

ROLDAN, S.A. - Stainless Steels

FACTORY

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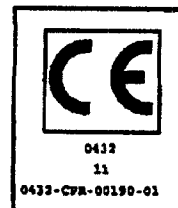
INSPECTION CERTIFICATE

3.1

EN 10204



TÜVRheinland[®]
CERT
ISO 9001



CERTIFICATE N° 2015/006349 DATE 2/04/2015 SHEET 1 DELIVERY NOTE N° 2015/001150
GRADE ROLDAMAX-339 EN10.088.3 (1.4401/1.4404.)

DIMENSIONS 41.27 mm.

LENGTH 3.100 mm. TOLERANCE ISO h10

PRODUCT 1311 Round bar, annealed, smooth turned, polished

REQUIREMENTS EN10.088.3 CUSTOMER ORDER 49395700

TENSILE TEST EN ISO 6992-1

ACCORDING TO EN 10.272 EDITION AD-2000 W2 AD-2000 W10

INTERGRANULAR CORROSION EN ISO 1651-2 SATISFACTORY WITHOUT OBJECTIONS

SURFACE AND DIMENSIONS CONTROL WITHOUT OBJECTIONS Spektrometrical Identity Test: O.K.

IMPACT TEST, SAMPLE DIMENSIONS EN ISO 148-1 MATERIAL FREE FROM RADIOACTIVITY EN 10.088.5

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



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 10.204

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 & N0101.

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