



Management System  
ISO 9001:2015  
www.tuv.com  
ID: 910922711

# Certificado de Calidad

IT020305 rev.01

## N° NN-20872

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
1	TEE 1/4" NPTM LATERAL, LATERAL Y PERPENDICULAR 1/4" NPTH	101S04 L	AZ-302 / AA-678
Componentes		Material	Certificado
CODO FORJADO CON BARRAS REDONDAS DE 27mm Y 28mm		AISI 316L	AZ-302 / AA-678

### Protocolo de ensayo :

Tipo		Presión de trabajo	Estado	Presión de prueba	Estado	Tiempo
Hidráulico	1	6.000 PSI	Ok	9.500 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 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.**



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# CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

1509001:2015 CERTIFICATE No. 04100011022

ADM. OFFICE: W», SVKH SAGAR, N. S. FATKAR MARG, MUMBAI W» W. INDIA

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

Website : www.chandansteel.net

Email : csl@chandansteel.net

L/C. No.:

I/c- Date:

WORK&amp;PLOT NO. 31 TO 36 /15,46,48, &amp; 49/2,142

(EXP. AKEA)G1DC, UMBERERGAON &amp; SURVEY NO. 10^2 &amp; 3,VILLAGE ,

DEHARI, TALUKAIUMBERGAON, DISTIVALSD, GUJARAT -396171

CSTIN - 24AAACC4713B1ZG

F860(824) QC 09/00/11.01.2018

## MILL TEST CERTIFICATE

### INSPECTION CERTIFICATE 3.1 ACCORDING TO EN 10204 : 2005

Cowartee Majdalani Inox S.A. RUTA PANAMERICANA KM 31,200, COLECTORA OESTE (1617) EL TALAR, BUENOS AIRES ARGENTINA				Test Certificate No. : EXP/00039 - 47/2019-2020 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				NetWt.			
				Ordered		Actual		522 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-9989	316L	27.00 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	0.026	0.41	1.67	0.039	0.009	16.84	2.04	10.04	*	-	-
MECHANICAL PROPERTIES											
Specified Value	Yield Strength N/mm <sup>2</sup> /MPa (Rp0.2)		Tensile Strength N/mm <sup>2</sup> /MPa (Rm)		Elongation %		Reduction of Area %			Hardness (HB)	
Min.	170		485		30		40			-	
Max.	-		-		-		-			-	
Results	290		632		46		67			194-197	
Remarks:											
1. Smooth Turned & 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.: 36						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. KRAUTELA  
MANAGER - QUALITY ASSURANCE

TEST CERTIFICATE

AA-678

<b>CUSTOMER</b> APERAM STAINLESS SERVICES & SOLUTIONS ARGENTINA S A AVDA. DESCARTES 4200 B1667AYP TORTUGITAS BUENOS AIRES, ARGENTINA.	<b>ORDER NO</b> APE-03/2015	<b>PACKING LIST NO</b> 62/989391/4	<b>INSPECTION NO</b> 100005208501	<b>DATE</b> 04.05.2015
<b>BUNDLE NO</b> 1100340659			<b>GRADE</b> AISI 316L	<b>HEAT No</b> 36777

38194

**DESCRIPTION**  
STAINLESS STEEL BRIGHT BARS

COLD DRAWN & POLISHED - 2H

SIZE	SHAPE	TOLERANCE	LENGTH	PIECES	WEIGHT
28.600 MM	ROUND	h9	6.00 - 6.20	19	0.588 TO

CHEMICAL ANALYSIS

%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Cu	%Mo	%Co	%N2
0.0260	1.350	0.350	0.0200	0.0360	16.520	10.050	0.710	2.030	0.170	0.0975

TEST RESULTS

0.2% yield strength MPa	Tensile Strength MPa	Elongation %	Reduction Of Area %	Hardness BHN
468.0	676.0	45.0	72.0	196.0

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 HR/ENCH 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