



SPAN FORGING PVT. LTD.

Manufacturers of : Steel Forging, CNC Turned Components & Gears

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

TEST REPORT

| | | | |
|--------------------|--|------------|------------|
| Ref. No. | M/s Nov Sara India Pvt. Ltd. A/2Sara Industrial Estate Ltd. Chakrata Road, Rampur - Selaqui Dehradun-248001 | Report No. | Date..... |
| | | 857 | 15-10-2011 |
| | | | D.O.R |
| | | | 15/10/2011 |
| Sample Description | INGOT 4"X5" | Sample No. | Heat No. |
| | | 6766 | D-1554 |

RESULTS

Chemical Analysis
By Spectrometer

Sample ID

J.O No.

| <u>Element</u> | <u>%</u> |
|----------------|----------|
| Carbon | 0.0759 |
| Silicon | 0.512 |
| Sulphur | 0.0258 |
| Phosphorus | 0.0445 |
| Manganese | 1.06 |
| Nickel | 10.28 |
| Chromium | 16.82 |
| Molybdenum | 2.15 |
| Vanadium | 0.057 |
| Copper | 0.368 |
| Niobium | 0.0181 |
| Cobalt | 0.178 |
| Aluminium | 0.0167 |
| Titanium | 0.0276 |
| Iron | 68.30 |

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 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-2802/11-12 | Date : | 30.09.2011 | Customer : | M/S NOV SARA INDIA PVT. LTD. |
| Heat No. D -1554 | | | | DEHRADUN |
| Specification:- AISI 316 | P.O. No.: | B / KES 0066 / 11 Dated 27.06.2011 | Invoice No: | 550 Date 30.09.2011 |

| SL. NO. | ITEM DESCRIPTION & DRAWING NO. | QUANTITY NOS |
|---------|--------------------------------|--------------|
| 1 | AISI 316 Ingots 4"x 5" | 81 |
| | | |
| | | |
| | | |
| | | |

CHEMICAL COMPOSITION

| PERCENT | C | Mn | Si | P | S | Cr | Ni | Mo | Cu | Ti | Al | V |
|--------------|----------|-------|------|------|-------|-------|-------|-------|------|----|-------|---|
| AS PER SPEC. | Min. (%) | | | | | 16.00 | 10.00 | 2.00 | | | | |
| | Max. (%) | 0.080 | 2.00 | 1.00 | 0.045 | 0.030 | 18.00 | 14.00 | 3.00 | | | |
| Actual Value | | 0.063 | 1.42 | 0.44 | 0.031 | 0.022 | 16.37 | 10.14 | 2.15 | | 0.019 | |

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 % GL mm | REDN IN AREA % | BEND | HARDNESS BHN | IMPACT (Joules) |
|-----------------------|---------------------------|-----------------------------|------------------|----------------|------|--------------|-----------------|
| AS PER SPEC. | Min. | | | | | | |
| | 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.

REMARK

The Steel has been made by Electric Furnace which is fully killed by Al & Si. It has fine grain structure.

Sign of the Inspecting Officer

Registered Office :

G & JU - 26/1, Pitampura, Telefax : + (91) 11 27343847

Delhi - 110088 (INDIA) : + (91) 11 26112222

Works :

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Bhiwadi - 301019, Rajasthan (INDIA)

Phone : + (91) 1493 220142

Fax : + (91) 1493 220552

Sign of the Panel of Quality Control



WEB : WWW.KSL.IN