

# ROLDAN, S.A. - Stainless Steels

## FACTORY

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## HEAD OFFICE

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## INSPECTION CERTIFICATE

EN 10204 3.1

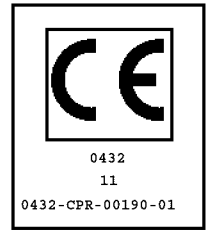
z01 Declaration: the Product is  
in compliance with the order

MADE IN SPAIN - EUROPEAN UNION



Sistema de  
Gestión  
ISO 9001:2015  
ISO 14001:2015  
ISO 50001:2018

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ID 0091003143



EN 10.088:5

CERTIFICATE N°	2023/015518	DATE	26/09/2023	SHEET	1	DELIVERY NOTE N°	2023/002702
GRADE	ROLDAMAX-229	EN10088:3 ( 1.4307. )					
CUSTOMER	BE GROUP OY						
DIMENSIONS	20,00 mm.			Surface finish according EN10088-3 Table 7:2H			
LENGTH	6.000 mm.			TOLERANCE	ISO h9		
PRODUCT	[341] Round bar, annealed, pickled, cold drawn, polished, both ends chamfered 45°						
REQUIREMENTS	EN10088:3			CUSTOMER ORDER			
TENSILE TEST	EN ISO 6892-1			P107809			
ACCORDING TO	EN 10272		EDITION AD2000 W0, W2 & W10				
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 148-1			MATERIAL FREE FROM RADIOACTIVITY			

ORDER N°	WORKS N°	MARKS / BOX	HEAT NUMBER	SAMPLE	WEIGHT	PRODUCTION PROCESS	INSPECTOR STAMP
MA08587 4	MA08587 4 1	87008 / JL35895	3AZD	3AZD	474	EAF + AOD +CC	
	MA08587 4 1	87009 / JL35896	3AZD		503		
	MA08587 4 1	87010 / JL35897	3AZD		503		
	MA08587 4 1	87011 / JL35898	3AZD		503		
						TRADE MARK	QUALITY INSPECTOR
						<b>RDN</b>	
						MARKING	JUAN JOSE ALVAREZ RODRIGUEZ
						HEAT NUMBER GRADE ( ACX-229 )	
							QUALITY CONTROL REPRESENTATIVE

MECHANICAL PROPERTIES																		
CAST	SAMPLE	SAMPLE DIMENSIONS mm.	Observ. T°.	Rm MPa	Rp 0,2% MPa	Rp 1% MPa	Z %	A %		Agt %	IMPACT STRENGTH ISO-V (J)			HARDNESS HB	FATIGUE TEST	BEND TEST	CROSS SECTIONAL AREA mm <sup>2</sup>	Kg / m
								L=50	L=40		20 °C	-196 °C						
3AZD	3AZD	20,00	20 °C	724	611	670	66	45	46					216				
REQUIREMENTS	EN ISO 377			500 900	175	210		20			100			315				

CHEMICAL COMPOSITION %														
CAST	C	P	S	Si	Mn	Cr	Ni	Mo	Ti	N	Cu	Co		
3AZD	0,0190	0,0320	0,0300	0,4410	1,4500	18,2800	8,0400	0,3890	0,0040	0,0930	0,3910	0,2280		
REQUIREMENTS	0,0300	0,0450	0,0300	1,0000	2,0000	17,5000 19,5000	8,0000 10,5000			0,1000				

OBSERVATIONS

OTHER TEST RESULTS	REQUIREMENTS	AD2000 W0,W2,W10   2014/68/EU(PED)   UKCA PER 2016/1105
HEAT TREATMENT	1.050 °C AND WATERCOOLED	Crack tested acc. to EN10277 table 3 class 3