

# ROLDAN, S.A. - Stainless Steels

**FACTORY**

Santo Tomás de las Ullas, s/n  
Apdo. de Correas 11  
PONFEREDA ( LEÓN )  
TEL.: +34 987 44 61 00  
FAX: +34 987 44 61 01  
E-MAIL: rldn\_fabrica@acerinox.com



**HEAD OFFICE**

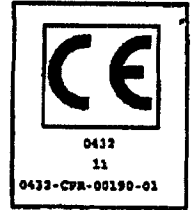
Santiago de Compostela, 100-3°  
28035 MADRID (ESPAÑA)  
TEL.: +34 913 98 52 57  
FAX: +34 913 98 51 53  
E-MAIL: roldan@acerinox.com

## INSPECTION CERTIFICATE

3.1  
EN 10204




TÜVRheinland<sup>®</sup>  
**CERT**  
ISO 9001



CERTIFICATE N°	2015/006349	DATE	2/04/2015	SHEET	1	DELIVERY NOTE N°	2015/001150
GRADE	EOLDAMAX-339 EN10.088.3 ( 1.4401/1.4404. )						
DIMENSIONS	41.27 mm.						
LENGTH	3.100 mm.	TOLERANCE	ISO h10				
PRODUCT	[31] Round bar, annealed, smooth turned, polished						
REQUIREMENTS	EN 10.088.3	CUSTOMER ORDER	49395700				
TENSILE TEST	EN ISO 6922-1	ACCORDING TO EN 10.272					
INTERGRANULAR CORROSION	EN ISO 1651-2 SATISFACTORY	EDITION AD-2000 W2 AD-2000 W10					WITHOUT OBJECTIONS
SURFACE AND DIMENSIONS CONTROL	WITHOUT OBJECTIONS	Spektrometrical Identity Test: O.K.					EN 10.088.5
IMPACT TEST, SAMPLE DIMENSIONS	EN ISO 148-1	MATERIAL FREE FROM RADIOACTIVITY					

ORDER N°	WORKS N°	MARKS / BOX	HEAT NUMBER	SAMPLE	WEIGHT
P102432 11		9 / RH15942	J1AW	J1AW	527
		10 / RH15944	J1AW	J1AW	463
		11 / RH15947	J1AW	J1AW	459

**PRODUCTION PROCESS**  
EAF + AOD + CC

**TRADE MARK**  


**MARKING**  
HEAT NUMBER  
GRADE ( ACE-339 )

**INSPECTOR STAMP**  
**R3**

**QUALITY INSPECTOR**  
JUAN JOSE ALVAREZ RODRIGUEZ

**QUALITY CONTROL REPRESENTATIVE**  
Signature is not necessary according to EN 10.134

MECHANICAL PROPERTIES																	
CAST	SAMPLE	SAMPLE DIMENSIONS mm.	Observ. T°	Rm MPa	Rp 0.2% MPa	Rp 1% MPa	E %	A %		Agt %	IMPACT STRENGTH ISO-V (J)		HARDNESS HB	FATIGUE TEST	BEND TEST	CROSS SECTIONAL AREA mm²	kg / m
								Lo50	Lo100		20°C	-196°C					
J1AW	J1AW	30.00	20°C	589	353	408	70	83	88				162				
REQUIREMENTS	EN ISO 377			500	200	235	60				100	40	215				

CHEMICAL COMPOSITION %													
CAST	C	P	S	Si	Mn	Cr	Ni	Mo	Ti	N	Cu	Co	
J1AW	0.0190	0.0330	0.0240	0.3720	1.3231	16.7900	10.5010	2.0220	0.0060	0.0460	0.3520	0.2340	
REQUIREMENTS	0.0300	0.0450	0.0300	1.0000	2.0000	16.5000	10.0000	2.0000		0.1100			

**OBSERVATIONS**  
EN 10.088.3 - 1.4401/1.4404. AISI 316/316L. UNS S31600/S31603.  
ASTM A-182. ASTM A-193. ASTM A-276. ASTM A-479. ASME SA-182. ASME SA-193. ASME SA-479.  
ASTM A-262 practice "B". NACE MR0175 & MR0103.

<b>OTHER TEST RESULTS</b>	1.050 °C AND WATERCOOLED	<b>REQUIREMENTS</b>	TRD100 TRB100, AD-2000-W2-W10, DGRL97/23/EC (PRD)
<b>HEAT TREATMENT</b>			