

ROLDAN, S.A. - Stainless Steels

FACTORY

Santo Tomás de las Ollas, s/n
Apdo. de Correos 11
POBERRADA (LEÓN)
TEL.: +34 987 44 61 00
FAX: +34 987 44 61 01
E-MAIL: rdn_fabrica@acerinox.com



HEAD OFFICE

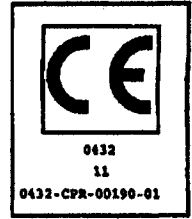
Santiago de Compostela, 100-3°
28035 MADRID (ESPAÑA)
TEL.: +34 913 98 52 57
FAX: +34 913 98 51 93
E-MAIL: roldan@acerinox.com

INSPECTION CERTIFICATE

3.1
EN 10204



TÜV Rheinland®
CERT
ISO 9001



FLOW TECHNOLOGY LTD
TEST CERTIFICATE
VERIFIED TRUE
COPY OF ORIGINAL

EN 10.088:5

CERTIFICATE N°	2016/015198	DATE	29/06/2016	SHEET	1	DELIVERY NOTE N°	2016/002039
GRADE	ROLDANAX-339 EN10088:3 (1.4401/1.4404.)						
DIMENSIONS	25,00 mm.						
LENGTH	4.000 mm.	TOLERANCE	ISO h10				
PRODUCT	[31] Round bar, annealed, smooth turned, polished						
REQUIREMENTS	EN10088:3	CUSTOMER ORDER	56438/June16				
TENSILE TEST	EN ISO 6892-1	EDITION	AD-2000 W2	AD-2000	W10		
ACCORDING TO	EN 10272						
INTERGRANULAR CORROSION	EN ISO 3651-2 method A: SATISFACTORY						WITHOUT OBJECTIONS
SURFACE AND DIMENSIONS CONTROL	WITHOUT OBJECTIONS						Spektrometrical Identity Test: O.K.
IMPACT TEST, SAMPLE DIMENSIONS	EN ISO 146-1						MATERIAL FREE FROM RADIOACTIVITY

ORDER N°	WORKS N°	MARKS / BOX	HEAT NUMBER	SAMPLE	WEIGHT
PL04376 1		16 / RB66918	LSWT	LSWT	1074

PRODUCTION PROCESS
EAF + AOD +CC

TRADE MARK

MARKING
HEAT NUMBER
GRADE (ACX-339)

INSPECTOR STAMP
R3

QUALITY INSPECTOR
JUAN JOSE ALVAREZ RODRIGUEZ

QUALITY CONTROL REPRESENTATIVE

CAST	SAMPLE	SAMPLE DIMENSIONS mm.	Observ. T°	Rm	Rp 0,2%	Rp 1%	E %	A %		Agt %	IMPACT STRENGTH ISO-V (J)		HARDNESS HB	FATIGUE TEST	BEND TEST	CROSS SECTIONAL AREA cm²	Rt / m
				MPa	MPa	MPa		2-50	2-140		20°C	-196°C					
LSWT	LSWT	25,00	20°C	608	351	401	70	53	55				162				
REQUIREMENTS	EN ISO 377			500	200	235		40			100			215			

CAST	CHEMICAL COMPOSITION %											
	C	P	S	Si	Mn	Cr	NI	Mo	TI	N	Cu	Co
LSWT	0,0160	0,0300	0,0270	0,3230	1,3400	16,7500	10,4000	2,0730	0,0050	0,0470	0,4440	0,1640
REQUIREMENTS	0,0300	0,0450	0,0300	1,0000	2,0000	16,5000	10,0000	2,0000		0,1000		

OBSERVATIONS
EN10088:3 - 1.4401/1.4404. AISI 316/316L. UNS S31600/S31603.
ASTM A-182 grade F316L. ASTM A-193 class 1 grade 30M. ASTM A-276 condition A. ASTM A-479 condition A.
ASME SA-182. ASME SA-193. ASME SA-276. ASME SA-479. ASME BVPC section II part A.
NACE MR0175 & MR0103. ASTM A-262 practice E: OK.

OTHER TEST RESULTS	HEAT TREATMENT	1.050 °C AND WATERCOOLED	REQUIREMENTS	TRD100 TRD100, AD-2000-W2-W10, DGRL97/23/EC(9ED)
--------------------	----------------	--------------------------	--------------	--------------------------------------------------

F12736
1/4" BSP All Swivel Tee 10K