



SPAN FORGING PVT. LTD.

Manufacturers of : Steel Forging, CNC Turned Components & Gears

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

Ref. No. SF/06/03.

Date 24-03-11

TEST REPORT

Issued to: M/s Nov Sara India Pvt Ltd.
7/1, Pritam Road, Unit-II
Dehradun-248001

Report No.
119

D.O.T.

22-03-2011

D.O.R

24-03-2011

Sample Description

T.S.

Sample No.

5857

Heat No.

D-0897

RESULTS

Chemical Analysis
By Spectrometer

Sample ID

J.O No.

| <u>Element</u> | <u>%</u> |
|----------------|----------|
| Carbon | 0.0707 |
| Silicon | 0.576 |
| Sulphur | 0.0158 |
| Phosphorus | 0.0275 |
| Manganese | 0.961 |
| Nickel | 10.29 |
| Chromium | 16.73 |
| Molybdenum | 2.19 |
| Vanadium | 0.0608 |
| Copper | 0.404 |
| Tungsten | 0 |
| Cobalt | 0.211 |
| Aluminium | 0.0092 |
| Titanium | 0.0263 |
| Iron | 68.30 |

Checked By
Arun Mishra



Autorised 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 within 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.

MATERIAL TEST CERTIFICATE

| | | |
|-------------------------|------------------|------------------------------------|
| TC NO-KSL-1923/10-11 | Date: 12.02.2011 | Customer: M/S NOV SARA DHERADUN |
| Heat No. D-0887 | | |
| Specification: AISI-316 | P.O. No. | Invoice No: 647 Date: 12.02.2011 |

| Sl. NO. | ITEM DESCRIPTION & DRAWING NO. | QUANTITY NOS |
|---------|--------------------------------|--------------|
| 1 | AISI-316 ROUND | 137 |
| | | |
| | | |
| | | |

CHEMICAL COMPOSITION

| PERCENT | C | Mn | Si | P | S | Cr | Ni | Mo | Cu | Ti | Al | V | |
|-----------------|-------|------|------|-------|-------|-------|-------|------|----|----|----|---|--|
| AS PER Min. (%) | | | | | | 16.00 | 10.00 | 2.00 | | | | | |
| SPEC Max. (%) | 0.080 | 2.00 | 1.00 | 0.045 | 0.030 | 18.00 | 14.00 | 3.00 | | | | | |
| Actual Value | 0.059 | 1.27 | 0.57 | 0.034 | 0.022 | 16.33 | 10.14 | 2.11 | | | | | |

HEAT TREATMENT

| Condition | Temp. C | Soaking Time Hrs | Cooling Medium |
|-----------|---------|------------------|----------------|
| | | | |

PHYSICAL PROPERTIES

| Mechanical Properties | Y S N/mm ² | U T S N/mm ² | ELONG % Cl. mm | REDN IN AREA % | BEND | HARDNESS BHN | IMPACT (Joules) |
|-----------------------|--------------------------|----------------------------|-------------------|-------------------|------|-----------------|--------------------|
| AS PER Min. | | | | | | | |
| SPEC Max | | | | | | | |
| Actual Value | | | | | | | |

We hereby certify that the items mentioned above have been tested and inspected in our presence and are found to be in accordance with the drawing, specifications, and purchase order.

TO MARK

This Steel has been made by E.T. (open) process which is fully killed by Al & Si. It has fine grain structure.

Sign of the inspecting Officer

Sign of the Chief of Quality Control