonic testing as per ASTM A 388
- 3 Material is free from residual radioactive elements.
- 4 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

Authorized Signatory (Q.C.)



4295
2880
7175