



Management System  
ISO 9001:2015  
www.tuv.com  
ID: 910602711

## Certificado de Calidad

IT020305 rev.01

# N° NN-20574

Industrias Nelson  
Av. Rivadavia 12140 – Ciudadela – Buenos Aires  
[info@industriasnelson.com.ar](mailto:info@industriasnelson.com.ar) / [www.industriasnelson.com.ar](http://www.industriasnelson.com.ar)  
T.E. 0800-333-4237

|  | Descripción            | Código          | Certificado        |
|--|------------------------|-----------------|--------------------|
|  | UNION CODO 1/2" OD     | 65S08           | AA-737             |
|  | <b>Componentes</b>     | <b>Material</b> | <b>Certificado</b> |
|  | UNION CODO 1/2" OD     | AISI 316        | AA-737             |
|  | Tuerca 61S08           | AISI 316        | AA-761             |
|  | Juego de Virolas 60S08 | AISI 316        | AZ-291 / AZ-297    |

### Protocolo de ensayo :

| Tipo       | Presión de trabajo | Estado | Presión de prueba | Estado | Tiempo      |
|------------|--------------------|--------|-------------------|--------|-------------|
| Hidráulico | 1                  | Ok     | 482 kg/cm2        | 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 : los conectores comprendidos dentro del certificados, son probados con tuercas, virolas y caño de nuestra propia comercialización.

Se certifica que las piezas descritas 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.**





# CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 011022

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATEL 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, &amp; 49/2, 142

(EXP. AREA) GIDC, UMBERGAON &amp; SURVEY NO. 102/2 &amp; 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<br>Majdalani Inox S.A.<br>RUTA PANAMERICANA KM 31,200, COLECTORA OESTE<br>(1617) EL TALAR, BUENOS AIRES<br>ARGENTINA   |  |                   |   |   | Test Certificate No. : EXP/00039 - 45/2019-2020<br>Date of Issue : 03.04.2019<br>P.O. No. :-<br>SC_No. & Date : 18-19/0484, Dt.13.12.2018<br>Invoice No. & Date : EXP/00039/2019-20, Dt.03.04.2019 |                      |                        |       |                  |    |   |
| PRODUCT DESCRIPTION<br>STAINLESS STEEL ROUND BARS  |  |                   |   |   | LENGTH   |                      |                        |       | Net Wt.          |    |   |
|  |  |                   |   |   | Ordered  |                      | Actual                 |       | 1042 Kgs.        |    |   |
|  |  |                   |   |   | 6.0 - 6.05 Mtrs.   |                      | 6.0 - 6.05 Mtrs.       |       |                  |    |   |
| Heat No.   | Grade<br>AISI                                    | Size<br>mm/inches | Tolerance                                       | Process Route<br>Electric Melting, A.O.D. Refining,<br>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<br>Value   | Yield Strength<br>N/mm <sup>2</sup> /MPa (Rp0.2) |                   | Tensile Strength<br>N/mm <sup>2</sup> /MPa (Rm) |   | Elongation<br>%  |                      | Reduction of Area<br>% |       | Hardness<br>(HB) |    |   |
| Min.   | 170  |                   | 485   |   | 30   |                      | 40                     |       | -                |    |   |
| Max.   | -  |                   | -   |   | -  |                      | -                      |       | -                |    |   |
| Results  | 317  |                   | 637   |   | 48   |                      | 74                     |       | 205-208          |    |   |
| Remarks:<br>1. Cold drawn & Centreless Ground.<br>2. Solution annealed at 1050 °C.<br>3. PMI test done 100% & found Satisfactory.<br>4. Material is free from radio-active contamination.<br>5. The material conforms to ASTM A276/A276M-17 Specifications.<br>6. The material is manufactured /melt in Chandan Steel Mill and is of Indian Origin.<br>7. No welding/weld repairs was performed on this material.<br>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



AZ-297

VIRAJ PROFILES LIMITED (SRM Division)  
Works: SURVEY NO. - 25/1, 25/2, 26 & 34, Village- MAAN, Taluka- PALGHAR, Dist. - THANE, MAHARASHTRA -401 506, INDIA,  
e-mail - viedgc@viraj.com

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT

|                           |                             |              |            |
|---------------------------|-----------------------------|--------------|------------|
| (A06)CUSTOMER :           | Manufacturer's Symbol (A04) | (A03)MTR NO. | 1035543/15 |
| JORVICAL ACEROS S.A.      | (Z02) DATE                  | (Z02) DATE   | 25.02.2018 |
| CATAMARCA, 1527           | MATERIAL SPEC.              | (B02) GRADE  | AISI 316L  |
| B1824ESI-LANUS OESTE      | DIMENSIONAL SPEC.           | H9           |            |
| PROVINCIA DE BUENOS AIRES |                             |              |            |

(B01) : STAINLESS STEEL BRIGHT BARS (B04) DELIVERY CONDITION : COLD DRAWN POLISHED - 2H

(A07)ORDER NO. -1-2567 (A09)Article No:

|                           |             |                   |                |               |
|---------------------------|-------------|-------------------|----------------|---------------|
| (B09-B11)ITEM DESCRIPTION | LENGTH      | (B08) PIECES(Nos) | NET WEIGHT(TO) | (B07) HEAT NO |
| ROUND 15.870 MM           | 5.00 - 5.20 | 128               | 1.032          | 48846         |

Bundle No | I100854048

| (C71-C92) CHEMICAL ANALYSIS |        |        |        |        |        |         |         |        |        |        |        |
|-----------------------------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|
| ELEMENT                     | %C     | %Mn    | %SI    | %S     | %P     | %Cr     | %Ni     | %Cu    | %Mo    | %Co    | %N2    |
| HEAT                        | 0.0180 | 1.5000 | 0.3600 | 0.0200 | 0.0380 | 16.7800 | 10.0700 | 0.4300 | 2.0400 | 0.1700 | 0.0750 |


| MECHANICAL PROPERTIES |                        |                |     |                   |                    |          |
|-----------------------|------------------------|----------------|-----|-------------------|--------------------|----------|
| Inspection No.        | (C12) Tensile Strength | Yield Strength |     | (C13) Elongation% | Reduction of Area% | Hardness |
|                       | Rp=0.2%                | Rp = 1%        |     | Lo=5D             |                    |          |
| 100909788329          | Mpa 713.00             | Mpa 592.00     | Mpa | 35.00             | 70.00              | HBW 211  |

(B06)Product Marking : SIZE, GRADE, HEAT NO, LOGO & INSPECTOR STAMP

MATERIAL CONFIRMS TO ASTM A276/A276M-17 COND A  
INTERGRANULAR CORROSION TEST SATISFACTORY AS PER ASTM A262-15 PRACTICE E.  
CERTIFIED AS PER EN 10204-3.1.

REMARKS : MINIMUM SOLUTION ANNEALING TEMPERATURE 1050°C, SOAKING TIME 01 HR/INCH WATER QUENCHED.  
MATERIAL HAS BEEN TESTED AND FOUND TO BE FREE FROM RADIOACTIVE CONTAMINATION.

We certify that the above material has been inspected and tested and complies with the order/contract and is of Indian origin

  
AUTHORIZED WORKS INSPECTOR  
RADHAKRISHNA MURTHY



# VIKAS PROFILES LTD.

A 2-271

Regd. & Mkt off: G-33 & 34, MIDC, Industrial Area, Tarapur, Thane (Dist), Maharashtra, INDIA - 401506, E-Mail: sales@vikas.com  
Work: SURVEY No- 114,119 & 120, VILL. Mahagaon, Tal: Palgarh Dist: Thane-401501, MAHARASTRA, INDIA, veldge@vikas.com

## TEST CERTIFICATE

| CUSTOMER   | ORDER NO    | PACKING LIST NO | INSPECTION NO | DATE       |
|--|-------------|-----------------|---------------|------------|
| APERNAM STAINLESS SERVICES & SOLUTIONS ARGENTINA S A AVDA. DESCARTES 4200 B1667A7P TORUUGITAS BUENOS AIRES, ARGENTINA. | APE-03/2015 | 62/991117/2     | 100005370129  | 16.06.2015 |
|  |             |                 | GRADE         | HEAT No    |
|  |             |                 | AISI 316L     | 37042      |

BUNDLE NO :  
1100359167,

38249

### DESCRIPTION

STAINLESS STEEL BRIGHT BARS

COLD DRAWN & POLISHED - 2H

| SIZE     | SHAPE | TOLERANCE | LENGTH      | PIECES | WEIGHT   |
|----------|-------|-----------|-------------|--------|----------|
| 17200 MM | ROUND | h9        | 6.00 - 6.20 | 51     | 0.538 TO |

### CHEMICAL ANALYSIS

| %C     | %Mn   | %SI   | %S     | %P     | %Cr    | %Ni    | %Cu   | %Mo   | %Cb   | %N2    |
|--------|-------|-------|--------|--------|--------|--------|-------|-------|-------|--------|
| 0.0180 | 1.540 | 0.390 | 0.0270 | 0.0360 | 16.780 | 10.050 | 0.430 | 2.010 | 0.180 | 0.0800 |

### TEST RESULTS

| 0.2% yield strength MPa | Tensile Strength MPa | Elongation % | Reduction Of Area % | Hardness HUN |
|-------------------------|----------------------|--------------|---------------------|--------------|
| 642.0                   | 728.0                | 40.0         | 70.0                | 216.0        |

### SPECIFICATION:

MATERIAL CONFIRMS TO ASTM A 276-13 COND A,  
INTERGRANULAR CORROSION TEST SATISFACTORY AS PER ASTM A262-10 PRACTICE E.  
CERTIFIED AS PER EN 10204-3.1.

### REMARKS

MATERIAL IS FREE FROM MERCURY CONTAMINATION, FREE FROM WELD OR WELD REPAIRS.  
MINIMUM SOLUTION ANNEALING TEMPERATURE 1050°C, SOAKING TIME 01 HIRANCH WATER QUENCHED.  
WE CONFIRM THAT THE MATERIAL HAS BEEN TESTED AND FOUND TO BE FREE FROM RADIOACTIVE CONTAMINATION.

We hereby certify that the material described above has been tested and complies with the terms of order/contract.

WORKS INSPECTOR  
K R K MURTHY