



Management System
ISO 9001:2015
www.tuv.com
ID: 9105023711

Certificado de Calidad

IT020305 rev.01

N° NN-20235

Industrias Nelson
Av. Rivadavia 12140 – Ciudadela – Buenos Aires
info@industriasnelson.com.ar / www.industriasnelson.com.ar
T.E. 0800-333-4237

| | Descripción | Código | Certificado |
|--|--|-----------|-----------------|
| | CONECTOR CODO ¼" OD X ½" NPT | 69S0408 | AA-670 / AA-737 |
| | Componentes | Material | Certificado |
| | CODO FORJADO CON BARRA REDONDA DE 25.4mm | AISI 316I | AA-670 / AA-737 |

Protocolo de ensayo :

| Tipo | | Presión de trabajo | Estado | Presión de prueba | Estado | Tiempo |
|------------|---|--------------------|--------|-------------------|--------|-------------|
| Hidráulico | 1 | 6.000 PSI | Ok | 8.000 PSI | Ok | 60 segundos |

Dimensional:

Se controlaron las roscas con el calibre correspondientes dando como resultado satisfactorio. Se controlaron también la rugosidad superficial y las dimensiones generales dando un resultado satisfactorio.

Visual/Funcional:

Se controlaron la porosidad, rebabas, ensamblado, terminación superficial y su función mecánica dando como resultado: satisfactorio

Observaciones :

Se certifica que las piezas descriptas fueron construidas de acuerdo a lo indicado en nuestros estándares internos, que se cumplen de acuerdo a un sistema de Gestión de Calidad certificado ISO 9001:2015, manteniendo en archivo los certificados correspondientes a cada material.

Firma: **INDUSTRIAS NELSON S.A.**



Management System
ISO 9001:2015
www.tuv.com
ID: 9105023711



CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 011022

ADM. OFFICE: 504, SUKH SAGAR, N. S. PALKAR MARG, MUMBAI 400 007, INDIA

Tel.: 91-22- 66290600. Fax.: 91-22-66290633/34

Website : www.chandansteel.net

Email : csl@chandansteel.net

L/c. No.:

L/c. Date:

WORKS:PLOT NO. 31 TO 36, 45,46,48, & 49/2,142

(EXP. AREA)GIDC, UMBERGAON & SURVEY NO. 102/2 & 3,VILLAGE ,

DEHARI, TALUKA:UMBERGAON, DIST:VALSAD, GUJARAT -396171

GSTIN - 24AAACC4713B1ZG

F860(824) QC 09/00/11.01.2018

MILL TEST CERTIFICATE

INSPECTION CERTIFICATE 3.1 ACCORDING TO EN 10204 : 2005

| | | | | | | | | | | | |
|--|--|-------------------|---|---|--|----------------------|------------------------|-------|------------------|----|---|
| Consignee Majdalani Inox S.A. RUTA PANAMERICANA KM 31,200, COLECTORA OESTE (1617) EL TALAR, BUENOS AIRES ARGENTINA | | | | | Test Certificate No. : EXP/00039 - 45/2019-2020 Date of Issue : 03.04.2019 P.O. No. :- SC_No. & Date : 18-19/0484, Dt.13.12.2018 Invoice No. & Date : EXP/00039/2019-20, Dt.03.04.2019 | | | | | | |
| PRODUCT DESCRIPTION STAINLESS STEEL ROUND BARS | | | | | LENGTH | | | | Net Wt. | | |
| | | | | | Ordered | | Actual | | 1042 Kgs. | | |
| | | | | | 6.0 - 6.05 Mtrs. | | 6.0 - 6.05 Mtrs. | | | | |
| Heat No. | Grade AISI | Size mm/inches | Tolerance | Process Route Electric Melting, A.O.D. Refining, Continuous Casting | | | | | | | |
| CH-9809 | 316L | 25.40 mm | h9 | | | | | | | | |
| CHEMICAL COMPOSITION (Weight %) | | | | | | | | | | | |
| | C | Si | Mn | P | S | Cr | Mo | Ni | Cu | Ti | N |
| Min. | - | - | - | - | - | 16.00 | 2.00 | 10.00 | - | - | - |
| Max. | 0.030 | 1.00 | 2.00 | 0.045 | 0.030 | 18.00 | 3.00 | 14.00 | - | - | - |
| Results | 0.027 | 0.50 | 1.72 | 0.044 | 0.009 | 16.70 | 2.05 | 10.03 | - | - | - |
| MECHANICAL PROPERTIES | | | | | | | | | | | |
| Specified Value | Yield Strength N/mm ² /MPa (Rp0.2) | | Tensile Strength N/mm ² /MPa (Rm) | | Elongation % | | Reduction of Area % | | Hardness (HB) | | |
| Min. | 170 | | 485 | | 30 | | 40 | | - | | |
| Max. | - | | - | | - | | - | | - | | |
| Results | 317 | | 637 | | 48 | | 74 | | 205-208 | | |
| Remarks: | | | | | | | | | | | |
| 1. Cold drawn & Centreless Ground. | | | | | | | | | | | |
| 2. Solution annealed at 1050 °C. | | | | | | | | | | | |
| 3. PMI test done 100% & found Satisfactory. | | | | | | | | | | | |
| 4. Material is free from radio-active contamination. | | | | | | | | | | | |
| 5. The material conforms to ASTM A276/A276M-17 Specifications. | | | | | | | | | | | |
| 6. The material is manufactured /melt in Chandan Steel Mill and is of Indian Origin. | | | | | | | | | | | |
| 7. No welding/weld repairs was performed on this material. | | | | | | | | | | | |
| BUNDLE NO.: 21 & 22 | | | | | | COLOUR : LIGHT GREEN | | | | | |

It is hereby certified that the above results are true and correct in every details and are meeting the requirements of specification & purchase order.

B. S. RAUTELA
MANAGER - QUALITY ASSURANCE

AA-670



Regd. Office & Works: Plot No.: 235, Sarkhej Bavla, N.H. No. 8-A, Village Sari, Taluka Sanand, Distt.: Ahmedabad-382220, Gujarat, India
 T.: 02717 - 610800 (100 lines), F : 02717 - 610824
 E : sales@gopalgroup.com | W : www.gopalgroup.com

MILL TEST CERTIFICATE 3.1

(NABL ACCREDITED LAB)

AD 2000 – MERKBLATT W0/W2 CERTI NO. 07 202 1423 WP-1414/13Q & PED 97/23/EC CERTI NO. 07 202 1423 WZ 1414/13Q
 ACCORDING TO EN 10204 : 2005

| | |
|---|---|
| CONSIGEE FAMIQ S.R.L. AV. SAN MARTIN 4723 C.A. BUENOS AIRES-C1417DSH ARGENTINA. | Test Certificate No. : 53531 Date of Issue : 31-December-2015 INVOICE NO : LSL/EXP/15-16/280 PO NUMBER : 54925 CIN NO : U27100GJ1999PLC036413 |
|---|---|

| PRODUCT | SUPPLY CONDITION | COLOUR CODE | PROCESS ROUTE | STAMP OF TESTING ENGINEERS | LENGTH REQUIRED | |
|----------------------------------|---------------------------|-------------|-------------------------|----------------------------|-----------------|-----------|
| | | | | | ORDERED | ACTUAL |
| STAINLESS STEEL BRIGHT ROUND BAR | Peeled, Ground & Polished | BLUE | EIF-AOD-LR-Fully Killed | SM | | 5.80-6.00 |

| Item No. | Heat No. | Grade | Size | Tolerance | No of Bndl | Pcs | Net Wt. (MT) |
|----------|----------|-----------|----------|-----------|------------|-----|--------------|
| 1 | FF-2873 | AISI 316L | 25.40 mm | h9 | 2 | 78 | 1.846 |
| 2 | FF-2828 | AISI 316L | 34.90 mm | h9 | 1 | 9 | 0.407 |
| 3 | FF-2828 | AISI 316L | 41.27 mm | h9 | 1 | 16 | 1.031 |
| 4 | FF-2538 | AISI 316L | 50.80 mm | h9 | 1 | 10 | 0.946 |
| 5 | FF-2795 | AISI 316L | 50.80 mm | h9 | 1 | 8 | 0.770 |
| 6 | FF-2845 | AISI 316L | 63.50 mm | h9 | 2 | 4 | 0.600 |

CHEMICAL COMPOSITION (Weight %)

| | C | Mn | Si | S | P | Cr | Ni | N | Mo | - | - |
|------|-------|------|------|-------|-------|-------|-------|---|------|---|---|
| Min. | - | - | - | - | - | 16.00 | 10.00 | - | 2.00 | - | - |
| Max. | 0.030 | 2.00 | 1.00 | 0.030 | 0.045 | 18.00 | 14.00 | - | 3.00 | - | - |

| | C | Mn | Si | S | P | Cr | Ni | N | Mo |
|---------|-------|------|------|-------|-------|-------|-------|--------|------|
| FF-2873 | 0.023 | 1.53 | 0.40 | 0.017 | 0.038 | 16.73 | 10.04 | 0.0736 | 2.03 |
| FF-2828 | 0.026 | 1.74 | 0.39 | 0.018 | 0.038 | 16.75 | 10.09 | 0.0650 | 2.04 |
| FF-2538 | 0.020 | 1.67 | 0.44 | 0.027 | 0.041 | 16.63 | 10.08 | 0.0717 | 2.03 |
| FF-2795 | 0.019 | 1.54 | 0.37 | 0.019 | 0.041 | 16.65 | 10.05 | 0.0680 | 2.02 |
| FF-2845 | 0.019 | 1.62 | 0.36 | 0.022 | 0.037 | 16.90 | 10.06 | 0.0620 | 2.03 |

MECHANICAL PROPERTIES / Test Condition : Solution Annealed

| Specified Values | Test Method :- ASTM A370 | | | | Hardness (HBW) | | Test Method :- ASTM E-23 Charpy (V) Impact Test (2mm) at (Joules) | | | |
|--------------------|----------------------------------|--|-------------------------------|---------------------|----------------|------|---|----|-----|------|
| | Proof Strength N/mm ² | Tensile Strength N/mm ² /Mpa (Rm) | Elongation after Fracture A % | Reduction of Area % | Min. | Max. | I | II | III | Avg. |
| | | | | | | | | | | |
| SPEC | 170 MIN | 485 MIN | 40 MIN | 50 MIN | - | - | - | - | - | - |
| FF-2873 / 25.40 mm | 302 | 612 | 58.00 | 67.00 | 175 | 182 | - | - | - | - |
| FF-2828 / 34.90 mm | 277 | 576 | 60.14 | 73.00 | 165 | 175 | - | - | - | - |
| FF-2828 / 41.27 mm | 285 | 589 | 59.00 | 70.00 | 163 | 170 | - | - | - | - |
| FF-2538 / 50.80 mm | 280 | 588 | 60.00 | 71.01 | 180 | 186 | - | - | - | - |
| FF-2795 / 50.80 mm | 254 | 556 | 64.00 | 73.00 | 169 | 176 | - | - | - | - |
| FF-2845 / 63.50 mm | 267 | 569 | 61.00 | 72.00 | 160 | 165 | - | - | - | - |

Remarks :

- The material is free from Radioactive contaminations .
- Lead has not added during manufacturing.
- Steel is fully killed by Aluminum for fine grain structure.
- Material confirms the requirement as per ASTM A276: 2010.

We hereby certify that above material described herein has been manufactured and tested with satisfactory results in accordance with the Specification & requirements



MADE IN INDIA

FAMIQ S.A.
 DPTO. CERTIFICACIONES
 COPIA FIEL DEL ORIGINAL