



Certificado de Calidad

IT020305 rev.01

N° NN-20510

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 TEE 1/2" OD X 1/2" NPT H CENTRAL	77S0808	AA-705
Componentes	Material	Certificado	
CONECTOR TEE 1/2" OD X 1/2" NPT H CENTRAL	AISI 316	AA-705	
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	3.000 PSI	Ok	5.000 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 : los cuerpos comprendidos dentro de las pruebas hidráulicas fueron ensamblados con virolas, tuercas y tubo de nuestra propia comercialización.

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.**



VILLARES METALS
INSPECTION CERTIFICATE

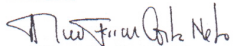
Our quality system is certified according to ISO 9001, TS 16949, NBR 15100 (AS 9100) and NADCAP (heat treatment and non-destructive tests). ISO 14001 Environmental Certification.

ACC. TO EN 10204 3.1

CERTIFICATE 676189

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INVOICE 1318E13

CUSTOMER JORVICAL ACEROS S/A				
PURCHASE ORDER / ITEM OC J372- / 05.04.2013				
JOB ORDER	LOT	PACKAGE	NET WEIGHT	QUANTITY
1577576	1577576	1577576/01	1,068 KG	30
VILLARES GRADE			SIMILAR GRADE	
V310			AISI 310	
DIMENSIONS		LENGHT RANGE	DRAWING NUMBER	
34.92 (-)0.160 (+)0.000		4,000 / 5,500		
PRODUCT	HEAT TREATMENT CONDITION		FINISHING	
Round Bar	Solution Treated		Peeled and Polished	
PRODUCT LINE	MELTING PROCESS			HEAT
Hot Rolled	ELECTRIC ARC FURNACE			0803320
CHEMICAL COMPOSITION (% in weight)				
Chemical Composition (% in weight)				
C 0.064	Si 0.36	Mn 1.89	P 0.028	S <0.0010
Cr 24.29	Mo 0.29	Ni 19.30		
SPECIFICATIONS				
ASTM A276 / 2010				
Tensile Test - longitudinal according to specification ASTM A370				
Specimen #: 16623	Position: LONGITUDINAL		Temperature: 24.90 °C	
Dimension: 12.67 mm	Tensile Strength: 574 MPa		Yield Strength 0,2%: 251 MPa	
Reduction of Area: 75.9 %	Elongation: 51.4 %			
Hardness according to specification ASTM A370				
Result: 151 HBW				
Visual And Dimensional Inspections				
Result: Approved				
Anti-Mixture Testing				
Result: Approved				
VILLARES METALS DECLARES THAT THIS PRODUCT IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER AND SPECIFICATION				
Sumaré PLANT / OFFICE R. Alfredo Dumont Villares, 155 13178-902 - Sumaré - SP - BRAZIL Phone: 55 19 3303-8000 Fax: 55 19 3303-8696 e-mail: metals@villaresmetals.com.br			15.08.2013  Alceu F. Costa Neto ENGINEERING DEPT. MANAGER	



CHANDAN STEEL LIMITED
(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001 : 2015 CERTIFICATE No. 04 100 011022

AA-761

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

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

Website : www.chandansteel.net

Email : csl@chandansteel.net

I/c. No.:

I/c. Date:

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

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

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

GSTIN - 24AAACC713B12G

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/01459 - 07/2019-2020 Date of Issue : 31.01.2020 P.O. No. : 30131 SC_No. & Date : 19-20/0463, Dt.10.12.2019 Invoice No. & Date : EXP/01459/2019-20, Dt.31.01.2020							
PRODUCT DESCRIPTION STAINLESS STEEL HEXAGONAL BARS				LENGTH				Net Wt.			
				Ordered		Actual		575 Kgs.			
				6.0 - 6.1 Mtrs.		6.0 - 6.1 Mtrs.					
Heat No.	Grade AISI	Size mm/inches	Tolerance	Process Route Electric Melting, A.O.D. Refining, Continuous Casting							
CH-12114	316L	22.22 mm (Hex)	h11								
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	0.45	1.72	0.036	0.005	16.65	2.11	10.08	-	-	-
MECHANICAL PROPERTIES											
Specified	Yield Strength		Tensile Strength		Elongation		Reduction of Area		Hardness		
Value	N/mm ² /MPa (Rp0.2)		N/mm ² /MPa(Rm)		%		%		(HB)		
Min.	170		485		30		40		-		
Max.	-		-		-		-		-		
Results	594		758		37		66		234-237		
Remarks:											
1. Cold drawn & Polished.						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.											
BUNDLE NO.: 159				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



42-271

VIRAJ PROFILES LTD.

Regi & Mkt off: G-33 & 34, MIDC, Industrial Area, Tarapur, Thane (Dist), Maharashtra, INDIA - 401506, E-Mail: sales@viraj.com
 Works: SURVEY No- 114, 119 & 120, VILL. Mahagaon, Tal: Palgar, Dist: Thane-401501, MAHARASTRA, INDIA, vielqc@viraj.com

TEST CERTIFICATE

CUSTOMER APERAM STAINLESS SERVICES & SOLUTIONS ARGENTINA S A AVDA. DESCARTES 4200 B1667A YP TORTUGITAS BUENOS AIRES, ARGENTINA.	ORDER NO APE-03/2015	PACKING LIST NO 62/991117/2	INSPECTION NO 100005370129	DATE 16.06.2015
BUNDLE NO : 1100359167,	38749		GRADE AISI 316L	HEAT No 37042

DESCRIPTION

STAINLESS STEEL BRIGHT BARS

COLD DRAWN & POLISHED - 2H

SIZE	SHAPE	TOLERANCE	LENGTH	PIECES	WEIGHT
17.200 MM	ROUND	h9	6.00 - 6.20	51	0.558 TO

CHEMICAL ANALYSIS

%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Cu	%Mo	%Co	%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 BHN
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 HR/INCH WATER QUENCHED.
 WE CONFIRM THAT THIS 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



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- vielqc@viraj.com

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT

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

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

(A07)ORDER NO: J-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 1100854048

(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

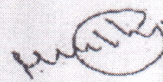
Inspection No.	Yield Strength			(C13) Elongation%	Reduction of Area%	Hardness
100009788529	(C12) Tensile Strength	Rp=0.2%	Rp = 1%	Lo=5D	70.00	HBW
		Mpa	Mpa			
	713.00	592.00				

(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