



Braunschweiger Flammenfilter GmbH

Material Traceability

Material Traceability 000047653
Purchaser PROTEGO UK Ltd.
Purchaser Order No. PUK12305
Reference PO: PO250211783
Sales Order 025105045-10
Quantity 1
Description Free vent - end-of-line deflagration flame arrester
PROTEGO® LH/AD-80-IIC-X3
Remark TAG-No.: FA-2000

Material Certificate	Type	Description Size Standard	Material	Supplier Manufacturer	Heat Specimen	Stamp
250000912	3.1	housing 80/16 Form B 3142-00	1.4408 A351 CF8M	Creative Castings Ltd. Creative Castings Ltd.	6940C	Original
250003735	3.1	spider ring Rd 210x8	1.4571	Friedrich Amtenbrink GmbH & Co. KG	12402063	Original
250001543	3.1	spider ring Rd 210x8	1.4571 316Ti	ATBS Braunschweig GmbH & Co. KG Outokumpu Stainless Oy	68984 4	Original

Braunschweig
Place

10-02-2025
Date

Tanja Winkler
Name

This document has been created digitally and is valid without a signature.

CREATIVE CASTINGS LIMITED



MANUFACTURER OF : STEEL AND ALLOY STEEL INVESTMENT CASTINGS

Regd. Office & Works : 102, GIDC Estate, Phase - II, Rajkot Road, Dolatpara, Junagadh - 362 003 (Gujarat, India)
Phone : 0285 2660040, 2660224, 2660254, Fax : 0285 2661348, Email : info@creative-cast.com, CIN : L27100GJ1985PLC008286

INSPECTION TEST CERTIFICATE

CERTIFICATION ACCORDING TO EN-10204 / DIN50 049 - 3.1

BRAUNSCHWEIGER FLAMMENFILTER GmbH

INDUSTRIESTRASSE 11

38110 BRAUNSCHWEIG

GERMANY (GERMANY, Germany)

TC No. : 2674 - Date : 27/01/2025

DC No. : E152 - Date : 27/01/2025

Inv. No. : - Date :

OA No. : 0641/24-25

PO No. : 101062845



250000912

Specification : EN-10213-2016 GR.1.4408 GX-5 Cr Ni Mo 19 11 2/ASME SA351-2023 GR.CF8M

SPECTRO CHEMICAL ANALYSIS

Heat No.	C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Cu %								
Min.						18.000	9.000	2.000									
Max.	0.070	1.500	1.500	0.040	0.030	20.000	12.000	2.500	0.500								
Min.						18.000	9.000	2.000									
Max.	0.080	1.500	1.500	0.040	0.040	21.000	12.000	3.000									
6939C	0.050	0.860	0.740	0.033	0.008	18.670	9.500	2.040	0.281								
6940C	0.053	0.820	0.760	0.034	0.008	18.520	9.510	2.040	0.312								

P
3

M. K. K.

MECHANICAL PROPERTIES

Heat No.	TS N/mm²	YS N/mm²	Elgn. %	R.A. %	Hardness BHN	Charpy 'V' Notch Impact Value 20°C				Die No.	Description / Drg. No.		Disp. Qty.
Min.	440	210	30.000			60 (J)		60 (J)					
Max.	640				237								
Min.	485	205	30.000										
Max.					237	1	2	3	avg				
6939C	550	306	53.200		156-160	188	194	192	191.33	4480	HOUSING - 3142-00 3083210105 Rev. No. 0 PO Line No. : 20 A NO. : 3083220117		7
6940C	550	303	52.240		161-165	182	188	192	187.33	4480	HOUSING - 3142-00 3083210105 Rev. No. 0 PO Line No. : 20 A NO. : 3083220117		19

Casting Process

: Melting By Electric Induction Furnace

Heat Treatment

: HEATED TO 1080°C SOAKED FOR 1HR./INCH OF THICKNESS THEN WATER QUENCHED AT ROOM TEMP.

Visual Inspection

: Visually Inspection carried out As Per DIN EN 1370.

Dimensional Inspection

: Accepted as per drawing and EN ISO 8062

Material Identification

: Casting are Identified with Heat No. / Grade / Foundry Logo etc.

NDT (Testing)

: PT confirms Severity level 2 for Machined and level 4 for Unmachined surface According to DIN EN 1371-2.

Note

: The Material is resistant against intergranular corrosion As Per EN-ISO 3651-2 Method 'A'. All the above castings are acid pickled & Passivated. All requirements meets according to castings specification PS-020 Rev.2

Date: 01.09.2017 (Machined Castings)

We hereby certify that the Items mentioned above confirms to PO Specification.

All the above casting are free from Radioactive Contamination

Approved acc.to AD2000-Markblatt W0 and certificate acc.to PED(2014/68/EU) by Certification Body for Pressure Equipment of TUV NORD system(Notification body Reg.No.-0045) & Conforms to NACE MR 0175/2015/ISO15156 And NACE MR 0103/ISO17945

A. P. Solanki

(A P SOLANKI)
Chief Chemist

QA Accepted
VAIBHAVKUMAR SOLANKI

Date: 15/02/2025

Sign:
Braunschweiger Flammenfilter GmbH
•PROTEGO®.

For, Creative Castings Limited



(V. B. KALAVAT)
Manufacturer's Authorized Inspector



250003735



Friedrich Amtenbrink GmbH & Co. KG

Stahl - Service - Center

Brennen • Lasern • Plasma • Anarbeitung • Werkzeugstahl

Friedrich Amtenbrink GmbH & Co. KG • Postfach 11 27 • 33241 Gütersloh

Braunschweiger Flammenfilter GmbH
Industriestraße 11
38110 Braunschweig

Ihre Auftragsnummer:

160046467

Your Order No.:

Unsere Kommissions Nr.:

2240262-1

Our Order No.:

Unsere Zeichen:

els.-cf

Our Ref.:

Umstempelungsbescheinigung

Certificate of Stamp

Stempelung

Stamp

Originalstempel Original Stamp		Neuer Stempel New Stamp
Herstellerzeichen: Mark of the Manufacturer:		
Erschmelzungsart: Methode of Steelmaking:		
Werkstoff: Material:	1.4571	1.4571
Schmelze Nr.: Heat No.:	12402063	12402063
Probe Nr.: Test No.:		
Abnahmestempel: Inspector's Stamp:		

Abmessungen

Dimensions

Anlieferungszustand: Size:		
8 x 1500 x 3000 mm	8 x 210 mm Ø	30 St.

Werkstoffgüternachweis gemäß DIN EN 10204 - 2.1, 2.2 oder 3.1

Certificate of Test according to EN 10204 / 3.1

Zeugnis Nr. Certificate No.:	10724657602
Hersteller: Producer:	MARCEGAGLIA
Die Umstempelung erfolgt mit Zustimmung des TÜV-Rheinland, Zertifizierungsstelle für Druckgeräte (Schreiben vom 18.05.2024. Für die ordnungsgemäße Umstempelung zeichnet sich verantwortlich: Der/Die Umstempelberechtigte / The Stamp Inspector	
Gütersloh, 02.07.2025 Ort / Place Datum / Date	

Hülsbrockstraße 32 - 34 • 33334 Gütersloh • Tel: (05241) 30 09-0 • Fax: (05241) 30 09-99 • www.amtenbrink.com • info@amtenbrink.com

Sparkasse • DE85 4785 0065 0003 0000 73 • WELADED1GTL
Volksbank • DE90 4786 0125 0500 0085 00 • GENODEM1GTL
Unicredit • DE04 4802 0086 0014 6173 88 • HYVEDEMM344

Geschäftsführer: Stefan Döring • USt-ID-Nr: DE126772676
Sitz der Gesellschaft: 33334 Gütersloh • AG Gütersloh HRA 2872
PHG: Amtenbrink Verwaltungs GmbH • AG Gütersloh HRB 1912



Type/Typ Abnahmeprüfzeugnis 3.1 AD-2000 EN10204 Number/Nummer 10724657602 Ausgegeben am 14/10/2024

- QMS approved acc AD-2000 W0 with Cert 01 202 I/Q-08 5131 by TUV Rheinland (0035), cert. PED 2014/68/UE Annex I §4.3 by TUV Rheinland (0035)
- Material acc. AD2000 W2 - W10 in ref to EN10028-7
- Material conforming to NACE MR0175/MR0103 - ISO17945 - ISO15156-1/ISO15156-3

Customer/Kunde ARCELORMITTAL STAHLHANDEL GMBH
GUTENBERGSTRASSE 11
33790 HALLE DE

Consignee/Anlieferadresse ArcelorMittal Stahlh. GmbH Halle
Gutenbergstrasse 11
33790 Halle (Westf.) DE

Delivery/Lieferung nr 8930530272
Of/Vom 14/10/2024
Delivery note nr/Lieferschein nr 1007011275

Quality Control/Qualitätsicherung Q.M.D./Bearb. A.Venturini
Plant Of/Werk Gazoldo

Pages/Seite 1/1

Material 51800988 Norm/Norma EN10028-7, EN10088-2, EN10088-4, ASTM A240/A240M, A480/A480M, ASME SA240/SA240M, SA480/SA480M
Description/Beschreibung LXC 8,00 X 1500 X 3000 316TI/4571 Quality/Qualità X6CrNiMoTi17-12-2, WNR1.4571, 316TI

Order Nr/Auftrag Nr 1191800933/30 Client Order/Kundenauftrag 4500795593
Client Date/Kundendatum 5/09/2024

Item	Batch/Bund Nr	Heat/Schmelze	Quantity/Anzahl	Dimensional tolerances/Maßtoleranzen	Steel Processing/Steel Processing	Mark Tester/Mark Tester
1	24TV025803	12402063	2028 KG	EN9444-2	Elektro-Ofen-VOD/AOD, Stranggussanlage, Lieferzustand loesungsgegl + abgeschreckt 1050 °C Gebläse Luft	- Ueberwachungsabteilung: CQ3
					- ASME norms acc. Sec. II Part A Ed. 2023	Terms of Delivery/Lieferbedingungen

Batch/Bund Nr	Chemische Werte	Stem	C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	Mo (%)	Ti (%)	N (%)
24TV025803		X001098881	.023	.420	1.164	.0118	.0129	16.867	10.625	2.040	.345	.0137



Batch/Bund Nr	Lage der Testversion	Richtung des Tests	Stem	Rm [N/mm²]	Rp 0.2 [N/mm²]	RP 1 [N/mm²]	A (%)	A2 (%)	HRB	HRB2
24TV025803	B	T	X001098881	594	290	354	50.8	52.8	83	83

Test Position/Posizione Prova Test Direction/Direzione Prova Remarks about tensile test: Other controls:

B=Coil End T=Transverse Direction - Confirmation of adequate degree of reliability for the uniformity over the strip length with certificate issued by TÜV Rheinland Group dt. June 19, 2019 - Verwechslungsprüfung, oberflächen und masskontrolle: ohne beanstandung
C=Coil middle L=Longitudinal Direction - Tensile test according EN ISO 6892-1 B / A-SA 370 - Corrosion Test EN ISO3651-2 Method A und ASTM A262 pract.E - OK
T=Coil head

Remarks/Bemerkungen: - Surface finish 1D - Regulated Substances: NPD - Intended Uses: Building Constructions or Civil Engineering. - DoP available at <http://www.marcegaglia.com/brochure/e/quality/dop.html> - Ausführung 1D

 1244 22 MARCEGAGLIA SPECIALTIES v. Bresciani, 16 46040 - Gazoldo D. I. Mantova - Italy EN 10088-4:2009

 0474 13 MARCEGAGLIA SPECIALTIES v. Bresciani, 16 46040 - Gazoldo D. I. Mantova - Italy EN 10088-4:2009

Umstempelungsbescheinigung/Certificate for Restamping#BS_25_059

Firma:	Braunschweiger Flammenfilter	 250001543
Company:		
Auftrag-Nr.:	160045391	
Order-No.:		
Herstell-Nr.:	ATBS	
Manufacturer-No.:		
Bauteil/Zeichnung-Nr.:	K3105089	
Part/ Drawing-No.:		

Stempelung/Stamping

	Original-Stempel/Original Stamp	Neuer Stempel/New Stamp
Herstellerzeichen: Manufacturer's Brand:	outokumpu 	
Werkstoff: Material:	1.4571	1.4571
Schmelze-Nr.: Heat-No.:	68984 4	68984
Sonstige Zeichen Umstempelungs- bescheinigung		AT-15

Abmessung/Dimensions

Anlieferungszustand/Delivery Condition	Nach Umstempelung/After Restamping
8,0 mm x 1.500 mm x 3.000 mm	30 Stück Rippenring Ø 210 mm ohne Gewinde t = 8,0 mm

Umstempelung durch Lieferanten: Firma:

Nr. d. Bescheinigung:

Datum d. Ausstellung:

Werkstoffgütenachweis gemäß DIN EN 102043.1.....

Inspection Certificate according to

Zeugnis-Nr.:	684786/001
Hersteller: Manufacturer:	Outokumpu Stainless Qy

Braunschweig _____
Ort/Place14.03.2025 _____
Datum/DateWolfgang Werner
Umstempelberechtigter
Authorized Person for Restamping

ATI

Die Umstempelung erfolgte mit Zustimmung der TÜV/NORD Systems GmbH & Co.KG.
Akten- Nr. 8122533632.

Delivery address, Empfänger, Lieu de livraison OUTOKUMPU S.R.L. FL CONSIGNEE VIA FUSTAGNO, 21 26012 CASTELLEONE ITALY				OUTOKUMPU S.R.L. VIA AGNELLO, 8 20121 MILANO ITALY									
Requirements, Anforderungen, Exigences EN 10088-4:2009 AD 2000 W2, W10 & EN 10028-7:2016 ASTM A240/A240M ASME SA-240/SA-240M II A ED. 2023				Our Order No. Unser Auftrag Nr. Notre commande n° 360026528		Your order, Ihre Bestellung, Votre commande 512458							
Product, Erzeugnisform, Produit COIL, STAINLESS STEEL				Mark of Manufacturer Zeichen des Lieferwerkes Signe de producteur outokumpu 		Process Erzeugungsmethode Mode de fusion AOD							
Grade, Werkstoff, Nuance 1.4571 TYPE 316TI				Tolerances Toleranzen, Tolérances EN ISO 9444-2									
Marking, Kennzeichnung, Marquage 1.4571 1D				Marks, Versandzeichen, Marques									
Line Reihe Ligne	Item Position Poste	Charge-test No. Schmelz-Probé Nr. Coulée n°	Size, Abmessungen, Dimensions		Quantity Stückzahl Nombre	Weight, Gewicht, Poids	Finish Ausführung Fini EN/ASTM						
1		6 68984 4	8,0 X 1500 MM			23000 KG	1D/1						
 10 0045-CPR-0567													
Change no. Schmelz Nr. Coulée n°		Chemical composition, Chemische Zusammensetzung, Composition chimiques											
		C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Ti %	N %		
		68984	0,025	0,43	0,92	0,034	0,002	16,9	10,6	2,02	0,28	0,016	
 <i>make</i>													
Line Reihe Ligne	Mechanical properties, Mechanische Eigenschaften, Caractéristiques mécaniques							Tensile test, Zugversuch, Essai de traction					
	Sample ID Proben ID Echantillon	Rp0.2 MPa	Rp1.0 MPa	Rm MPa	A5 %	A50 %	%	Hardness Härte, Dureté HBW	ISO 6892-1:2019 A224 SAMPLES PERPENDICULAR TO THE ROLLING DIRECTION APPROVED ACC. TO AD2000-W0 WITH VERIFICATION OF THE UNIFORMITY OVER THE STRIP LENGTH. CERTIFIED ACC. TO PED 2014/68/EU BY TÜV NORD REG. NO. 0045. DOPS ACC. TO CPR AVAILABLE ON THE WEB PAGE BY STEEL NUMBER				
1	01	280	316	569	57	59		151					
	02	289	323	574	56	58		155					
Identity test, Verwechslungsprüfung, Contrôle d'identification Sizes, Abmessungen, Dimensions Surface, Oberfläche, Surface Test of intergran. coros., Prüfung auf interkrit. Korros., Test de coros. intercrit. EN ISO 3651-2 A: OK EN 10088-2:2014/1.4571 NACE MR0103/ISO 17945 AND NACE MR0175/ISO 15156-1 / NACE MR0175/ISO 15156-1 HEAT TREATMENT 1070 C COUNTRY OF MELT TORNIO, FINLAND MANUFACTURED IN TORNIO, FINLAND													
OK OK OK								Avg. t CO2e/t 1.55 Model verified Scope 1,2,3					
EN 10088-2:2014/1.4571 NACE MR0103/ISO 17945 AND NACE MR0175/ISO 15156-1 / NACE MR0175/ISO 15156-1 HEAT TREATMENT 1070 C COUNTRY OF MELT TORNIO, FINLAND MANUFACTURED IN TORNIO, FINLAND								ISO 6892-1:2019 A224 SAMPLES PERPENDICULAR TO THE ROLLING DIRECTION APPROVED ACC. TO AD2000-W0 WITH VERIFICATION OF THE UNIFORMITY OVER THE STRIP LENGTH. CERTIFIED ACC. TO PED 2014/68/EU BY TÜV NORD REG. NO. 0045. DOPS ACC. TO CPR AVAILABLE ON THE WEB PAGE BY STEEL NUMBER					
VS. ORD. 45013 9788 NS. DDT 489506 DEL 221024								OUTOKUMPU S.R.L. TO THE ORIGINAL Outokumpu S.R.L. NAME SIGNATURE Outokumpu Stainless Oy A-E KYÖSTÄJÄ FI-95490 Tornio, Finland Tel. +358 16 4521, email certifi@outokumpu.com, www.outokumpu.com Domitile: Tornio, Finland. Business Identity Code 0823315-9					