

INSPECTION CERTIFICATE TO EN 10204/3.1
 ABNAHMEPRÜFZEUGNIS EN 10204/3.1
 CERTIFICAT DE RÉCEPTION EN 10204/3.1

ZAPP

Zapp Precision Metals GmbH, Postfach 17 20, D-58212 Schwerte

KNL C&M Co., Ltd
 1st floor
 22-7 Hajeong-Ro (Shinseol-Dong)
 02586 DONGDAEMOON-GU, SEOUL
 SÜDKOREA

하기 Lot에서 71.50 KG을
 (주)메카젠임플란트 사로
 2019년 11월 6일 판매하였습니다.
 ZAPP 한국 공식 대리점 (주)KNL C&M
 Tel : 02-2232-8431

Certificate No./Attest-Nr. 1210084254000010 01

Date/Datum 28.10.2019 Page/Seite/Page 1/2

Customer PO# Kunden-Bestell-Nr. / No. de commande	KL31-218014 of/vom/du 15.03.2018		
Customer Specification Kunden-Spezifikationen / Spécification de client	ISO 5832-3: 2016 (E) and ASTM F136-13		
Customer No. Kundennr. / Code client	617866	Delivery Note Lieferschein-Nr. / Bon de livraison	1210084254 Pos 10
Sales Order No. Auftragsnr. / No. de commande	1202026395	Contact Kontakt	Jennifer Schmidt Tel. +49 2304 79-7211
Material No. Materialnr. / No. d'article	5509166	Material Designation Bezeichnung / Désignation	
Grade / Alloy	TI 6AL 4V-ELI TITANIUM ALLOY FOR IMPLANTS		
Finish	ERGITAN 3.7165 MG drawn, annealed, straightened, stress relieved annealed, ground, polished		
Diameter	5.0000 mm		
Diameter tolerance	-0.0080 mm / 0.0000 mm		
Bar Length	2,500.000 mm		
Bar Length tolerance	0.000 mm / 50.000 mm		

Chemical Composition (%) Chemische Zusammensetzung / Composition chimique	Heat No. Schmelzennr. / No. de coulée	00H8K62
Melting Process: 2XVAR Erschmelzungsart / Mode d'élaboration		

	C	N	O	Fe	Al	V	Ti	β Trans
Actual	0.010	0.0100	0.1100	0.150	6.00	4.02	bal.	966.0

Production Lot 4814418 Produktionslos / Unité de production	Inspection Lot 020000391043 / 000001 Prüflös / Prüfeinheit / Unité d'inspection
Weight Gewicht / Poids	126.000 KG

Pack.Unit Packstücke / No. de caisse	M102651001
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	Target (min)	Target (max)	Actual (min)	Actual (max)
Tensile Strength (MPa)	900	1500	1055	1089
Yield Strength 0.2 (MPa)	795		933	973
Elongation A4d (%)	10.0		17.2	17.7
Elongation A5 (%)	10.0		15.4	15.8
Elongation A5d gage length(mm)	15.0	99.0	25.0	25.0
Elongation A4d gage length(mm)	15.0	99.0	20.0	20.0
Reduction of area Z (%)	25.0		52.2	53.4
Average Roughness Ra (µm)		0.500	0.429	0.489
Hydrogen content at finish %		0.0120	0.0020	0.0020

AWE / A. HENNIG
 Acceptance / Inspection representative
 Abnahme / Abn. Beauftragter
 Contrôle / Contrôleur

+49 2304 79-7162
 Phone
 Telefon
 Téléphone

This certificate has been issued by computer and is valid without signature acc. to EN 10204 p.5.

원본대조필

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Microstructure No alpha-case at 100x magnification.

Microstruct.ISO 20160(Titan.) acc. to ETTC 2 / ISO 20160: A1

Sizes and Quality identification test examined and in order.
Surface visual inspection at finish: without objection.
In compliance with the conditions mentioned in the acknowledgement of order.



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