



OLARRA U.K. LTD.
FOREST PARK - CLEOBURY MORTIMER
NR KIDDERMINSTER - DY 14 9BD - ENGLAND

Trade Mark - Zeichen des Lieferwerkes
Anagrama del suministrador 

Works Inspector Stamp - Werkssachverständiger
Sello del Inspector 

Certificate type - APZ Nach Certificado tipo EN 10204/3.1	Certificate nº - Prüf-Nr Certificado nº 362619	Date - Datum - Fecha 10 - 09 - 2018
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Our order Nº Werks - Nr 660395 Nº de Referencia	Heat Schmelze 460899 Colada	Your order Nº Bestell - Nr OL8449 Pedido Nº
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Steel Grade Werkstoff 316-S-11 AV Calidad	According to Entsprechend BS 970:PART 3:1991. Corresponde
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Shape and Size - Gegenstad Perfil y dimensión HEXAGON 31,75 mm	Tolerance - Toleranz Tolerancia h 11 /DIN 176	Bundles Bunde 5 Bultos	Bars Stäbe 121 Barras	Weight Gewicht 2598 Kg Peso
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Requirements - Anforderungen - Exigencias

EN 10.088-3.2014. EN 10.272-2016. ASTM A 182/A 182M-16. ASTM A 479 / A 479M-17. ASTM A 276/A 276M-17. ASME SA 479 / SA 479M-15 SAE AMS 5653H-12. NACE MR-0175/ISO 15156-3 2015. NACE MR-0103/ISO 17945-2015. NORSOK M-630 and MDS S01.	316S31AV-1.4404-1.4401-Type 316-Type 316L. PED 2014/68/EU, Annex I, Parag.4.3/DGR 2014/68/EU Anhang I Absatz 4.3 Certificate/Zertifikat Nr. 348/2008/MUC
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Melting process / Erschmelzungsart / Proceso de Fusión E.A.F. / A.O.D.	Heat treatment / Wärmebehandlung / Tratamiento térmico 1060C 4H/Std WATER/WASSER/AGUA
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Solution annealed/Abgeschreckt/Hipertemple-Cold drawn/Gezogen/Estirado-

Test results - Ergebnis der Prüfungen - Resultados de los ensayos

Dimension of Specimen Abmessungen des Probestabes Medida de las probetas	Rp0,2%	Rp 1%	Rm	A	A	Z	Hardness	Impact test / Kersbschlag / Resiliencia	
	N/mm2	N/mm2	N/mm2	%L 5D	%L 4D	%	Härte	ISO V Jules	
	MPA	MPA	MPA				HBw		
RD. 10,00 mm.	Min.	325	375	550	20				
	Max.								
Temperature °C 20	Spec. Nº. Probe Nr. Pro Nº.	1	377	416	576	44	47	72	174

	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	N	Co
Min.						16,50	2,00	11,00			
Max.	0,030	1,00	2,00	0,045	0,030	18,50	2,50	14,00	0,70		
	0,017	0,57	1,57	0,033	0,028	17,08	2,04	11,03	0,39	0,0270	0,12

Visual and dimensional inspection Besichtigung und Ausmessung O.K. Control visual y dimensional	Radioactivity inspection Radioaktivitätskontrolle O.K. Control de Radioactividad	Antimixing test Spektrsk Verwechlungspr O.K. Antimezcla	Grain Size Korngrösse 5-6 ASTM E-112-13 Tamaño de grano
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Remarks - Bemerkungen - Observaciones IC test acc./IK prüfung nach ASTM A 262 E.15. OK Crack control/Rissgeprüft acc. EN 10277-1 class 2. OK F14135 1/2" BSPP CS MALE X 1/2" SWIV FEM ADAPTOR 15K 316L	EDV / EDP Acc. EN 10.204 Marian Tejado Quality Mng. Works Inspector Der Werkssachverständige Inspector de fábrica
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We hereby certify that material described herein complies with the requirements agreed on the order.