

CHAPTER 4

MATERIAL CERTIFICATES

ROL DAN, S.A.

**CERTIFICADO DE INSPECCION
INSPECCION CERTIFICATE
ABNAHMEPRÜFZEUGNIS
CERTIFICAT DES PRODUIT
EN 10.204.3.1.B**

FECHADATE: 25/05/2004

2.004/193
N.º ALBARA 2.004/404.910
Hoja num. 1

MATERIAL ROLDANMAX-143
GRADE EN10.088:3 (1.4301/1.4307.)
Werkstoff
Nuance

31375823

FABRICA
SANTO TOMAS DE LAS OLLAS, SN
APOC. DE CORREOS 11
POMERADA (LEON)
TELEFONO: (987) 44 61 00
FAX: (987) 44 61 01
E-MAIL: rldan@rldan.es

OFICINA CENTRAL
SANTO TOMAS DE LAS OLLAS, SN
28039 MADRID (ESPANA)
TELEFONO: (91) 386 52 57
FAX: (91) 386 51 56
E-MAIL: rldan@rldan.es

CLIENTE / CUSTOMER / BESTELLER / CLIENT

TOLERANCIA / TOLERANCE
TOLERANZ / TOLERANCE

PRODUCTO / PRODUCT / PRÜFGEGENSTAND / PRODUIT
Barre écourtée, polie.

PDM Service D'acier

REQUERIMIENTOS / REQUIREMENTS
ANFORDERUNGEN / EXIGENCES

EN10.088:3

DIMENSIONES / DIMENSIONS / ABMESSUNGEN / DIMENSIONS

45.00mm.

LONGITUD / LENGTH / LÄNGE / LONGUEUR

3.100 mm.

INSPECCION DIMENSIONAL Y VISUAL
SURFACE AND DIMENSIONS CONTROL
BESICHTIGUNG UND MASSKONTROLLE WURDEN DURCHFÜHRT
INSPECTION DIMENSIONNELLE VISUELLE

WITHOUT OBJECTIONS

CORROSION INTERGRANULAR
INTERGRANULAR CORROSION
INTERKRISTALLINE KORROSION
CORROSION INTERGRANULAIRE

EN ISO 3651-2 SATISFACTORY

OTROS ENSAYOS
OTHER TEST RESULTS
SONSTIGE PRÜFUNGEN
AUTRES ESSAIS

Controlé ANTI-MELANGE conforme

COMPOSICION QUIMICA % / CHEMICAL COMPOSITION % / CHEMISCHE ZUSAMMENSETZUNG % / COMPOSITION CHIMIQUE %

N.º COLADA CASTING N.º SCHÜSSEL N.º N.º COLÉE	C	P	S	Si	Mn	Cr	Ni	Mo	Ti	N	Cu	Co
3KC8	0,0230	0,0310	0,0229	0,3200	1,3840	18,3960	8,7630	0,2890	0,0030	0,0734	0,2520	0,1870
CONVERSIONES REQUIREMENTS FÖRDERER	0,3000	0,0450	0,0300	1,0000	2,0000	17,5000	8,0000			0,1100		

OBSERVACIONES / OBSERVATIONS / BEMERKUNGEN / OBSERVATIONS

EN 10272 - 1.4307 AISI 304/304L ASTM-A-276-02a ASTM-A-479-02 ASME-SA-479-98
W.N. 1.4301 DIN 17.440 X5CrNi 18-10 NACE MR0175-02 (SOLO DUREZA)
ASTM-A-262 PRACTICE "E" TEMPERATURE HYPERTREMPES 1075 °C

CONTRASEÑA DEL SUMINISTRADOR
TRADE MARK
HERSTELLERZEICHEN
SIGLE DU PRODUCTEUR

SELLO DEL RECEPCIONADOR
INSPECTOR STAMP
VERSTÄNDIGEN
SIGLE DE L'AGENT RECEPTIONNAIRE

R3

SISTEMA DE FABRICACION
STEELMAKING PROCESS
ERSCHEIDUNGSSYSTEM
ELABORATION

EEF+AOD+CC

POR CONTROL DE CALIDAD
QUALITY INSPECTOR
DER ABNAHMEBEAMTETE
L'AGENT RECEPTIONNAIRE

JOAQUIN DIEGUEZ GONZALEZ

QUALITY CONTROL REPRESENTATIVE
No necesaria firma según EN 10.204

Potrdilo o prevzemu 3.1.B/ Abnahmeprüfzeugnis
3.1.B/ Inspection certificate 3.1.B

Stran/Seite/Page 1 / 1
St. / Nr. / No.

DIN 50 049 3.1.B
EN 10 204 3.1.B

Datum / Datum / Date

31043563-3

18.08.2004

Narocnik / Kunde / Customer

JACQUET LIZY SAS

ZI LES CARREAUX-BP 4
F-77440 LIZY-SUR-OURCQ

Narocilo / Bestellung Nr. / Order No.

59830 disp.21445

Dobavni list / Lieferschein / Despatch note

31043563 z/vom/from 18.08.2004

FRANCE

Izdelek / Erzeugnis / Product

BLECH

Vrsta peci / Erschmelzungsart / Melting furnace

E + VOD

Znak izvedenca TK

Zeichen des sachverständigen
Inspectors' stamp



Znak proizvajalca

Zeichen des Herstellerwerks
Mark of the Manufacturer



Specifikacije / Vorschriften / Specifications

ASTM A240/A 240 M/ED.03

ASME SA 240 SECT.II PART A/ED.01

PED/97/23/EC

DIN 17440/ED.96 EN10088-2/ED.95

EN 10028-7/ED.2000

NF-A 36.209/ED.90

AD 2000 Regelwerk W2/ED.01 und W10/ED.01

TRB 100

Tip / W.nr. / Type

304L/304

304L/304

X5CrNi18/10/

X2CrNi18/9

W.Nr.1.4301/1.4307

Z 7 CN 18-09

X2CrNi18/9

W.Nr.1.4307

Pov. / Fläche / Finish

No.:1

No.:1

C2-IIa, 1D

C2-IIa

Koroz. test / Int.krist.korr. / Corrosion test

ASTM A262 PRACTICE E:OK

DIN 50914:OK

EN ISO 3651-2

NF-A 05.159.T1 : OK

Obseg dobave / Umfang der Lieferung / Extent of material delivery

Poz. Pos. Item	St. sarže Schmelzen Nr. Heat No.	St. plošče Waltztafel Plate No.	Teža neto Gewicht Weight kg	Dimenzije Abmessungen Dimensions mm	St. kom. Stückzahl Quantity	St. vzorca Probe Nr. Sample No.
1	247314	4095	960	10 / 2000 / 6000	1	4094 T

Mehanske lastnosti / Mechanische Eigenschaften / Mechanical properties

St.vzorca Probe Nr. Sample No.	Smer vzorca Proben lage Position	Nap.tecenja Dehn grenze Yield 0.2% N/mm ²	Nap.tecenja Dehn grenze Yield 1% N/mm ²	Nat.lrdnost Zugfestigkeit Tensile str. N/mm ²	Raztezek / Bruchdehnung / Elongation A5 % A50 % A80 %	Kontrakt. Einschnürung Red. of area %	Trdota Harte Hardness HB	Zilavost / Kerbschlag / Impact pri /smer bei /lage at/posit.	°C
Zahteva Anforderung. Requirement.	MIN MAX	210 250	250 378	520 609	45 51.6 65.6		201	60	20
4094 T	p	330	378	609	51.6 65.6		170	321 339	334 20

G - Glava / Kopf / Top N - Noga / Fuss / Bottom V - Vz dolžno / Längs / Longitudinal P - Precno / Quer / Transverse Upogib / Biege / Bend : 0.5a

Ĥemicka analiza / Chemische Zusammensetzung / Chemical Composition

Sarža/Schmelzen Nr./ Heat No.	%C	%Si	%Mn	%P	%S	%Cr	%Ni	%B	%N	%Co	Ferrite
247314	0.024	0.35	1.47	0.039	0.002	18.20	8.29	<0.0005	0.0828	0.15	

Opomba

Im Einvernehmen mit dem TÜV Bayern (August 1965)

"Auf eine Gegenzeichnung wurde durch dem TÜV BAYERN SACHSEN verzichtet
(20.06.1996)."

WARMBEHANDLUNG : LOSUNGSGLUGEN BEI 1050°C, WASSER ABGESCHRECKT !

- OBERFLÄCHEN UND MASSPRÜFUNG : OHNE BEANSTANDUNG NACH EN 10029 DICKE CLASS B

- PRÜFUNG AUF WERKSTOFFVERWECHSLUNG : OHNE BEANSTANDUNG

- PRÜFUNG AUF BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION

NACH DIN 50914 : OHNE BEANSTANDUNG

HEAT TREATMENT : SOLUTION ANNEALED AT 1050°C, WATER QUENCHED

- VISUAL AND DIMENSIONAL CHECK : OK

- SPECTROMETER SORTING TEST : OK

- INTERGRANULAR CORROSION TEST ACCORDING TO

ASTM A .- 262 PRACTICE E : OK!

Certified acc. Pressure Equipment Directive (97/23/EC)

by TÜV-CERT-Certification body for pressure equipment of the

TÜV-SÜDDEUTSCHLAND Bau und Betrieb GmbH: notified body. reg-no.0036

Zig in podpis
Firmenstempel und Unterschrift
Stamp and signature

OUTOKUMPU

04 09 04 / 1783 cc JF6

CERTIFICATE - ZEUGNIS - CERTIFICAT

3

1/1

EN 10204-3.1.BAvesta Works
CM. Hans Pernäng

Date - Datum Load - Ladung - Chargen No Cert.No - Zeugnis No

2004-09-29

FR4A-0889

1143252-EN

Your order - Ihre Bestellung - Votre commande

316577

Avesta order - Auftrag - Ordre Invoice - Rechnung - Facture

661/406146

661/466816

Purchaser - Besteller - Acheteur

OUTOKUMPU S/A
100, RUE PETIT

Requirements - Anforderungen - Exigences

ASTM A 240-04

ASME SA-240 2001 A02

FR-75165 PARIS CEDEX 19
FRANCE

Dest.

CMP ARLES SA

Product - Erzeugnisform - Produit

Stainless Steel Hot Rolled, Coil-Plate
finish 1D, cut edge

Grade - Werkstoff - Nuance

Avesta 18-8L
TYPE 304Brand mark
Herstellerzeichen
Signe du producteur**OUTOKUMPU**Inspectors stamp
Abname - Stempel
Estamp de l'expertMelting process
Erschmelzungsart
Procédé de fusion

E + AOD

Extent of delivery - Lieferumfang - Etendue de livre

Item	Pcs	Dimensions	Abmessungen	Dimensions	Heat No	Lot No
Pos	Anzahl				Schmelze Nr	Los Nr
Poste	Nombre	kg	mm		Coulée No	Lot Nr
9	11	6350	6.00	2000 6130	843576	— 004

Chemical composition - Chemische Zusammensetzung - Composition chimique

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu	Co	N
Heat	.017	.30	1.78	.026	.001	18.15	8.07	.007	.37	.11	.075

Radioactive contamination check acc. IAEA recommendations: Satisfactory

Test results - Prüfergebnisse - Résultats de essais (1N/mm² = 1 MPa) F = Front - Anfang - Début B = Back - Ende - Fin T = Transverse - Quer - Travers

	Test Ref	Temp	Rp 0.2	Rp 1.0	Rm	2"	HB
	Probe Ref	°C	N/mm ²	N/mm ²	N/mm ²	%	HB
	Eprouv Ref						
Min		+20	205		515	40	
Max							201
	F T	+20	317	366	626	50	170
	B T		315	365	627	51	183

Corrosion acc. ASTM A 262-E: Satisfactory

Heat treatment: Material temperature 1100 cel / Quenched (forced air + water)

Steel grade verification (PMI-spectroscopic): OK

Insp. and gauge measurement: Satisfactory

Outokumpu Stainless AB
Avesta Works
BOX 74, S-774 22 AVESTA
SWEDEN
Regoffice:
Stockholm SwedenTelephone : (0)226 814 18
Telefax : (0)226 813 16
Telex no : 7030 AVESTA S
Reg no : 556001-8748
V.A.T no : SE556001874801

This material is found to comply with order requirements

Authorized Inspector



EN 10204-3.1.B

Avesta Works
CM. Hans Pernäng

Date - Datum Load - Ladung - Chargem No Cert.No - Zeugnis No

2004-09-20 FR4A-0865 1139146-EN

Your order - Ihre Bestellung - Votre commande

Avesta order - Auftrag - Ordre Invoice - Rechnung - Facture

316577

661/406146

661/466166

Purchaser - Besteller - Acheteur

Requirements - Anforderungen - Exigences

OUTOKUMPU S/A
100, RUE PETIT

ASTM A 240-04

ASME SA-240 2001 A02

FR-75165 PARIS CEDEX 19
FRANCE

Dest.

CMP ARLES SA

Product - Erzeugnisform - Produit

Stainless Steel Hot Rolled, Coil-Plate
finish 1D, cut edge

Grade - Werkstoff - Nuance

Avesta 18-8L
TYPE 304

Brand mark
Herstellerzeichen
Signe du producteur

OUTOKUMPU

Inspectors stamp
Abname - Stempel
Estamp de l'expert



Melting process
Erschmelzungsart
Procédé de fusion

E + AOD

Extent of delivery - Lieferumfang - Etendue de livre

Item	Pcs	Dimensions	Abmessungen	Dimensions	Heat No	Lot No
Pos	Anzahl				Schmelze Nr	Los Nr
Poste	Nombre	kg	mm		Coulée No	Lot Nr
6	31	14846	5.00	2000 6130	843379	003

Chemical composition - Chemische Zusammensetzung - Composition chimique

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu	Co	N
Heat	.019	.33	1.73	.024	.001	18.15	8.24	.004	.24	.09	.064

Radioactive contamination check acc. IAEA recommendations: Satisfactory

Test results - Prüfergebnisse - Résultats de essais (1N/mm² = 1 MPa) F = Front - Anfang - Début B = Back - Ende - Fin T = Transverse - Quer - Travers

Test Ref	Temp	Rp 0.2	Rp 1.0	Rm	2"	HB
Probe Ref	°C	N/mm ²	N/mm ²	N/mm ²	%	HB
Eprouv Ref						
Min	+20	205		515	40	
Max						201
F T	+20	312	362	636	50	170
B T		317	372	635	52	170

Corrosion acc. ASTM A 262-E: Satisfactory

Heat treatment: Material temperature 1100 cel / Quenched (forced air + water)

Steel grade verification (PMI-spectroscopic): OK

Insp. and gauge measurement: Satisfactory

Outokumpu Stainless AB Telephone : (0)226 814 18
Avesta Works Telefax : (0)226 813 16
BOX 74, S-774 22 AVESTA Telex no : 7030 AVESTA S
SWEDEN Reg no : 556001-8748
Regoffice: V.A.T no : SE556001874801
Stockholm Sweden

This material is found to comply with order requirements

Rune Jansson

Authorized Inspector



Avesta Works
CM. Hans Pernäng

Your order - Ihre Bestellung - Votre commande

316577

Purchaser - Besteller - Acheteur

OUTOKUMPU S/A
100, RUE PETIT

FR-75165 PARIS CEDEX 19
FRANCE

Dest.

CMP ARLES SA

Product - Erzeugnisform - Produit

Stainless Steel Hot Rolled, Coil-Plate
finish 1D, cut edge

Grade - Werkstoff - Nuance

Avesta 18-8L
TYPE 304

CERTIFICATE - ZEUGNIS - CERTIFICAT

5 1/1

EN 10204-3.1.B

Date - Datum Load - Ladung - Chargem No Cert.No - Zeugnis No

2004-09-20

FR4A-0865

1139140-EN

Avesta order - Auftrag - Ordre Invoice - Rechnung - Facture

661/406146

661/466166

Requirements - Anforderungen - Exigences

ASTM A 240-04

ASME SA-240 2001 A02

Brand mark
Herstellerzeichen
Signe du producteur

OUTOKUMPU

Inspectors stamp
Abname - Stempel
Estamp de l'expert



Melting process
Erschmelzungsart
Procédé de fusion

E + AOD

Extent of delivery - Lieferumfang - Etendue de livre

Item	Pcs	Dimensions	Abmessungen	Dimensions	Heat No	Lot No
Pos	Anzahl				Schmelze Nr	Los Nr
Poste	Nombre	kg	mm		Coulée No	Lot Nr
1	5	1838	5.00	1500 6130	31058	- 002

Chemical composition - Chemische Zusammensetzung - Composition chimique

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu	Co	N
Heat	.025	.50	1.82	.029	.001	18.20	8.30	.010	.39	.14	.059

Radioactive contamination check acc. IAEA recommendations: Satisfactory

Test results - Prüfergebnisse - Résultats de tests (1N/mm² = 1 MPa) F = Front - Anfang - Début B = Back - Ende - Fin T = Transverse - Quer - Travers

	Test Ref	Temp	Rp 0.2	Rp 1.0	Rm	2"	HB
	Probe Ref	°C	N/mm ²	N/mm ²	N/mm ²	%	HB
Min		+20	205		515	40	
Max							201
	F T	+20	310	351	623	52	170
	B T		320	364	632	50	178

Corrosion acc. ASTM A 262-E: Satisfactory

Heat treatment: Material temperature 1100 cel / Quenched (forced air + water)

Steel grade verification (PMI-spectroscopic): OK

Insp. and gauge measurement: Satisfactory

Outokumpu Stainless AB
Avesta Works
BOX 74, S-774 22 AVESTA
SWEDEN
Regoffice:
Stockholm Sweden

Telephone : (0)226 814 18
Telefax : (0)226 813 16
Telex no : 7030 AVESTA S
Reg no : 556001-8748
V.A.T no : SE556001874801

This material is found to comply with order requirements

Rune Jonsson

Authorized Inspector



EN 10204-3.1.B

Avesta Works
CM. Hans Pernäng

Date - Datum Load - Ladung - Chargem No Cert.No - Zeugnis No

2004-09-22 FR4A-0873 1140292-EN

Your order - Ihre Bestellung - Votre commande

Avesta order - Auftrag - Ordre Invoice - Rechnung - Facture

316577

661/406146

661/466367

Purchaser - Besteller - Acheteur

Requirements - Anforderungen - Exigences

OUTOKUMPU S/A

ASTM A 240-04

100, RUE PETIT

ASME SA-240 2001 A02

FR-75165 PARIS CEDEX 19

FRANCE

Dest.

CMP ARLES SA

Product - Erzeugnisform - Produit

Stainless Steel Hot Rolled, Coil-Plate
finish 1D, cut edge

Grade - Werkstoff - Nuance

Avesta 18-8L

TYPE 304

Brand mark
Herstellerzeichen
Signe du producteur

OUTOKUMPU

Inspectors stamp
Abname - Stempel
Estamp de l'expert



Melting process
Erschmelzungsart
Procédé de fusion

E + AOD

Extent of delivery - Lieferumfang - Etendue de livre

Item	Pcs	Dimensions - Abmessungen - Dimensions	Heat No	Lot No
Pos	Anzahl		Schmelze Nr	Los Nr
Poste	Nombre	kg mm	Coulée No	Lot Nr
5	10	4430 5.00 2000 5650	843379	002

Chemical composition - Chemische Zusammensetzung - Composition chimique

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu	Co	N
Heat	.019	.33	1.73	.024	.001	18.15	8.24	.004	.24	.09	.064

Radioactive contamination check acc. IAEA recommendations: Satisfactory

Test results - Prüfergebnisse - Résultats d'essais (1N/mm² = 1 MPa) F = Front - Anfang - Début B = Back - Ende - Fin T = Transverse - Quer - Travers

	Test Ref	Temp	Rp 0.2	Rp 1.0	R _m	2"	HB
	Probe Ref	°C	N/mm ²	N/mm ²	N/mm ²	%	HB
	Epreuve Ref						
Min		+20	205		515	40	
Max							201
	F T	+20	294	342	617	52	160
	B T		302	348	620	53	156

Corrosion acc. ASTM A 262-E: Satisfactory

Heat treatment: Material temperature 1100 cel / Quenched (forced air + water)

Steel grade verification (PMI-spectroscopic): OK

Insp. and gauge measurement: Satisfactory

Outokumpu Stainless AB
Avesta Works
BOX 74, S-774 22 AVESTA
SWEDEN
Regoffice:
Stockholm Sweden

Telephone : (0)226 814 18
Telefax : (0)226 813 16
Telex no : 7030 AVESTA S
Reg no : 556001-8748
V.A.T no : SE556001874801

This material is found to comply with order requirements

Rune Jansson

Authorized Inspector



**OUTO
KUMPU**

CERTIFICATE - ZEUGNIS - CERTIFICAT

1/1

EN 10204-3.1.B

Avesta Works
OCM. Hans Pernäng

Date - Datum Load - Ladung - Chargem No Cert.No - Zeugnis No

2004-09-22 FR4A-0872 1140284-EN

Your order - Ihre Bestellung - Votre commande

Avesta order - Auftrag - Ordre Invoice - Rechnung - Facture

316577

661/406146

661/466365

Purchaser - Besteller - Acheteur

Requirements - Anforderungen - Exigences

OUTOKUMPU S/A

100, RUE PETIT

ASTM A 240-04

ASME SA-240 2001 A02

FR-75165 PARIS CEDEX 19

FRANCE

Dest.

BSL TUBES ET RACCORDS SA

Product - Erzeugnisform - Produit

Stainless Steel Hot Rolled, Coil-Plate

finish 1D, cut edge

Grade - Werkstoff - Nuance

Avesta 18-8L

TYPE 304

040904/1783 cc DL

Brand mark
Herstellerzeichen
Signe du producteur

**OUTO
KUMPU**

Inspectors stamp
Abname - Stempel
Estamp de l'expert



Melting process
Erschmelzungsart
Procédé de fusion

E + AOD

Extent of delivery - Lieferumfang - Etendue de livre

Item Pcs Dimensions - Abmessungen - Dimensions

Pos Anzahl

Poste Nombre

kg

mm

Heat No

Schmelze Nr

Coulée No

Lot No

Los Nr

Lot Nr

2 7 2430 5.00 2000 4400 843379 -- 002

Chemical composition - Chemische Zusammensetzung - Composition chimique

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu	Co	N
Heat	.019	.33	1.73	.024	.001	18.15	8.24	.004	.24	.09	.064

Radioactive contamination check acc. IAEA recommendations: Satisfactory

Test results - Prüfergebnisse - Résultats des essais (1N/mm² = 1 MPa) F = Front - Anfang - Début B = Back - Ende - Fin T = Transverse - Quer - Travers

Test Ref	Temp	Rp 0.2	Rp 1.0	Rm	2"	HB
Probe Ref	°C	N/mm ²	N/mm ²	N/mm ²	%	HB
Eprouv Ref						
Min	+20	205		515	40	
Max						201
F T	+20	294	342	617	52	160
B T		302	348	620	53	156

Corrosion acc. ASTM A 262-E: Satisfactory

Heat treatment: Material temperature 1100 cel / Quenched (forced air + water)

Steel grade verification (PMI-spectroscopic): OK

Insp. and gauge measurement: Satisfactory

Outokumpu Stainless AB

Telephone : (0)226 814 18

This material is found to comply with order requirements

Avesta Works

Telefax : (0)226 813 16

BOX 74, S-774 22 AVESTA

Telex no : 7030 AVESTA S

SWEDEN

Reg no : 556001-8748

Regoffice:

V.A.T no : SE556001874801

Stockholm Sweden

Rune Jonsson

Authorized Inspector



OUTOKUMPU

CERTIFICATE - ZEUGNIS - CERTIFICAT

1/1

EN 10204-3.1.BAvesta Works
QCM.Hans PernängDate - Datum Load - Ladung - Chargem No Cert.No - Zeugnis No
2004-10-22 FR4A-0955 1153169-EN

Your order - Ihre Bestellung - Votre commande

Avesta order - Auftrag - Ordre Invoice - Rechnung - Facture

316577**661/406146****661/468312**

Purchaser - Besteller - Acheteur

Requirements - Anforderungen - Exigences

OUTOKUMPU S/A
100, RUE PETIT**ASTM A 240-04****ASME SA-240 2001 A02****FR-75165 PARIS CEDEX 19**
FRANCE

Dest.

BSL TUBES ET RACCORDS SA

Product - Erzeugnisform - Produit

Stainless Steel Hot Rolled, Coil-Plate
finish 1D, cut edge

Grade - Werkstoff - Nuance

Avesta 18-8L
TYPE 304

040904/783 cc2L

Brand mark
Herstellerzeichen
Signe du producteur**OUTOKUMPU**Inspectors stamp
Abname - Stempel
Estamp de l'expert**AJA**
AMelting process
Erschmelzungsart
Procédé de fusion**E + AOD**

Extent of delivery - Lieferumfang - Etendue de livre

Item	Pcs	Dimensions	Abmessungen	Dimensions	Heat No	Lot No
Pos	Anzahl				Schmelze Nr	Los Nr
Poste	Nombre	kg	mm		Coulée No	Lot Nr
2	1	339	5.00	2000 4400	843645 —	002

Chemical composition - Chemische Zusammensetzung - Composition chimique

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu	Co	N
Heat	.021	.31	1.68	.026	.001	18.29	8.10	.003	.46	.10	.075

Radioactive contamination check acc. IAEA recommendations: SatisfactoryTest results - Prüfergebnisse - Résultats des essais (1N/mm² = 1 MPa) F = Front - Anfang - Début B = Back - Ende - Fin T = Transverse - Quer - Travers

Test Ref	Temp	Rp 0.2	Rp 1.0	R _m	2"	HB
Probe Ref	°C	N/mm ²	N/mm ²	N/mm ²	%	HB
Eprouv Ref						
Min	+20	205		515	40	
Max						201
F T	+20	310	358	624	56	167
B T		307	356	623	52	163

Corrosion acc. ASTM A 262-E: Satisfactory**Heat treatment: Material temperature 1100 cel / Quenched (forced air + water)****Steel grade verification (PMI-spectroscopic): OK****Insp. and gauge measurement: Satisfactory**Outokumpu Stainless AB
Avesta Works
BOX 74, S-774 22 AVESTA
SWEDEN
Regoffice:
Stockholm SwedenTelephone : (0)226 814 18
Telefax : (0)226 813 16
Telex no : 7030 AVESTA S
Reg no : 556001-8748
V.A.T no : SE556001874801

This material is found to comply with order requirements

*Rene Jonsson***Authorized Inspector**



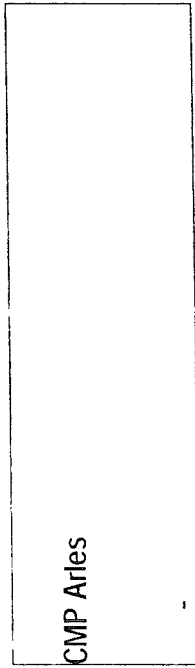
by order and on account of OUTOKUMPU STAINLESS AB

OUTOKUMPU

040904/783 cc DV

Specification	Material
ASME SA-240. Code Sect. II. Part A. Ed.2001-A02	Type 304
ASTM A 240M-04a	Type 304

Product
plate, hot rolled, solution annealed, descaled,
sheared



Item	Pcs	Wht [kg]	Dimension [mm]	Cast	Lot
2	2	7.000 x	2100.0 x	6400.0	485569 200848818

CMP Arles

Purchase Order No. 040904/783

Analysis (weight %)

Cast	Melting Pr.	C	S	N	Cr	Ni	Mn	Si	P
485569	E	0.024	0.001	0.07	18.35	8.08	1.62	0.47	0.028

Sample Condition	Tensile Test				Hardness Test			
	Temp [°C]	Yield [MPa]	Tensile [MPa]	Elongation A [%]	1 ASTM E 10	2	3	4
1 ASTM E 8 / transverse specimen								
Temp								
Yield 0.2%								
10%								
Temp								
172 surface								
1								
RT								
614								
50								
58								
1								
1-1								
200848818								

Spectrographic analytical mixup test: without objection
Dimensional and visual inspection performed: without objection



LRQA Approval
Number 912097

We herewith certify, that the material mentioned above is in compliance with the delivery specifications of the order	Mark of the Inspector
This certification was created by machine and is valid without signature	Q
Date of release: 24.01.2005	

* 31632 - O - E *
This certifies test report shall not be reproduced except in full, without the written approval of the issuing organization. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.



Order No. 404190
Delivery No. 1.4301
Trademark

by order and on account of OUTOKUMPU STAINLESS AB

OUTOKUMPU

0409041783 cc D U

Specification	Material
ASME SA-240 Code Sect. II, Part A, Ed. 2001-A02	Type 304 / Type 304L
ASTM A 240M-04a	Type 304 / Type 304L

Product
plate, hot rolled, solution annealed, descaled,
sheared

Item	Pcs	Wht [kg]	Dimension [mm]	Cast	Lot
3	3	15,000 x	2100,0 x	4500,0	200848816

CMP Arles

Purchase Order No. 040904/783

Analysis (weight %)

Cast	Melting Pr.	E	C	S	N	Cr	Ni	Mn	Si	P
485569			0.024	0.001	0.07	18.35	8.08	1.62	0.47	0.028

Sample Condition	Tensile Test		Elongation		Z [%]
	Temp [°C]	Yield [MPa]	Temp [°C]	Yield [MPa]	
1 ASTM E 8 / transverse specimen	RT	303	630	50	60
1 ASTM E 10	RT	303	630	50	60

Spectrographic analytical mixup test: without objection
Dimensional and visual inspection performed: without objection

RECEIVED
24 MARS 2005



LRQA Approval
Number 912097

We herewith certify, that the material mentioned above is in compliance with the delivery specifications of the order	Mark of the Inspector
This certification was created by machine and is valid without signature	Q
Date of release: 07.02.2005	

* 31220-O-E *

This certifies test report shall not be reproduced except in full, without the written approval of the issuing organization. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.

**OUTO
KUMPU**Avesta Works
QCM.Hans Pernäng

Your order - Ihre Bestellung - Votre commande

316577

Purchaser - Besteller - Acheteur

OUTOKUMPU S/A
100, RUE PETIT**FR-75165 PARIS CEDEX 19**
FRANCE

Dest.

BSL TUBES ET RACCORDS SA

Product - Erzeugnisform - Produit

Stainless Steel Hot Rolled, Coil-Plate
finish 1D, cut edge

Grade - Werkstoff - Nuance

Avesta 18-8L
TYPE 304

CERTIFICATE - ZEUGNIS - CERTIFICAT

11

1/1

EN 10204-3.1.B

Date - Datum Load - Ladung - Chargem No Cert.No - Zeugnis No

2004-09-22**FR4A-0872****1140288-EN**

Avesta order - Auftrag - Ordre Invoice - Rechnung - Facture

661/406146**661/466365**

Requirements - Anforderungen - Exigences

ASTM A 240-04**ASME SA-240 2001 A02**

040904/783 ccdL

Brand mark
Herstellerzeichen
Signe du producteur**OUTO
KUMPU**Inspectors stamp
Abname - Stempel
Estamp de l'expert**AJA
A**Melting process
Erschmelzungsart
Procédé de fusion**E + AOD**

Extent of delivery - Lieferumfang - Etendue de livre

Item	Pcs	Dimensions	Abmessungen	Dimensions	Heat No	Lot No
Pos	Anzahl				Schmelze Nr	Los Nr
Poste	Nombre	kg	mm		Coulée No	Lot Nr
4	14	5464	5.00	2000 5000	843379 -	002

Chemical composition - Chemische Zusammensetzung - Composition chimique

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu	Co	N
Heat	.019	.33	1.73	.024	.001	18.15	8.24	.004	.24	.09	.064

Radioactive contamination check acc. IAEA recommendations: SatisfactoryTest results - Prüfergebnisse - Résultats des essais (1N/mm² = 1 MPa) F = Front - Anfang - Début B = Back - Ende - Fin T = Transverse - Quer - Travers

Test Ref	Temp	Rp 0.2	Rp 1.0	Rm	2"	HB
Probe Ref	°C	N/mm ²	N/mm ²	N/mm ²	%	HB
Eprouv Ref						
Min	+20	205		515	40	
Max						201
F T	+20	294	342	617	52	160
B T		302	348	620	53	156

Corrosion acc. ASTM A 262-E: Satisfactory**Heat treatment: Material temperature 1100 cel / Quenched (forced air + water)****Steel grade verification (PMI-spectroscopic): OK****Insp. and gauge measurement: Satisfactory**

Outokumpu Stainless AB

Telephone : (0)226 814 18

This material is found to comply with order requirements

Avesta Works

Telefax : (0)226 813 16

BOX 74, S-774 22 AVESTA

Telex no : 7030 AVESTA S

SWEDEN

Reg no : 556001-8748

Regoffice:

V.A.T no : SE556001874801

Stockholm Sweden

*Rune Jansson***Authorized Inspector**

**OUTO
KUMPU**Avesta Works
OCM. Hans Pernäng

Your order - Ihre Bestellung - Votre commande

316577

Purchaser - Besteller - Acheteur

OUTOKUMPU S/A
100, RUE PETIT**FR-75165 PARIS CEDEX 19**
FRANCE

Dest.

BSL TUBES ET RACCORDS SA

Product - Erzeugnisform - Produit

Stainless Steel Hot Rolled, Coil-Plate
finish 1D, cut edge

Grade - Werkstoff - Nuance

Avesta 18-8L
TYPE 304

CERTIFICATE - ZEUGNIS - CERTIFICAT

1/1

EN 10204-3.1.B

Date - Datum Load - Ladung - Chargem No Cert.No - Zeugnis No

2004-09-22**FR4A-0872****1140282-EN**

Avesta order - Auftrag - Ordre Invoice - Rechnung - Facture

661/406146**661/466365**

Requirements - Anforderungen - Exigences

ASTM A 240-04**ASME SA-240 2001 A02**

040904/783 CCL

Brand mark
Herstellerzeichen
Signe du producteur**OUTO
KUMPU**Inspectors stamp
Abname - Stempel
Estamp de l'expertMelting process
Erschmelzungsart
Procédé de fusion**E + AOD**

Extent of delivery - Lieferumfang - Etendue de livre

Item	Pcs	Dimensions	Abmessungen	Dimensions	Heat No	Lot No
Pos	Anzahl				Schmelze Nr	Los Nr
Poste	Nombre	kg	mm		Coulée No	Lot Nr
13	3	1881	8.00	2000 5000	843384 -	003

Chemical composition - Chemische Zusammensetzung - Composition chimique

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu	Co	N
Heat	.021	.32	1.62	.026	.001	18.23	8.10	.001	.37	.10	.069

Radioactive contamination check acc. IAEA recommendations: SatisfactoryTest results - Prüfergebnisse - Results deessais (1N/mm² = 1 MPa) F = Front - Anfang - Debut B = Back - Ende - Fin T = Transverse - Quer - Travers

Test Ref	Temp	Rp 0.2	Rp 1.0	R _m	2"	HB
Probe Ref	°C	N/mm ²	N/mm ²	N/mm ²	%	HB
Eprov Ref						
Min	+20	205		515	40	
Max						201
F T	+20	319	360	616	54	174
B T		316	358	612	55	170

Corrosion acc. ASTM A 262-E: Satisfactory**Heat treatment: Material temperature 1100 cel / Quenched (forced air + water)****Steel grade verification (PMI-spectroscopic): OK****Insp. and gauge measurement: Satisfactory**

Outokumpu Stainless AB

Avesta Works

BOX 74, S-774 22 AVESTA

SWEDEN

Regoffice:

Stockholm Sweden

Telephone : (0)226 814 18

Telefax : (0)226 813 16

Telex no : 7030 AVESTA S

Reg no : 556001-8748

V.A.T no : SE556001874801

This material is found to comply with order requirements

Authorized Inspector



SIGLE PRODUCTEUR

HERSTELLERZEICHEN

TRADE MARK

AM

DUFERCO CLABECO

Rue de Clabecoq 101

1460 ITTRE

(BELGIQUE)

PLAQUES-BLECHE-PLATES

207

207

Q181/REINHAIRE, BÉTEILLER/EMFANGEN, NORMEN/LÖSNINGE

AM

04 0820/783 du 08.07.04

3512

ASTM A283 /03

BL

EXEMPLES DE MARQUE - IDENTIFICATION		TRACTION - ZUGVERSUCH - TENSILE TEST		RESILIENCE - KERBSCHLAGZAHNIGKEIT - NOTCH TOUGHNESS	
NO REFERENCE	Y COULEE	NO REFERENCE	Y COULEE	NO REFERENCE	Y COULEE
153507	B1	2	1	2	1
2956	B3	3	6	3	6
4404153556	B1	4	9	4	9
		5	5	5	5
		6	6	6	6
		7	7	7	7
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		263	263	263	263
		264			

138326



Nikopol Stainless Tube Mill

Ukraine



53201 56, Trubnikov Avenue Nikopol Dnepropetrovsk Region Ukraine tel/fax (05662) 2-51-94

Approved acc. to AD 2000-Merkblatt W0 by TÜV Nord a. V. and certified acc. to Pressure Equipment Directive (97/23/EC) by TÜV CERT-Certification body for pressure equipment of the TÜV NORD GRUPPE; notified body, reg.-no. 0045.
Сертифицирован по AD 2000 W0 ТЮФ Норд и по директиве для манорных резервуаров высокого давления (97/23Ев) сертификационным центром ТЮФ СЕРТ для оборудования, работающего под давлением сертификационного общества ТЮФ НОРД ГРУППЕ; регистрационный номер сертификационного центра 0045.

Требования Сертификата Inspection Certificate EN 10204-1993/3.1.B-ISO 9001 + P.E.D	Сертификат приемочных испытаний № Material Test Certificate No. 2004/ 802	Лист/Page 1	Листов/Pages 2
Заказчик Customer Страна назначения Country of destination Адрес Address Контракт №/Contract No.	VAN LEEUWEN STAINLESS B.V The NETHERLANDS INDUSTRIEWEG 26 4153 ZG BEESD 407142 Kern 028		

ТЕХНИЧЕСКИЕ ТРЕБОВАНИЯ / TECHNICAL REQUIREMENTS

Наименование продукции/Product description

HOT ROLLED TUBES ; SEAMLESS

НТД/Specification PED 97/23/EC; ASTM A 312-99a/A 530-98; ASME SA 312/SA 530 SEC.II Part.A - 1998 ;

091.12E/091.17 E; Rev 2 december 2001; NFA 49 - 117; September 86; NACE MR-0175-2001 Part. 3.5

31

Способ выплавки/Melting process EAF + AOD	Маркировка/Marking NSTM
---	-------------------------

Состояние поставки / State of delivery
Solution annealed and passivated

штамп контролера / Inspector's stamp

Сортамент / Range of sizes							Гидроис- пытания/ Hydr. test MPa (t=10sec.)
номер партии, Lot	марка стали/ Steel grade	плавка/ Heat No.	штук/ Pieces	Метраж/ Total Length, m	вес нетто, кг Net weight, kg	размеры/Dimensions, mm	
897	TP304/304L/ TUZ 2 CN 18 - 10	912068	6	35,9	1064	OD 168,3 x 7,11 WT x 5500-6500	-
901	TP304/304L/ TUZ 2 CN 18 - 10	912021	10	58,0	1708	OD 168,3 x 7,11 WT x 5500-6500	-
		TOTAL:	16	93,9	2772		

дата / date 17.11.2004

эксперт/inspector



V. Chapitskiy

Требования Сертификата Inspection Certificate EN 10204-1995/3.1.B.-ISO 9001 + P.E.D	Сертификат приемочных испытаний № Material Test Certificate No. 2004/802	Лист/Page 2	Листов/Pages 1
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ДОЛЯ ХИМИЧЕСКИХ ЭЛЕМЕНТОВ, В % / CHEMICAL COMPOSITION, %

плавка № Heat No.	C	Mn	Si	P	S	Cr	Ni	Mo		
	0,035 max	2,00 max	0,75 max	0,040 max	0,030 max	18,0-20,0	8,00-13,0			
912068	0,029	1,27	0,60	0,033	0,013	18,48	10,20			
912021	0,024	1,09	0,57	0,035	0,021	18,38	10,40			

РЕЗУЛЬТАТЫ ИСПЫТАНИЙ / TEST RESULTS

МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ / MECHANICAL TESTS ACC. TO EN 10002-1,-5										
партия/ Lot No.	Плавка/ Heat No.	№ образца испытания Specimen No.	направление испытаний/ Test direction	темпе- ратура- испытаний/ Test temperature, °C	предел текучес- ты/ Yield strength, MPa	прочность при растяжении Tensile strength, MPa	удли- нение Elongation %	удли- нение Elongation % ($L_0=5,65\sqrt{S_0}$)	твер- дость/ Brinell Hardness, HRB	
897	912068	1	L	20°	170	485	35	45	≤ 90	
		2			321	585	47		80	
901	912021	1			269	595	53		81	
		2			280	600	57		79	
					282	575	50		79	

РЕЗУЛЬТАТЫ МИКРОСТРУКТУРЫ/
MICROSTRUCTURE RESULTS

n/a.

ТЕХНОЛОГИЧЕСКИЕ ИСПЫТАНИЯ/
TECHNOLOGICAL TESTS

flattening - 1 - 2 stage - acceptable.

ИСПЫТАНИЯ НА МЕЖКРИСТАЛЛИТНУЮ КОРРОЗИЮ/
INTERGRANULAR CORROSION TEST

A 262, Practice E - acceptable, NFA 49-117.

ИСПЫТАНИЕ НА СООТВЕТСТВИЕ МАРКИ СТАЛИ
POSITIVE MATERIAL IDENTIFICATION

- satisfactory.

НЕРАЗРУШАЮЩИЙ КОНТРОЛЬ/
NON-DESTRUCTIVE TEST METHOD

100% ultrasonic tested - acceptable.

ПРИМЕЧАНИЯ
ADDITIONAL REMARKSTubes are heat treated : 1060° C holding time 5 minutes
then quenched by water.100% ВИЗУАЛЬНЫЙ КОНТРОЛЬ, ПРОВЕРКА РАЗМЕРОВ/
VISUAL INSPECTION, DIMENSIONAL MEASUREMENT

- SATISFACTORY



дата / date 17.11.2004

эксперт/inspector

ACERINOX S.A.
FABRICA DEL CAMPO
DE GIBRALTAR
PALMONES (LOS BARRIOS)
TEL. (34) 56-629300
FAX (34) 56-629311
P.O. BOX 83
370 LOS BARRIOS (CADIZ)



INSPECTION CERTIFICATE CERTIFICADO DE INSPECCION

di 14/7/783 cc DC.
3.1.B

ACCORDING TO EN 10204
SEGUN

CERTIFICATE N°
CERTIFICADO N° 524310 2 / 1

CUSTOMER CLIENTE

CPC INOX SPA
VIA GRAMSCI, 7/9
20032 CORMANO

ITALIA

Our order no.
n/pedido AE 60318

Your order no.
s/pedido 17470/03 KN208

REQUIREMENTS

NORMAS APLICABLES
EN 10088-2:1995

GRADE MATERIAL
ACX 160
1.4301
FINISH
ACABADO
1D

TRADE MARK

SELLO DEL FABRICANTE



INSPECTOR'S STAMP
SELLO DEL INSPECTOR

STEELMAKING PROCESS
PROCESO DE ACERIA

A.O.D.

COIL/BOX BOBINA/CAJA	CONTENT CONTENIDO	DIMENSIONS DIMENSIONES			MARKS MARCA	QUANTITY N° PIEZAS	PROBETA
		THICKNESS ESPESOR	WIDTH ANCHO	LENGTH LARGO			
011XD7 A	011XD7 A	10,00	1.540,00		13	1	011XD7
021WE6 A	021WE6 A	10,00	1.542,00		11	1	021WE6

CHEMICAL ANALYSIS

COMPOSICION QUIMICA (%)

HEAT NO. COLADA	C	CR	MN	N	NI	P	S	SI						
REQUIREMENTS REQUISITOS	0,070	17,000 19,500	2,000	0,110	8,000 10,500	0,045	0,015	1,000						
1WE6	0,020	18,098	1,685	0,037	8,651	0,032	0,004	0,309						
1XD7	0,022	18,305	1,628	0,036	8,691	0,030	0,003	0,409						

C. R. C. INOX S.p.A.

MECHANICAL PROPERTIES

CARACTERISTICAS MECANICAS

COIL PROBETA	YIELD Rm N/mm2	Rp 0.2 N/mm2	Rp 1.0 N/mm2	AS %										
REQUIREMENTS REQUISITOS	520,00 720,00	210,00	250,00	45,00										
011XD7	612,2	330,1	368,3	52,6										
021WE6	611,3	330,1	372,7	53,1										

Materiale consegnato a ESPACINOX
NS DDT BAS V. 8821 DEL 17/12/04
sotto forma di BARRE 10,00 X 100 X 6000
CL. B020091
VS ORD N. BCF03254

INTERGRANULAR CORROSION TEST
CORROSION INTERGRANULAR TEST

SURFACE AND DIMENSIONAL CONTROL
INSPECCION SUPERFICIAL Y DIMENSIONAL

REMARKS OBSERVACIONES

SATISFACTORY
Satisfactoria

WORK INSPECTOR
INSPECTOR J. VAQUERO

PALMONES, 30 SEPTIEMBRE 2003

OUTOKUMPUAvesta Works
OCM Hans Pernäng

Your order - Ihre Bestellung - Votre commande

315736 / 04 0636/752

Purchaser - Besteller - Acheteur

OUTOKUMPU S/A
100, RUE PETIT**FR-75165 PARIS CEDEX 19**
FRANCE

Dest.

CMP ARLES SA

Product - Erzeugnisform - Produit

Stainless Steel Hot Rolled, Coil-Plate
finish 1D, cut edge

Grade - Werkstoff - Nuance

Avesta 18-8L
TYPE 304/1.4301**CERTIFICATE - ZEUGNIS - CERTIFICAT**

1/1

EN 10204-3.1.B

Date - Datum Load - Ladung - Chargem No Cert.No - Zeugnis No

2004-07-30**FR4A-0746****1120873-EN**

Avesta order - Auftrag - Ordre Invoice - Rechnung - Facture

403883**463337**

Requirements - Anforderungen - Exigences

ASTM A 240-04**ASME SA-240 2001 A02****EN 10028-7:2000**Brand mark
Herstellerzeichen
Signe du producteur**OUTOKUMPU**Inspectors stamp
Abnahme - Stempel
Estamp de l'expertMelting process
Erschmelzungsart
Procédé de fusion**E + AOD**

Extent of delivery - Lieferumfang - Etendue de livre

Item Pcs
Pos Anzahl
Poste NombreDimensions - Abmessungen - Dimensions
mmHeat No
Schmelze Nr
Coulée NoLot No
Los Nr
Lot Nr**3 4 3128 10.00 2000 5000****842555 - 001**

Chemical composition - Chemische Zusammensetzung - Composition chimique

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu	Co	N
Heat	.018	.35	1.65	.027	.001	18.21	8.11	.006	.33	.14	.063

Radioactive contamination check acc. IAEA recommendations: SatisfactoryTest results - Prüfergebnisse - Résultats des essais (1N/mm² = 1 MPa) F - Front - Anfang - Début B - Back - Ende - Fin T - Transverse - Quer - Travers

	Test Ref Probe Ref Epreuve Ref	Temp °C	Rp 0.2 N/mm ²	Rp 1.0 N/mm ²	Rm N/mm ²	A5 %	2" %	HB
Min		+20	230	260	520	45	40	
Max					720			201
	F T	+20	337	377	621	54	56	201
	B T		339	384	622	54	56	192

Corrosion acc. ASTM A 262-E, EN ISO 3651-2A: Satisfactory**Heat treatment: Material temperature 1100 cel / Quenched (forced air + water)****Steel grade verification (PMI-spectroscopic): OK****Insp. and gauge measurement: Satisfactory****Certified acc. Pressure Equipment Directive (97/23/EC) by TÜV CERT-Certification body
for pressure equipment of the TÜV NORD GROUP; notified body, reg-no. 0045.**

Outokumpu Stainless AB

Telephone : (0)226 814 18

This material is found to comply with order requirements

Avesta Works

Telefax : (0)226 813 16

BOX 74, S-774 22 AVESTA

Telex no : 7030 AVESTA S

SWEDEN

Reg no : 558001-8748

Regoffice:

V.A.T no : SE556001874801

Stockholm Sweden

Authorized Inspector





Nikopol Stainless Tube Mill

Ukraine



53201 56, Trubnikov Avenue Nikopol Dnepropetrovsk Region Ukraine tel/fax (05662) 2-51-94

Approved acc. to AD 2000-Merkblatt W0 by TÜV Nord e. V. and certified acc. to Pressure Equipment Directive (97/23/EC) by TÜV CERT-Certification body for pressure equipment of the TÜV NORD GRUPPE; notified body, reg.-no. 0045. Сертифицирован по AD 2000 W0 ТЮФ Норд и по директиве для напорных резервуаров высокого давления (97/23Ев) сертификационным центром ТЮФ СЕРТ для оборудования, работающего под давлением сертификационного общества ТЮФ НОРД ГРУППЕ; регистрационный номер сертификационного центра 0045.

Требования Сертификата Inspection Certificate EN 10204-1995/3.1.B.-ISO 9001 + P.E.D	Сертификат приемочных испытаний № Material Test Certificate No. 2005/ 43	Лист/Page 1	Листов/Pages 2
Заказчик Customer Страна назначения Country of destination Адрес Address Контракт №/Contract No.	VAN LEEUWEN STAINLESS B.V The NETHERLANDS INDUSTRIEWEG 26 4153 ZG BEESD 410061 item 008		

ТЕХНИЧЕСКИЕ ТРЕБОВАНИЯ / TECHNICAL REQUIREMENTS

Наименование продукции/Product description

HOT ROLLED TUBES ; SEAMLESS

НТД/Specification PED 97/23/EC; ASTM A 312-99a/A 530-98/; ASME SA 312/SA 530 SEC.II Part.A - 1998 ; 091.12E/091.17 E; Rev 2 december 2001; NACE MR-0175-2001 Part. 3.5

Способ выплавки/Melting process EAF + AOD	Маркировка/Marking NSTM
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Состояние поставки / State of delivery Solution annealed and passivated	штамп контролера / Inspector's stamp
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31

Сортамент / Range of sizes							Гидроис- пытания/ Hydr. test MPa (t=10sec.)
номер партии, Lot	марка стали/ Steel grade	плавка/ Heat No.	штук/ Pieces	Метраж/ Total Length, m	вес нетто, кг Net weight, kg	размеры/Dimensions, mm	
117	TP304/304L	912248	20	123,3	672	OD 60,33 x 3,91 WT x 5500-6500	OK
117	TP304/304L	912248	19	116,44	658	OD 60,33 x 3,91 WT x 5500-6500	OK
148	TP304/304L	90474	11	69,0	388	OD 60,33 x 3,91 WT x 5500-6500	OK
TOTAL			50	308,74	1718		

дата / date 21.01.2005.

эксперт/inspector

31

V.Chaplitskiy

Требования Сертификата Inspection Certificate EN 10204-1995/3.1.B.-ISO 9001 + P.E.D	Сертификат приемочных испытаний № Material Test Certificate No. 2005/43	Лист/Page 2	Листов/Pages 1
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ДОЛЯ ХИМИЧЕСКИХ ЭЛЕМЕНТОВ, В % / CHEMICAL COMPOSITION, %

плавка № Heat No.	C	Mn	Si	P	S	Cr	Ni	Mo		
	0,035 max	2,00 max	0,75 max	0,040 max	0,030 max	18,0-20,0	8,00-13,0			
912248	0,025	1,05	0,45	0,038	0,014	18,20	10,80			
90474	0,025	1,11	0,51	0,032	0,019	18,38	10,40			

РЕЗУЛЬТАТЫ ИСПЫТАНИЙ / TEST RESULTS

МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ / MECHANICAL TESTS ACC. TO EN 10002-1,-5

партия/ Lot No.	Плавка/ Heat No.	№ образца испытаний Specimen No.	направление испытаний/ Test direction	темпе- ратура- испытаний/ Test temperature, °C	предел текучес- ти/ Yield strength, MPa	прочность при растяжении Tensile strength, MPa	удли- нение Elongation %	удли- нение Elongation % ($L_0=5.65\sqrt{S_0}$)	твер- дость/ Brinell Hardness, HRB
					205	515	35	45	≤ 90
117	912248	1	L	20°	323	590	47		85
		2			342	610	51		88
117	912248	1			323	590	47		85
		2			342	610	51		88
148	90474	1			373	600	40		90
		2			337	540	39		90

РЕЗУЛЬТАТЫ МИКРОСТРУКТУРЫ/
MICROSTRUCTURE RESULTS

ТЕХНОЛОГИЧЕСКИЕ ИСПЫТАНИЯ/
TECHNOLOGICAL TESTS

ИСПЫТАНИЯ НА МЕЖКРИСТАЛЛИНУЮ КОРРОЗИЮ/
INTERGRANULAR CORROSION TEST

ИСПЫТАНИЕ НА СООТВЕТСТВИЕ МАРКИ СТАЛИ
POSITIVE MATERIAL IDENTIFICATION

НЕРАЗРУШАЮЩИЙ КОНТРОЛЬ/
NON-DESTRUCTIVE TEST METHOD

ПРИМЕЧАНИЯ
ADDITIONAL REMARKS

100% ВИЗУАЛЬНЫЙ КОНТРОЛЬ, ПРОВЕРКА РАЗМЕРОВ/
VISUAL INSPECTION, DIMENSIONAL MEASUREMENT

n/a.

flattening – 1 – 2 stage – acceptable.

A 262, Practice E – acceptable

– satisfactory.

100% ultrasonic tested - acceptable.

Tubes are heat treated : 1060° C holding time 5 minutes then quenched by water.

– SATISFACTORY



дата / date 21.01.2005.

эксперт/inspector

Э1 V.Chapitskiy

TUV

TUV

APPROVED
MANUFACTURER
ACC. TO
AD-MERKBLATT
WO/TND 100

DIN EN ISO 9001

Certificate: 07 100 938

143308

Ukraine

Nikopol Stainless Tube Mill



53201 56, Trubnikov Avenue Nikopol Dnepropetrovsk Region Ukraine tel/fax (05662) 2-51-94

Approved acc. to AD 2000-Merkblatt W0 by TÜV Nord e. V. and certified acc. to Pressure Equipment Directive (97/23/EC) by TÜV CERT-Certification body for pressure equipment of the TÜV NORD GRUPPE; notified body, reg.-no. 0045.
Сертифицирован по AD 2000 WO TIOF Норд и по директиве для напорных резервуаров высокого давления (97/23Ев) сертификационным центром ТЮФ СЕРТ для оборудования, работающего под давлением сертификационного общества ТЮФ НОРД ГРУППЕ; регистрационный номер сертификационного центра 0045.

Требования Сертификата Inspection Certificate EN 10204-1995/3.1.B.-ISO 9001 + P.E.D	Сертификат приемочных испытаний № Material Test Certificate No. 2005/ 115	Лист/Page 1	Листов/Pages 2
Заказчик Customer Страна назначения Country of destination Адрес Address Контракт №/Contract No.	VAN LEEUWEN STAINLESS B.V The NETHERLANDS INDUSTRIEWEG 26 4153 ZG BEESD 411033 Item 012		

ТЕХНИЧЕСКИЕ ТРЕБОВАНИЯ / TECHNICAL REQUIREMENTS

Наименование продукции/Product description

HOT ROLLED TUBES ; SEAMLESS

НТД/Specification PED 97/23/EC; ASTM A 312-99a/A 530-98/; ASME SA 312/SA 530 SEC. II Part. A - 1998 ; 091.12E/091.17 E; Rev 2 december 2001; NACE MR-0175-2001 Part. 3.5

Способ выплавки/Melting process

EAF + AOD

Маркировка/Marking NSTM

Состояние поставки / State of delivery

Solution annealed and passivated

штамп контролера / Inspector's stamp

31

Сортамент / Range of sizes

номер партии/ Lot	марка стали/ Steel grade	плавка/ Heat No.	штук/ Pieces	Метраж/ Total Length, m	вес нетто, кг Net weight, kg	размеры/Dimensions, mm	Гидроиспытания/ Hydr. test MPa (t=10sec.)
30	TP304/304L	90594	21	134,4	1563	OD 88,9 x 5,49 WT x 5500-6500	-
30	TP304/304L	90594	20	128,0	1493	OD 88,9 x 5,49 WT x 5500-6500	-
TOTAL:			41	262,4	3056		

дата / date 11.02.2005.

эксперт/inspector

Требования Сертификата Inspection Certificate EN 10204-1995/3.1.B.-ISO 9001 + P.E.D	Сертификат приемочных испытаний № Material Test Certificate No. 2005/115	Лист/Page 2	Листов/Pages 1
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ДОЛЯ ХИМИЧЕСКИХ ЭЛЕМЕНТОВ, В % / CHEMICAL COMPOSITION, %

плавка № Heat No.	C	Mn	Si	P	S	Cr	Ni	Mo		
	0,035 max	2,00 max	0,75 max	0,040 max	0,030 max	18,0-20,0	8,00-13,0			
90594	0,030	1,09	0,40	0,034	0,030	18,33	10,35			

РЕЗУЛЬТАТЫ ИСПЫТАНИЙ / TEST RESULTS

МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ / MECHANICAL TESTS ACC. TO EN 10002-1,-5

партия/ Lot No.	Плавка/ Heat No.	№ образца испытаний Specimen No.	направление испытаний/ Test direction	темпе- ратура- испытаний/ Test temperature, °C	предел текучес- ти/ Yield strength, MPa	прочность при растяжении Tensile strength, MPa	удли- нение Elongation %	удли- нение Elongation % (L ₀ =5,65 S ₀)	твёр- дость/ Brinell Hardness, HRB
30	90594	1	L	20°	205	515	35	45	≤ 90
30	90594	2			269	580	53		81
		1			264	580	50		78
		2			269	580	53		81
					264	580	50		78

РЕЗУЛЬТАТЫ МИКРОСТРУКТУРЫ/
MICROSTRUCTURE RESULTS

n/a.

ТЕХНОЛОГИЧЕСКИЕ ИСПЫТАНИЯ/
TECHNOLOGICAL TESTS

flattening – 1 – 2 stage – acceptable.

ИСПЫТАНИЯ НА МЕЖКРИСТАЛЛИТНУЮ КОРРОЗИЮ/
INTERGRANULAR CORROSION TEST

A 262, Practice E – acceptable

ИСПЫТАНИЕ НА СООТВЕТСТВИЕ МАРКИ СТАЛИ
POSITIVE MATERIAL IDENTIFICATION

– satisfactory.

НЕРАЗРУШАЮЩИЙ КОНТРОЛЬ/
NON-DESTRUCTIVE TEST METHOD

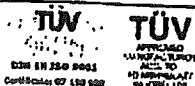
100% ultrasonic tested - acceptable.

ПРИМЕЧАНИЯ
ADDITIONAL REMARKS

Tubes are heat treated : 1060° C holding time 5 minutes then quenched by water.

100% ВИЗУАЛЬНЫЙ КОНТРОЛЬ, ПРОВЕРКА РАЗМЕРОВ/
VISUAL INSPECTION, DIMENSIONAL MEASUREMENT

– SATISFACTORY



дата / date 11.02.2005.

эксперт/inspector

31 V. Chaplitskiy
[Signature]



4 à 8 route du caillou (par D.42)
Parc des Sables - B.P. 12
69630 Chaponost France
rds lyon b 326 979 762 00019
n° ident. lva : fr 26 326 979 762 - ape : 291F
téléphone +33 (0)4 72 67 13 00
télécopieur +33 (0)4 72 67 13 19

ISO 9001 : 2000 LRQA N° 922612
COGEMA / SGN "Q2" - A0.A1
EDF / FRAMATOME : Qualification RCCM
SHELL France & UK - SIAR Niveau RAQ2
TUV : N°916 AD-Merkblatt WO/TRD 100
STOOMWEZEN - Reconnaissance QUALIFAS
Goodrich Aerospace n° 56353 - QA111
HS MARSTON AS 861

CERTIFICAT DE RECEPTION No: 654547

SELON NF EN 10204 3.1.B. (DIN EN 10204 3.1.B. (Ex DIN 50049 3.1.B.)

PAGE 5

VOTRE COMMANDE / YOUR ORDER / IHR BEST.

45/768615

Date

03/01/05

Client / Customer / Besteller

THYSSEN
2, ROUTE DE MARMAGNE - Z.I.
18000 BOURGES
FRANCE

NOTRE REFERENCE / OUR REF / WERKS Nr.

118505 / 1

Date

04/01/05

PRODUIT / PRODUCT / PRODUKT FORME A FROID

Qté Stückzahl	Désignation Description/Gegenstand	Dimensions Size/Abmessung	Spécifications Requirements/Anforderungen	Nuance Grade/Werkstoff
2	COUDE ANSI 90° LR SCH 40S	6" ETIRE	A403-03/SA403	304/304L
Contrôle visuel et dimensionnel		Visual inspection and dimensional control / Besichtigung und Abmessung Ohne beanstandung		Oui
Contrôle nuance PMI :				Oui

MATIERE / BASE MATERIAL / VORMATERIAL

Coulée Heat/Schmelze	No CCPU Cert. No/Zeugnisnr.	Tubiste Material Supplier/Vormaterial Lieferant	Spécifications Requirements / Anforderungen	AQUAP
032207	c86543	SCHOELLER-BLECKMANN	NFA 49117-A312 SA312-DIN 17458	

ANALYSE CHIMIQUE DU METAL DE BASE / CHEMICAL COMPOSITION / CHEMISCHE ZUSAMMENSETZUNG

Coulée Heat/Schmelze	C	Si	Mn	S	P	Cr	Ni	Mo	Ti	Co	Cu	N		
Mini						18	10							
032207	0.018	0.35	1.57	0.001	0.023	18.40	10.30	0.19	0.00	0.06	0.00	0.00		
Maxi	0.03	0.75	2	0.015	0.04	20	11	0.5	0.05			0.11		

mini, maxi imprimés correspondent à la fourchette de tolérance des équivalences de nuances / The mini, maxi agree with the bracket of the grades'allowances.

CARACTERISTIQUES MECANQUES-ESSAIS / MECHANICAL CHARACTERISTICS-TESTS / MECHANISCHE EIGENSCHATTEN-PRÜFUNG

Coulée Heat/Schmelze	Limite élastique Yield str./Dehngrenze 0.2 % Rp N/mm²		Résistance Rupture Tensile str./Zugfestigkeit Rm N/mm²		Allongement Elongation/Dehnung A % 2"		Dureté Hardness/Härte HRB		Hypertrempe Heat treat./Wärmebehand. 1070°		Essai de corrosion Intergranular Corrosion / Intermetalline Korrosion		Essai non destruct. Non destructive testing / Zerstörungsfreie Prüfungen	
	Base Base/Vormat.	Produit Product/Produkt	Base Base/Vormat.	Produit Product/Produkt	Base Base/Vormat.	Produit Product/Produkt	Base Base/Vormat.	Produit Product/Produkt	Base Base/Vormat.	Produit Product/Produkt	Base Base/Vormat.	Produit Product/Produkt	Base Base/Vormat.	Produit Product/Produkt
Mini	205		515		45									
032207	299		584		47.00		86		Oui	Oui	A 262 E			
Maxi			680											

Les mini, maxi imprimés correspondent à la fourchette de tolérance des équivalences de nuances / The mini, maxi agree with the bracket of the grades'allowances.

AUTRES ESSAIS / REMARQUES / Other tests - Remarks / Anforderungen

Epreuve de pression Pressur Test/Prüfdruck : 90 bars.

Produits découpés et passivés.

ASME B16.9 B16.25 PMI: OK.

Hardness Nace MR 0175.93 : OK. Corrosion A 262 E : OK.

CARACTERISTIQUES GARANTIES

Pour Z3CN 18-10 et Z3 CND 17-13-03 (A.M. du 24.03.78)

Carbone <=0,25% - Rm<=800 N/mm² - Soufre<=0,05% - Rm (A-2)>=10500 N/mm² - Phosphore<=0,05% - A% sur 5,65 V So>=16

CONFORME AUX STIPULATIONS DE LA COMMANDE / MANUFACTURING REQUIREMENTS ARE SATISFACTORY / DIE GESTELLTEN ANFORDERUNGEN SIND ERFÜLLT

Analyse chimique et caractéristiques mécaniques conformes à l'original du Certificat de Contrôle des Produits par l'Usine (CCPU) qui a exécuté et fourni le métal de base (coudes PROFORM) ou les produits finis (autres produits).

Ce certificat rédigé au moyen du traitement informatique de données, est applicable sans signature. Changement ou application pour d'autres produits sont considérés comme falsification de document et fraude et seront soumis à la juridiction pénale.

04/01/05
L'expert d'usine.
Factory Inspector / WÜK-Stellenbeauftragter
T. RUGGERI



Marque de fabrique

142944

CERTIFICATE NO : 9125875 (1) DATE : 26/1/2005
 CONTRACT NO : 9106111
 SHIPPER : KANZEN TETSU SDN BHD
 ORDER NO. : 411090
 CUSTOMER : VAN LEEUWEN STAINLESS B.V.

**CERTIFICATE EN 10 204/3.1.8
 MILL TEST REPORT**

DIN 50049 3.1 B
 EN 10204 3.1 B

4339 PCS OF STAINLESS STEEL WELDED TUBE
 SHIPPING TERMS : CIF PORT OF ROTTERDAM
 ACCORDING TO INCOTERMS 2000
 BILL OF LADING NO. 00000000000000000000

Kanzen Tetsu Sdn Bhd

Company No. 190802-W
 P.O. Box 7272, Lot 4 Persiaran Perusahaan
 Seksyen 23, 40706 Shah Alam, Selangor Darul Ehsan, Malaysia.
 Tel: (603) 5542 1400 Fax: (603) 5541 9777
 http://www.kanzen-tetsu.com e-mail: info@kanzen-tetsu.com

PRODUCT : WELDED AUSTENITIC STAINLESS STEEL
 PIPES ASTM A312/ASME SA312H-03

(Q30 SPECIFICATION)

SIZE	QTY	TOTAL LENGTH	WEIGHT	HEAT NO	TENSILE TEST				HARDNESS TEST (HRR)	HYDRO-STATIC TEST MPa	FLAT-TENING TEST %	CORROSION TEST ASTM A262 PRACTICE E	CHEMICAL COMPOSITION (%)									
					Y.S.	T.S.	EL %	C					Si	Mn	P	S	Ni	Cr	Mo			
																				N	N	N
TP304/304L X 1" X SCH10S	112	-	KGS		205	515	35	82	12.2	PASSED		3.5	100	200	45	30	1300	2000	-			
				4110-0410 ✓	319	638	54	82	12.2	PASSED		2.2	48	128	27	2	805	1802	-			
TP304/304L X 1-1/4" X SCH10S	45	-	766	4112-0412	296	619	57	79	13.8	PASSED		2.1	53	130	26	3	837	1806	-			
TP304/304L X 2" X SCH10S	135	-	3271	4120-0412	319	664	53	83	9.6	PASSED		1.7	46	127	40	2	808	1813	-			
TP304/304L X 2-1/2" X SCH10S	45	-	1659	4125-0412	324	665	55	84	9.0	PASSED		1.9	46	126	28	2	804	1831	-			
TP304/304L X 3" X SCH10S	66	-	2546	4130-0411 ←	290	655	51	84	6.9	PASSED		2.6	41	146	25	4	823	1825	-			
	26	-	1034	4130-0412	328	630	53	84	6.9	PASSED		2.0	47	128	40	2	807	1810	-			
TP304/304L X 3" X SCH40S	10	-	696	4430-0412	267	621	55	83	13.1	PASSED		2.2	38	165	23	3	820	1817	-			
TP304/304L X 6" X SCH40S	4	-	697	4460-0412	331	589	49	83	9.0	PASSED		2.7	44	133	26	9	806	1815	-			
TP304/304L X 1-1/2" X SCH40S	68	-	1695	4415-0410	324	653	50	85	15.8	PASSED		3.0	51	170	22	3	832	1851	-			

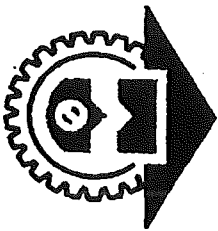
La société Kanzen Tetsu garantit que tous les produits, en certification modifié respectant en leur totalité les spécifications de l'article 15 de l'arrêté ministériel du 24 mars 1978 modifié:

C=0.05%, P=0.05%, S=0.05%, R=0.05%, R=0.05%
 A% (L=5.65V₂₀) min. 10% en long. R(A-2) = 10500

The material comply with ASTM A312 Sect II part A ed. '95 plus addenda
 All Welded Stainless Steel Pipes Are Certified P.M.I. Tested

QA DEPARTMENT
 CHAN YIN HANG
 MANAGER

KT/DOQA-22-R3



SHREE GANESH FORGINGS LIMITED

C-3/C, T.T.C. IND. AREA, THANE BELAPUR ROAD, PAWNE, NAVI MUMBAI, INDIA



RWTVV

QADFRMA

INSPECTION CERTIFICATE - EN 10204/3.1B														
PED Certificate No. 04 202 2 440 02 10004 and AD-2000 Merkblatt WO Certificate No. 04202W1300200018														
CLIENT : M/S. VANLEEUWEN STAINLESS B.V.		PRODUCT : MACHINED STAINLESS STEEL FORGED FLANGES												
ORDER NO. : 408274		MATERIAL SPECIFICATION : DIN EN 10088 - 3												
DATE : 27.08.2004		QUALITY : 1.4306												
INVOICE NO. : EXP/04-05/115		DIMENSIONAL SPECIFICATION : DIN 2635 / C ND 40												
dl. 31.01.2005														
		MANUFACTURER'S BRAND :												
		INSPECTORS STAMP :												
		DATE : 27.02.2005												
		CERTIFICATE NO.: EXP/2004-05/ 1721												

CHEMICAL ANALYSIS														
S.NO.	ITEM DESCRIPTION	H.NO./H.CODE	QTY	% C	% Mn	% Si	% S	% P	% Cr	% Ni	% Mo	% Ti	% N2	ARTICLE NO.
23	DIN 2635 / C ND 40 NW 20 / 28.9	S-2600 / 076	10	.014	1.77	.34	.024	.036	18.26	10.04	-	-	.0679	455.34.023
24	DIN 2635 / C ND 40 NW 50 / 60.3	S-2600 / 076	100	.014	1.77	.34	.024	.036	18.26	10.04	-	-	.0679	455.34.053
25	DIN 2635 / C ND 40 NW 80 / 88.9	S-2600 / 076	50	.014	1.77	.34	.024	.036	18.26	10.04	-	-	.0679	455.34.082
26	DIN 2635 / C ND 40 NW 200 / 219.1	S-2408 / 900	10	.025	1.78	.41	.018	.039	18.22	10.31	-	-	.0615	455.34.204

MECHANICAL PROPERTIES														
S.NO.	H.NO./H.CODE	TENSILE STRENGTH Rm N/mm2	YIELD STRENGTH Rp N/mm2		% Elongation % A G.L = 50 mm	% Reduction Area % Z	CHARPY IMPACT TEST V - NOTCH (JOULES) (+20°C)				Hardness BHN	MICRO-STRUCTURE	IGC AS PER ISO 3651-2	HEAT TREATMENT.
			0.2%	1.1%			I	II	III	AVEG				
23	S-2500 / 076	576	239	281	53	70.20	170	186	194	183.33	156	O.K	O.K	SOIN ANN
24	S-2500 / 076	576	239	281	53	70.20	170	186	194	183.33	156	O.K	O.K	SOIN ANN
25	S-2500 / 076	576	239	281	53	70.20	170	186	194	183.33	156	O.K	O.K	SOIN ANN
26	S-2408 / 900	587	245	288	53.76	68.50	184	186	186	186.33	163	O.K	O.K	SOIN ANN

REMARKS : 1) After solution annealing hardness found less than HRC 22 (237 BHN) according to "NACE MR 0175-2000."

2) PMI Test found O.K.

We certify that the material have been manufactured, tested and examined in accordance with all the requirement of the ordered standard and all test result are acceptable.

WOMEN INSPECTOR

T.V. BHOSALE

138326



Nikopol Stainless Tube Mill

Ukraine



53201 56, Trubnikov Avenue Nikopol Dnepropetrovsk Region Ukraine tel/fax (05662) 2-51-94

Approved acc. to AD 2000-Merkblatt W0 by TÜV Nord e. V. and certified acc. to Pressure Equipment Directive (97/23/EC) by TÜV CERT-Certification body for pressure equipment of the TÜV NORD GRUPPE; notified body, reg.-no. 0045. Сертифицирован по AD 2000 W0 ТЮФ Норд и по директиве для напорных резервуаров высокого давления (97/23/Ев) сертификационным центром ТЮФ СЕРТ для оборудования, работающего под давлением сертификационного общества ТЮФ НОРД ГРУППЕ; регистрационный номер сертификационного центра 0045.

Требования Сертификата Inspection Certificate EN 10204-1995/3.1.B.-ISO 9001 + P.E.D	Сертификат приемочных испытаний № Material Test Certificate No. 2004/ 802	Лист/Page 1	Листов/Pages 2
Заказчик Customer Страна назначения Country of destination Адрес Address Контракт №/Contract No.	VAN LEEUWEN STAINLESS B.V The NETHERLANDS INDUSTRIEWEG 26 4153 ZG BEESD 407142 Item 026		

ТЕХНИЧЕСКИЕ ТРЕБОВАНИЯ / TECHNICAL REQUIREMENTS

Наименование продукции/Product description

HOT ROLLED TUBES ; SEAMLESS

НТД/Specification PED 97/23/EC; ASTM A 312-99a/A 530-98; ASME SA 312/SA 530 SEC.II Part.A - 1998 ; 091.12E/091.17 E; Rev 2 december 2001; NFA 49 - 117; September 85; NACE MR-0175-2001 Part 3.5

31

Способ выплавки/Melting process EAF + AOD	Маркировка/Marking NSTM
Состояние поставки / State of delivery Solution annealed and passivated	штамп контролера / Inspector's stamp

Сортамент / Range of sizes							Гидроис- пытания/ Hydr. test МПа (t=10sec.)
номер партии, Lot	марка стали/ Steel grade	плавка/ Heat No.	штук/ Pieces	Метрах/ Total Length, m	вес нетто, кг Net weight, kg	размеры/Dimensions, mm	
897	TP304/304L/ TUZ 2 CN 18 - 10	912068	6	35,9	1064	OD 168,3 x 7,11 WT x 5500-6500	-
901	TP304/304L/ TUZ 2 CN 18 - 10	912021	10	58,0	1708	OD 168,3 x 7,11 WT x 5500-6500	-
		TOTAL:	16	93,9	2772		

дата / date 17.11.2004

эксперт/inspector

В.С. Чардitzkiy

25-B

Требования Сертификата Inspection Certificate EN 10204-1995/3.1.B.-ISO 9001 + P.E.D	Сертификат приемочных испытаний № Material Test Certificate No. 2004/802	Лист/Page 2	Листов/Pages 1
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ДОЛЯ ХИМИЧЕСКИХ ЭЛЕМЕНТОВ, В % / CHEMICAL COMPOSITION, %

плавка № Heat No.	C	Mn	Si	P	S	Cr	Ni	Mo		
	0,035 max	2,00 max	0,75 max	0,040 max	0,030 max	18,0-20,0	8,00-13,0			
912068	0,029	1,27	0,60	0,033	0,013	18,48	10,20			
912021	0,024	1,09	0,57	0,035	0,021	18,38	10,40			

РЕЗУЛЬТАТЫ ИСПЫТАНИЙ / TEST RESULTS

МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ / MECHANICAL TESTS ACC. TO EN 10002-1,-5

партия/ Lot No.	Плавка/ Heat No.	№ образца испытания Specimen No.	направление испытаний/ Test direction	темпе- ратура- испытаний/ Test temperature, °C	предел текучес- ти/ Yield strength, MPa	прочность при растяжении Tensile strength, MPa	удли- нение Elongation %	удли- нение Elongation % ($L_0=5,65\sqrt{S_0}$)	твер- дость/ Brinell Hardness, HRB
897	912068	1	L	20°	170	485	35	45	≤ 90
901	912021	2			321	585	47		80
		1			269	595	53		81
		2			280	600	57		79
					282	575	50		79

РЕЗУЛЬТАТЫ МИКРОСТРУКТУРЫ/
MICROSTRUCTURE RESULTS

n/a.

ТЕХНОЛОГИЧЕСКИЕ ИСПЫТАНИЯ/
TECHNOLOGICAL TESTS

flattening - 1 - 2 stage - acceptable.

ИСПЫТАНИЯ НА МЕЖКРИСТАЛЛИТНУЮ КОРРОЗИЮ/
INTERGRANULAR CORROSION TEST

A 262, Practice E - acceptable, NFA 49-117.

ИСПЫТАНИЕ НА СООТВЕТСТВИЕ МАРКИ СТАЛИ
POSITIVE MATERIAL IDENTIFICATION

- satisfactory.

НЕРАЗРУШАЮЩИЙ КОНТРОЛЬ/
NON-DESTRUCTIVE TEST METHOD

100% ultrasonic tested - acceptable.

ПРИМЕЧАНИЯ
ADDITIONAL REMARKS

Tubes are heat treated : 1060° C holding time 5 minutes then quenched by water.

100% ВИЗУАЛЬНЫЙ КОНТРОЛЬ, ПРОВЕРКА РАЗМЕРОВ/
VISUAL INSPECTION, DIMENSIONAL MEASUREMENT

- SATISFACTORY



дата / date 17.11.2004

эксперт/inspector

31 V. Chaplitskiy

CERTIFICATE - ZEUGNIS - CERTIFICAT

Page
Seite 1(2)

EN 10 204-3.1.B

Date - Datum	Load - Ladung - Charge No	Cert.No - Zeugnis Nr
040628	3376	4064011.R00

OUTOKUMPU

Your order - Ihre Bestellung - Votre commande

Outokumpu Order - Auftrag - Ordre Pack - Kolli - Colis No

CTS Order

403137

0

Purchaser - Besteller - Acheteur

Outokumpu Stainless AB, CL.

Requirements - Anforderungen - Exigences

Hot Rolled Plate

AD 2000-Mbl. W2/AD 2000-Mbl. W10/EN 10028-7

Central Lager

EN 10088-2:95

69381 DEGERFORS

ASME SA-240. Code Sect. II. Part A.Ed.2001-A02

SVERIGE

ASTM A240M-04a

Dest

A480/A480M

By e-Services system

EN 10 029 - B NK

Product - Erzeugnisform - Produit

Width tolerance:-0/+100mm

Stainless steel plate, hot rolled CTS

Solution annealed, pickled/1D/No.1 Finish

Grade - Werkstoff - Nuance *

18-9L

1.4301/1.4307/Type 304/Type 304L

Brand-Mark
Herstellereichen
Signe de l'industriel



Inspector stamp
Abnahme - Stempel
Estamp de l'expert



Melting process
Erbschmelzen
Procédé de fusion

E+AOD

Marking - Kennzeichnung - Marquage

Plate No, Dimension, Heat No, Lot No, Incl. *

Extent of delivery - Lieferumfang - Etendue de livraison

Item Pos	Pcs Anzahl Nombre	Kg	Dimension mm	Abmessung
-------------	-------------------------	----	-----------------	-----------

Heat No Schmelze Nr Coulée	Lot No Los Nr Lot No
----------------------------------	----------------------------

1	9		30 * 2000 * 6000	
---	---	--	------------------	--

41505

139934

Plate No
Blech Nr
Tôle No

8580 2201,-2301,-2401,-2501,-2601,-2701,-2801,-2901,-3001

Chemical composition - Chemische Zusammensetzung - Composition chimique %

Heat - Schmelze - Coulée No

	C	Si	Mn	P	S	Cr	Ni	N				
Min	0.000	0.00	0.00	0.000	0.000	18.00	8.00	0.00				
Max	0.030	0.75	2.00	0.045	0.015	19.50	10.00	0.10				
41505	0.018	0.31	1.84	0.026	0.001	18.26	8.07	0.08				

Test results - Prüfergebnisse - Résultats des essais (1N/mm² = 1 MPa)

Direc.	Top/Bot	Form	Location
T = Transverse	F = Front	P = Flat	1 = Center
L = Longitudinal	B = Back	C = Round	2 = Close to Surface
			3 = Standard
			4 = At 1/4 of thickness

Mechanical Properties

Tensile testing EN 10 002/Hardness Rockwell B

Plate-NoDirec. Top/BotLocation Form Temp. Rp 0,2 Rp 1,0 Rm A5 A50 HRB

					C	N/mm2	N/mm2	N/mm2	%	%	
Min						210	250	520	45	40	0
Max								650			92
2201	T	F	3	C	20	250	299	594	60	62	82
2301	T	F	3	C	20	251	299	592	59	60	83
2401	T	F	3	C	20	254	304	597	59	61	82
2501	T	F	3	C	20	246	297	593	58	60	80
2601	T	F	3	C	20	250	301	597	58	60	80
2701	T	F	3	C	20	252	304	598	58	60	86
2801	T	F	3	C	20	248	299	596	59	61	83
2901	T	F	3	C	20	254	303	595	59	61	80
3001	T	F	3	C	20	250	300	595	59	61	82

The results comply with the requirements of the order.

Outokumpu Stainless AB
Hot Rolled Plate

SE-693 81 Degerfors, Sweden

Telefon / Telephone

Nat 0586 470 00

Int +46 (0)586 470 00

Telefax

Nat 0586 470 16

Int +46 (0)586 470 16

Org nr/Reg. No.: 556001-8748

Säte/Registered office: Stockholm, Sweden

Moms nr/V.A.T. No.: SE556001874801



Computer generated original
Quality Inspector

Bengt Hagström
Bengt Hagström

Charpy impact test (V-notch) EN 10045-1

Plate-No/Direc. Top/Bot/Location Form Temp. Value 1 Value 2 Value 3 Average

					C	Joule	Joule	Joule	Joule
Min									60
Max									
2201	T	F	3	P	20	308	340	335	328
2301	T	F	3	P	20	306	312	300	306
2401	T	F	3	P	20	328	300	317	315
2501	T	F	3	P	20	326	304	316	315
2601	T	F	3	P	20	314	301	311	309
2701	T	F	3	P	20	333	309	291	311
2801	T	F	3	P	20	330	318	319	322
2901	T	F	3	P	20	313	324	307	315
3001	T	F	3	P	20	332	316	315	321

Corrosion

EN ISO 3651-2 Method A : Approved

Other Information

Heat treated at 1100°C and Quenched in water.

Dimensional control, visual inspection and grade check :Approved

Accepted acc to AD-Merkblatt W0 / TRD 100 without countersignature
document file TÜV Nord e.V. 0121WL12640.

Approved acc. to AD2000-Merkblatt W0 by TÜV Nord e.V.

Certified acc. Pressure Equipment Directive (97/23/EC)

by TÜV-CERT-Certification body for pressure equipment of the

TÜV-NORD GROUP: notified body, reg-no. 0045

Outokumpu Stainless AB

Hot Rolled Plate

SE-693 81 Degerfors, Sweden

Telefon / Telephone

Nat 0586 470 00

Int +46 (0)586 470 00

Moms nr/V.A.T. No.: SE556001874801

Telefax

Nat 0586 470 16

Int +46 (0)586 470 16

Org nr/Reg. No.: 556001-8748

Säte/Registered office: Stockholm, Sweden

Computer generated original
Quality Inspector

Bengt Hagström

DMV STAINLESS Italia s.r.l

Via Piò, 30 24062 Costa Volpino (BG)
Tel : 035.975.811 - Fax : 035.971624
e-mail: dmvitaly@dmv-stainless.com

137321

27A

**INSPECTION CERTIFICATE**

3.1.B - EN 10204 : 1991+A1 : 1995

No

04.04471

Page 1/2

Purchaser VAN LEEUWEN STAINLESS .
Address INDUSTRIEWEG 26 BEESD .
Customers Order 410089 date 08/10/2004 .
DMV Ref. Order / Item 0000213383/000007 .
Part number 091.12.043 .

Product

Seamless Stainless Steel Cold Finished Pipes Solution Annealed Free From Scale Plain Ends Square Cut Deburred

Specification ASTM A 312-03 ASME SA-312 ED. 2001 ADD. 2002 DIN 17458 PK1 07.85 NF A 49117 09.85
Grade TP304 TP304L 1.4301 1.4306 Z 2 CN 18-10 Z 6 CN 18-09
Standards ASTM A 312-03 AW - NFA 49117 - D3/T3 EN ISO 1127-4/96
Marking {LOGO_DMV} ASTM/ASME A/SA-312 -117-TP304/TP304L 1.4301/1.4306 Z2CN1810/Z6CN1809 SEAMLESS HS1 H.{HEAT} NPS 3/8 SCH 40S 17,1 x 2,31 DMV-I IF BUNDLE {BUNDLE}

Heat	No	Weight	Total length	OD	W. Th.	Length
497600	51	256,00 Kg	313,00 m	NPS 3/8	SCH 40S	5182/7315 mm
Tot.	51	256,00 Kg	313,00 m			

Heat 497600 Melting Process Electric + VOD

Chemical analysis (%)

	C	Si	Mn	P	S	Cr	Cu	Ni	Co	B
Min						18.000		10.000		
Max	0.030	1.0000	2.00	0.040	0.0300	19.000	1.000	10.500	0.200	0.0015
Heat	0.013	0.3600	1.75	0.029	0.0020	18.310	0.240	10.280	0.089	0.0014

Mechanical and Metallurgical Properties**Tensile test (at 20 °C)**

	Direct.	Y.S. 0,2%	Y.S. 1,0%	U.T.S.	El 5d	El 50 mm
	Long/Trans	MPa	MPa	MPa	%	%
Min		205.00	230.00	515.00	45.00	35.00
Max				680.00		
No 176700	L	316.53	347.94	641.56	49.09	51.20

HARDNESS TEST

No 176700/1/2/3/4/5 Required HRB max 90,00 Result 82,00 / 83,00

FLARING TEST

Required NF A 49-856 Result OK

RING FLATTENING TEST

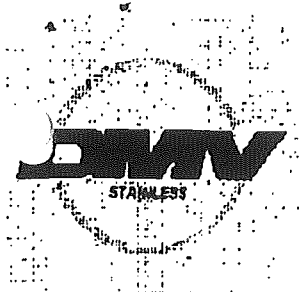
Required DIN 50 136 Result OK

FLATTENING TEST

Required ASTM A 999 Result OK

CORROSION TEST

Required ASTM A 262 PR E Result OK



DMV STAINLESS Italia s.r.l

Via Pld, 30.24062 Costa Volpino (BG)
Tel : 035.975.611 - Fax : 035.971624
e-mail: dmvitally@dmv-stainless.com

No
04.04471
Page 2/2

27-B

INSPECTION CERTIFICATE

3.1.B - EN 10204 : 1991+A1 : 1995

CORROSION TEST

Required	NF A 05159 T1	Result OK
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Other tests and declarations

Heat treatment	1070°C	
Antimixing checked by PMI		OK
Visual and dimensional examination		OK
Eddy current testing	ASTM A 999	OK
Material in accordance with	NACE MR 01.75 2000 (HRC<=22)	OK

No weld repair

Tubes are free from mercury contamination

We certify that the delivered products comply with the request of the order

1. Delivered material has been produced and tested on the internal order/item n° 0004042703/000001

La Société DMV garantit que tous les produits objet du Certificat susdit, respectent en leur totalité les Specifications de l'Article 15 de l'Arrêté Ministeriel du 24 Mars 1978 modifié: C max 0,25% P max 0,05% Rm max 800 N/mm² A (Lo=5,65VSo) min 16% long.Rm (A-2) min 10500 N/mm²

Date 21-Oct-2004

Mill Inspector F. ANNIBALI

Confirmation with reference to Pressure Equipment Directive 97/23/EC:

The works operates a quality management system that has undergone a specific assessment for materials for pressure equipment and is certified by a competent body (TUV-CERT.No: 70/2002/MUC)

This certificate is issued by a computerized system and is valid without signature. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one, taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subject to the law

DMV STAINLESS Italia s.r.l. ISO 9001 - IGQ N° .9408





UGNE & ALZ France
Site d'Argues
62330 ISBERGUES
FRANCE

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EN 10204-3.1.B

Avesta Works
CM. Hans Pernäng

Date - Datum Load - Ladung - Chargem No Cert.No - Zeugnis No
2004-09-29 FR4A-0888 1143250-EN

Your order - Ihre Bestellung - Votre commande

Avesta order - Auftrag - Ordre Invoice - Rechnung - Facture

316577

661/406146

661/466815

Purchaser - Besteller - Acheteur

Requirements - Anforderungen - Exigences

OUTOKUMPU S/A
100, RUE PETIT

ASTM A 240-04
ASME SA-240 2001 A02

FR-75165 PARIS CEDEX 19
FRANCE

Dest.

CMP ARLES SA

Product - Erzeugnisform - Produit

Stainless Steel Hot Rolled, Coil-Plate
finish 1D, cut edge

Grade - Werkstoff - Nuance

Avesta 18-8L
TYPE 304

Trade mark
Herstellerzeichen
Signe du producteur

OUTOKUMPU

Inspectors stamp
Abname - Stempel
Estamp de l'expert

AJA
A

Melting process
Erschmelzungsart
Procédé de fusion

E + AOD

Extent of delivery - Lieferumfang - Etendue de livre

Item	Pcs	Dimensions	Abmessungen	Dimensions	Heat No	Lot No
Pos	Anzahl				Schmelze Nr	Los Nr
Poste	Nombre	kg	mm		Coulée No	Lot Nr
11	21	15710	6.00	2000 7890	843578	002

Chemical composition - Chemische Zusammensetzung - Composition chimique

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu	Co	N
Heat	.020	.31	1.66	.026	.001	18.27	8.11	.003	.37	.11	.074

Radioactive contamination check acc. IAEA recommendations: Satisfactory

Test results - Prüfergebnisse - Résultats de essais (1N/mm² = 1 MPa) F = Front - Anfang - Début B = Back - Ende - Fin T = Transverse - Quer - Travers

Test Ref	Temp	Rp 0.2	Rp 1.0	R _m	2"	HB
Probe Ref	°C	N/mm ²	N/mm ²	N/mm ²	%	HB
Eprouv Ref						
Min	+20	205		515	40	
Max						201
F T	+20	309	359	621	52	167
B T		309	358	619	52	163

Corrosion acc. ASTM A 262-E: Satisfactory

Heat treatment: Material temperature 1100 cel / Quenched (forced air + water)

Steel grade verification (PMI-spectroscopic): OK

Insp. and gauge measurement: Satisfactory

Outokumpu Stainless AB Telephone : (0)226 814 18
Avesta Works Telefax : (0)226 813 16
BOX 74, S-774 22 AVESTA Telex no : 7030 AVESTA S
SWEDEN Reg no : 556001-8748
Regoffice: V.A.T no : SE556001874801
Stockholm Sweden

This material is found to comply with order requirements

Rene Jansson

Authorized Inspector



CERTIFICATE - ZEUGNIS - CERTIFICAT		Page Seite	1(2)
EN 10 204-3.1.B			
Date - Datum	Load - Ladung - Charge - No	Cert. No. - Zeugnis-Nr	
041012	6380	4101076.R00	

Your order - Ihre Bestellung - Votre commande	Outokumpu Order - Auftrag - Ordre	Order No. - Cote No.
101331	404523	0
Purchaser - Besteller - Acheteur	Eloquinta Oy - Andringamon - Enquinta	
Outokumpu Stainless AB, CL. Hot Rolled Plate Central Lager 69381 DEGERFORS SVERIGE	AD 2000-Mbl. W2/AD 2000-Mbl. W10/EN 10028-7 EN 10088-2:95 ASME SA-240. Code Sect. II. Part A.Ed.2001-A02 ASTM A240M-04a A480/A480M EN 10 029 - B NK Width tolerance: -0/+100mm	
Dest		
By e-Services system		
Product - Erzeugnisform - Produit		
Stainless steel plate, hot rolled CTS Solution annealed, pickled/1D/No.1 Finish		
Grade - Werkstoff - Nuance		
18-9L 1.4301/1.4307/Type 304/Type 304L		

W DJ 2 E+AOD

Plate No, Dimension, Heat No, Lot No, Incl. *						
Extent of delivery - Lieferumfang - Etendue de livraison						
Item	Pcs	Kg	Dimension	Abmessung	Heat No	Lot No
Pos	Anzahl				Stempel Nr	Los Nr
	Nombre		mm		Gesam	Lot No
1	2		25 * 3000 * 6000		41347	143549

Plate No	8529 4204,-4205
Block No	
Tape No	

	C	Si	Mn	P	S	Cr	Ni	N				
Min	0.000	0.00	0.00	0.000	0.000	18.00	8.00	0.00				
Max	0.030	0.75	2.00	0.045	0.015	19.50	10.00	0.10				
41347	0.025	0.33	1.64	0.024	0.001	18.13	8.14	0.07				

Test results - Prutergonisse - Resultados dos testes (1 N/mm² = 1 MPa)

Letter	Temp/pt	Form	Comments
T = Transverse	F = Front	P = Flat	1 = Cooler
L = Longitudinal	B = Back	C = Round	2 = Close to Surface
			3 = Standard
			4 = At 1/8 of thickness

Mechanical Properties

Tensile testing EN 10 002/Hardness Rockwell B

Plate-No	Dir.	Top/Bot	Location	Form	Temp.	Rp 0.2	Rp 1.0	Rm	A5	A50	HRB
----------	------	---------	----------	------	-------	--------	--------	----	----	-----	-----

C	N/mm ²	N/mm ²	N/mm ²	%	%
---	-------------------	-------------------	-------------------	---	---

Min	210	250	520	45	40	0
-----	-----	-----	-----	----	----	---

Max	500	500	500	500	500	500	500
			650				92

4204	T	F	3	C	20	245	303	603	57	59	83
------	---	---	---	---	----	-----	-----	-----	----	----	----

4205	T	F	3	C	20	250	301	\$99	60	62	83
------	---	---	---	---	----	-----	-----	------	----	----	----

Charpy impact test (V-notch) EN 10045-1

Plate-No	Dir	Loc	Temp	Value 1	Value 2	Value 3	Average
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50
51	51	51	51	51	51	51	51
52	52	52	52	52	52	52	52
53	53	53	53	53	53	53	53
54	54	54	54	54	54	54	54
55	55	55	55	55	55	55	55
56	56	56	56	56	56	56	56
57	57	57	57	57	57	57	57
58	58	58	58				

C	Joule	Joule	Joule	Joule
---	-------	-------	-------	-------

Min	60
-----	----

Max

4204	T	F	3	P	20	327	325	316	323
------	---	---	---	---	----	-----	-----	-----	-----

4205	T	F	3	P	20	350	356	355	354
------	---	---	---	---	----	-----	-----	-----	-----

The results comply with the requirements of the order.

Outokumpu Stainless AB
Hot Rolled Plate

SE-693 81 Degerfors, Sweden

Org nr/Reg. No.: 556001-8748

Säte/Registered office: Stockholm, Sweden

Telefon / Telephone

Nat 0586 470 00

Int +46 (0)586 470 00

Moms nr/V.A.T. No.: SE556001874801

Telstax

Na: 0586 470 16

Int +46 (0)586 470 16

2558001874801



Compact governed original
Quality Inspector

4-11-1974

Beitrag Maximal

CERTIFICATE - ZEUGNIS - CERTIFICAT

Page
Seite 2(2)OUTO
KUMPU

EN 10 204-3.1.B

Date - Datum	Load - Laddung - Charge No	Cert.No - Zeugnis Nr
041012	6380	4101076.R00

Corrosion

EN ISO 3651-2 Method A : Approved

Other Information

Heat treated at 1100°C and Quenched in water.

Dimensional control, visual inspection and grade check : Approved

Accepted acc to AD-Merkblatt W0 / TRD 100 without countersignature
document file TÜV Nord e.V. 0121WL12640.

Approved acc. to AD2000-Merkblatt W0 by TÜV Nord e.V.

Certified acc. Pressure Equipment Directive (97/23/EC)

by TÜV-CERT-Certification body for pressure equipment of the
TÜV-NORD GROUP notified body, reg-no. 0045Outokumpu Stainless AB
Hot Rolled Plate

SE-693 81 Degerfors, Sweden

Org nr/Reg. No.: 656001-8748

Site/Registered office: Stockholm, Sweden

Telefon / Telephone

Nat 0586 470 00

Int +46 (0)586 470 00

Moms nr/V.A.T. No.: SE556001874801

Telefax

Nat 0586 470 16

Int +46 (0)586 470 16

Contract, certified original
Quality Inspector

Bengt Hagström

CERTIFICATE - ZEUGNIS - CERTIFICAT			Page Seite 1(2)
EN 10 204-3.1.B			
Date - Datum	Load - Ladung - Charge No	Cert.No - Zeugnis Nr	
050113	9432	5010853.R00	

OUTOKUMPU

Your order - Ihre Bestellung - Votre commande	Outokumpu Order - Auftrag - Ordre	Pack - Koli - Colis No
101414	405692	0
Purchaser - Besteller - Acheteur	Requirements - Anforderungen - Exigences	
Outokumpu Stainless AB, CL. Hot Rolled Plate Central Lager 69381 DEGERFORS SVERIGE	AD 2000-Mbl. W2/AD 2000-Mbl. W10/EN 10028-7 EN 10088-2:95 ASME SA-240. Code Sect. II. Part A.Ed.2004 ASTM A240M-04a A480/A480M EN 10 029 - B NK Width tolerance: -0/+100mm	
Dest		
By e-Services system		
Product - Erzeugnisform - Produit		
Stainless steel plate, hot rolled CTS Solution annealed, pickled/1D/No.1 Finish		
Grade - Werkstoff - Nuance		
18-9L 1.4301/1.4307/Type 304/Type 304L		

Brand-Mark Herstellerzeichen Signe du Producteur		Inspector's stamp Abnahme - Stamp Essai de l'expert		Melting process Erzeugungsmethode Procédé de fusion	E+AOD
--	--	---	--	---	-------

Marking - Kennzeichnung - Marquage
Plate No, Dimension, Heat No, Lot No, Incl. *

Item Pos	Pcs Anzahl Nombre	Kg	Dimension mm	Heat No Schmelz Nr Coulée	Lot No Los Nr Lot No
1	11		15 * 2000 * 6000	844901	148234

Plate No 9180 0112, 0113, 0114, 0115, 0116, 0117, 0118, 0119, 0120, 0121, 0122
Blech Nr
Tôle No

Chemical composition - Chemische Zusammensetzung - Composition chimique
Heat - Schmelz - Coulée No

	C	Si	Mn	P	S	Cr	Ni	N				
Min	0.000	0.00	0.00	0.000	0.000	18.00	8.00	0.00				
Max	0.030	0.75	2.00	0.045	0.015	19.50	10.00	0.10				
844901	0.020	0.33	1.62	0.029	0.001	18.31	8.18	0.08				

Test results - Prüfergebnisse - Résultats des essais (1 N/mm² = 1 MPa)

Mechanical Properties**Tensile testing EN 10 002/Hardness Rockwell B**

Plate-No	Dir	Loc	Temp	Rp 0,2	Rp 1,0	Rm	A5	A50	HRB
				N/mm²	N/mm²	N/mm²	%	%	
Min				210	250	520	45	40	0
Max						650			92
0112	T	F	3	P	20	258	299	61	65
						601	61	65	80

Corrosion

EN ISO 3651-2 Method A : Approved

The results comply with the requirements of the order.

Outokumpu Stainless AB
Hot Rolled Plate

SE-693 81 Degerfors, Sweden

Org nr/Reg. No.: 556001-8748

Säte/Registered office: Stockholm, Sweden

Telefon / Telephone

Nat 0586 470 00

Int +46 (0)586 470 00

Moms nr/V.A.T. No.: SE556001874801

Telefax

Nat 0586 470 16

Int +46 (0)586 470 16



Computer generated
Quality Inspector

Bengt Hagström
Bengt Hagström

CERTIFICATE - ZEUGNIS - CERTIFICAT		Page Seite 2(2)
EN 10 204-3.1.B		
Date - Datum	Load - Ladung - Charge No	Cert.No - Zeugnis Nr
050113	9432	5010853.R00

**OUTO
KUMPU****Other Information**

Heat treated at 1100°C and Quenched in water.

Dimensional control, visual inspection and grade check :Approved

Accepted acc to AD-Merkblatt W0 / TRD 100 without countersignature
document file TÜV Nord e.V. 0121WL12640.

Approved acc. to AD2000-Merkblatt W0 by TÜV Nord e.V.

Certified acc. Pressure Equipment Directive (97/23/EC)

by TÜV-CERT-Certification body for pressure equipment of the
TÜV-NORD GROUP: notified body reg-no. 0045**Outokumpu Stainless AB**
Hot Rolled Plate

SE-693 81 Degerfors, Sweden

Org nr/Reg. No.: 556001-8748

Säte/Registered office: Stockholm, Sweden

Telefon / Telephone

Nat 0586 470 00

Int +46 (0)586 470 00

Moms nr/V.A.T. No.: SE556001874801

Telefax

Nat 0586 470 16

Int +46 (0)586 470 16



Computer generated original
Quality Inspector

Bengt Hultström

33.A

ThyssenKrupp Materials France	
CLIENT	
N° Cde CLIENT	
N° BL	
VISA	
EUROSCOPIC CERTIFIED	

**SCHOELLER
BLECKMANN
EDELSTAHLROHR**
SEAMLESS-STAINLESS
NAHTLOS ZUM ERFOLG

Zertifizierter Hersteller nach DGR 97/23/EG Certified Manufacturer to PED 97/23/EC von / by LRQA GmbH Kontrollnummer / Identification No.: 0525	
 Certification No.: 881147	 AD-Merkblatt V01700 100

ABNAHMEPRÜFZEUGNIS B - INSPECTION CERTIFICATE B
CERTIFICAT DE RECEPTION PAR L'USINE 3.1.B C.C.P.U.
nach/according to OENORM/DIN EN 10 204-3.1.B

Schoeller-Bleckmann
Edelstahlrohr AG
Rohrstrasse 1
A-2630 Ternitz, Austria
Tel: +43 02630/316 469
Fax: +43 02630/316 683

Zert./cert: C108140
Seite/Page: 1 /3
Datum/Date: 040824
e-mail: helga.harather@sber.co.at

Besteller/Purchaser/Commandant
THYSSENKRUPP MATERIALS FRANCE
ZI DES DANJONS

THYSSENKRUPP MATERIALS FRANCE
ZI DES DANJONS

F-18000 BOURGES
FRANCE

F-18000 BOURGES

Bestell-Nr./Purchaser's Order No/No. de commande: 45/1/68543

Auftrags-Nr./Works Order No/No. de commande d'usine:

0429839/ 4

Lieferschein/Delivery note/Avis d'expédition: 0429839/ 4 Date: 04-07-22

Erzeugnis/Product/Produit

TUBES INOX SANS SOUDURE - SEAML. STAINL. STEEL TUBES/PIPES,
SBS NUANCE / GRADE A600, 1.4301/1.4306, TP304/TP304L,
TUZ2CN18-10, TUZ6CN18-09,
EXECUTION C2 = FINIS A CHAUD, HYPERTREMPE, DECAPE, PASSIVE,
FINISH C2 = HOT FINISHED, HEAT-TREATED, PICKLED,
LIVRAISON SELON / TECHN. COND. ACC. ASTM A312/A312M-01A,
THYSSEN FICHE MATIERE TSS/ANSI/ST/810 REV.00,
TOLERANCES SELON / ACC.
EN ISO 1127/03.97 D2/T2, ASTM A530/A530M-99,
ASME SECT. II PART. A SA530/SA530M-2001 ED. 2002 ADD,
NFA 49-117/SEPT.1985, LONGUEUR COMPRISE / RANDOM LENGTH
6100/ 7300 MM EXTRÉMITÉ D'EQUERRE / FLAIN ENDS,

Lieferung/Descr./Liste descr.:

Pos	Abmessung Dimensions Dimensione	Menge Quantity Poids	Gewicht Netweight Poids net	Stk Pcs Pcs	Schmelze Heat Coulee	Prüf-Nr Test-No No.Epr.
30	168,28 X 7,11 MM / 6"NB X SCH 40S	28,94 M	ISO 168,3 X 7,1 MM 791,00 KG	4	759590	152761

Ergebnis der Prüfungen/Test Result/Resultat des essais:
Die gestellten Anforderungen sind erfüllt.
The material has been furnished in accordance to the requirements.
Le material a été trouvé conforme aux exigences.

**SCHOELLER-BLECKMANN
EDELSTAHLROHR AG**

Zeichen des Lieferwerks:
Brand of Manufacturer: **SBS**
Marques de l'usine:

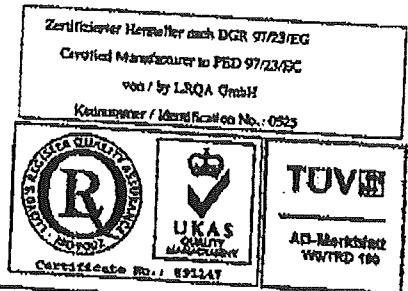
Zeichen des Prüfers:
Symbol of inspector
Symbole de l'inspecteur:



Harather
FR. H. HARATHER
(DER WIRKSACHVERSTÄNDIGE)
(WORKS INSPECTOR/EXPERT DE USINE)

33.8

**SCHOELLER
BLECKMANN
EDELSTAHLROHR**
SEAMLESS-STAINLESS
NAHTLOS ZUM ERFOLG



ABNAHMEPRÜFZEUGNIS B - INSPECTION CERTIFICATE B
CERTIFICAT DE RECEPTION PAR L'USINE 3.1.B C.C.P.U.
nach/according to ONORM/DIN EN 10 204-3.1.B

**Schoeller-Bleckmann
Edelstahlrohr AG**
Rohrstrasse 1
A-2630 Ternitz, Austria
Tel: +43 02630/316 469
Fax: +43 02630/316 683

Zert./cert: C108140

Seite/Page: 2 /3

Datum/Date: 040824

e-mail: helga.harather@sber.co.at

Chemische Zusammensetzung/Chemical Composition/Composition chimique (%)
Schmelze

Heat	C	SI	MN	P	S	CR	MO	NI	CO
759590	0,024	0,400	1,770	0,022	0,003	18,100	0,210	10,350	0,050

Mechanische Eigenschaften/Mechanical Properties/Charact. mecaniques
Prüf-Nr Proben-Nr. TEMP RPO.2 RM
Test-No Sample-no. °C MPA MPA
No.Epr. sample-no. min max
AZ" %

152761	1	20	294	596	50
--------	---	----	-----	-----	----

Ergebnisse weiterer Prüfungen/Further test results/Résultat d'autre essais
ESSAI D'APLATISSEMENT: SATISFAISANT
FLATTENING TEST: SATISFACTORY
ESSAI DE CORR. INTERGR. SELON ASTM A262 PRACT.E: SATISFAISANT
INTERGR. CORR. TEST ACC. TO ASTM A262 PRACT.E: SATISFACTORY
VERIFICATION DE LA NUANCE SUR CHAQUE TUBE
PAR "X-RAY-FLUORESCENCE-ANALYZER": SATISFAISANT
POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE
BY "X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY

LÖSUNGSGEGLÜHT BEI / SOLUTION ANNEALED AT
1060°C, 10 MINUTES, WASSER/WQ

WASSERDRUCKVERSUCH MIT 1300 PSI: IN ORDNUNG
HYDROSTATIC TEST AT 1300 PSI: SATISFACTORY

BESICHTIGUNG UND NACHMESSUNG: IN ORDNUNG
INSPECTION AND CHECKING OF DIMENSIONS: SATISFACTORY

KENNZEICHNUNG/MARKING/MARQUAGE: WERKSTOFF/MATERIAL

Ergebnis der Prüfungen/Test Result/Resultat des essais:
Die gestellten Anforderungen sind erfüllt.
The material has been furnished in accordance to the requirements.
Le material a été trouvé conforme aux exigences.

Zeichen des Lieferwerks:
Brand of Manufacturer: **SBS**
Marques de l'usine:

Zeichen des Prüfers:
Symbol of Inspector
Symbole de l'inspecteur:



**SCHOELLER-BLECKMANN
EDELSTAHLROHR AG**

Harather
FR. H. HARATHER
(DER WEIKSSACHVERSTÄNDIGE)
(WORKS INSPECTOR/L'EXPERT DE USINE)

33.C

**SCHOELLER
BLECKMANN
EDELSTAHLROHR**
SEAMLESS-STAINLESS
NAHTLOS ZUM ERFOLG

ABNAHMEPRÜFZEUGNIS B - INSPECTION CERTIFICATE B
CERTIFICAT DE RECEPTION PAR L'USINE 3.1.B C.C.P.U.
nach/according to ONORM/DIN EN 10 204-3.1.B

Zertifizierter Hersteller nach DGR 97/23/EG Certified Manufacturer to PED 97/23/EC von / by LRQA GmbH Kennzeichen / Identification No.: 0525		
 Certificate No.: 871347	 UKAS QUALITY MANAGEMENT	 TÜV AD-Marktblatt W0700 100

Schoeller-Bleckmann
Edelstahlrohr AG
Rohrstrasse 1
A-2630 Ternitz, Austria
Tel: +43 02630/316 469
Fax: +43 02630/316 683

Zert./cert: C108140

Seite/Page: 3 /3

Datum/Date: 040824

e-mail: helga.harather@sber.co.at

-ABMESSUNG/DIMENSION-SCHMELZE/HEAT NO.-LOT NO.-SMLS

ERSCHMELZUNGSART/STEELMAKING PROCESS: EF+AOB

Ergebnis der Prüfungen/Test Result/Resultat des essais:
Die gestellten Anforderungen sind erfüllt.
The material has been furnished in accordance to the requirements.
Le material a été trouvé conforme aux exigences.

Zeichen des Lieferwerks:
Brand of Manufacturer: **SBS**
Marques de l'usine:


Zeichen des Prüfers:
Symbol of inspector
Symbole de l'inspecteur:



**SCHOELLER-BLECKMANN
EDELSTAHLROHR AG**

Harather
FR. H. HARATHER
(DER WERKSACHVERSTÄNDIGE)
(WORKS INSPECTOR / L'EXPERT DE USINE)

34

 ThyssenKrupp Nirosa Im Unternehmen von ThyssenKrupp Stahl AG		ABNAHMEPRUEFZEUGNIS B INSPECTION CERTIFICATE B CERTIFICAT DE RECEPTION B BESCHEINIGUNG 3.1.B NACH EN 10204		Zeugnis-Nr.: 021475321 Certificate No.: 021475321 N° de certificat: 021475321 Datum: 27.05.2002 Date: 27.05.2002 Date: 27.05.2002	
47704 Krefeld KRUPP HOESCH STEEL LTD SPEEDWELL INDUSTRIAL ESTATE GB- STAVELEY, CHESTERF/DERB S43 3JW Großbritannien		Postfach KRUPP HOESCH STEEL LTD 706201/EMP/58/6 222641 86028154		Unterl. Nr.: Order No.: Contrat No.: 222641 86028154	
Band/Coil/Rouleau TYPE 304 / 304 L NIROSTA 4301 / 4307		ASTM A 240/A 240M ASME SA 240 EN 10088-2 EN 10088-7 AD W2 AD W10 AD 2000 W2 AD 2000 W10 Richtlinie 97/23/EG		QA	
Position Pos. 1		Quantity Quantité 1		Weight Poids 21700	
Material Matériau 6.00 x 1500,00		Finish Fin AOD		Order No. Ordre No. 469738	
Chemical Composition Composition Chimique 469738		C 0,017		Si 0,37	
Mn 1,28		P 0,026		S 0,001	
Cr 18,12		Ni 8,09		N 0,045	
Fe 0,000		Al 0,000		Cu 0,000	
Other Elements Autres Éléments 0,000		Other Elements Autres Éléments 0,000		Other Elements Autres Éléments 0,000	
Physical Properties Propriétés Physiques 555 A		Yield Strength R_{0,2} 308		Tensile Strength R_m 359	
565 E		Yield Strength R_{0,2} 297		Tensile Strength R_m 355	
Hardness Dureté HRB		HRB 85,0		HRB 85,0	
Other Properties Autres Propriétés 0,000		Other Properties Autres Propriétés 0,000		Other Properties Autres Propriétés 0,000	
Direction of Rolling Direction de laminage QUER		Direction of Rolling Direction de laminage QUER		Direction of Rolling Direction de laminage QUER	
Verwechslungsprüfung Test of Identity Control of Identification		Verwechslungsprüfung Test of Identity Control of Identification		Verwechslungsprüfung Test of Identity Control of Identification	
Method Méthode ASTM A 262 PRACTICE E		Method Méthode ASTM A 262 PRACTICE E		Method Méthode ASTM A 262 PRACTICE E	
ThyssenKrupp Nirosa GmbH DIESES ZEUGNIS WURDE VOM RECHNER ERSTELLT WERK KREFELD, ABNAHME BUTZEN WERKSACHVERSTÄENDIGER TEL: 0221 51-632447 FAX: 0221 51-634106		* SLIT EDGE WAERMEBEHANDLUNG : 1050 GRAD C / LUFT TREATMENT TERMQUE : 1050 GRAD C / AIR HEAT - TREATMENT : 1050 DEGREE / AIR EUROPEAN METAL PRODUCTS CERTIFICATE OF INSPECTION COI 125V 324 2V 0.2 APPLIES TO MATERIAL SUPPLIED ON DELIVERY NOTE 125V 324 FOR STAINLESS STEEL PLATE DE-COILED FROM HOT ROLLED ANNEALED AND PICKLED COIL.		FAXED MP 19.6	

AXINOX SA
 21 DE MILLERIEUX
 RUE ALBERT LEBLANC
 02200 SOISSONS (FR)

UGINE & ALZ Belgium NV
Meetschappelijke zetel
Genk-Zuid : Zone 6A, Swinnenwilerweg 5, B 3600 Genk
Tel. (089) 30 21 11 - Telefax (089) 30 23 80
Telex 39058 eldozg b
H.R. Tongeren nr 41.051 - B.T.W. nr BE 401.277.814

U & A.

SURVEYOR'S MARK
CACHET DE L'EXPERT
STEMPEL DES WERKSSACHVERSTÄNDIGEN

Der TÜV Rheinland hat mit Schreiben vom 21. März 1972 auf die Gegenzeichnung verzichtet

Certificate of test - Mill certificate
Certificat de Réception C.C.P.U.
Abnahmeprüfzeugnis B
nach EN 10204/3.1.8

No 2004.01511
Nr
4c489

Approved as supplier according to
AD2000-WO - TRD 100 statement W E 603
certified acc. PED
(97/23/EC) by TÜV, N° 0035

PROD.PROCES: Electric Arc Furnace - VOD/AOD - Continuou
PROC. FABRIC.: Four à Arc - VOD/AOD - Coulée Continue
FERTIGUNGSABL.: Elektro-Lichtbogen Ofen - VOD/AOD - St

your order n° - votre n° de cde - Bestell.Nr

our order n° - notre n° de cde - Werksnr

411127480

01071/588/01

**ACIER INOXYDABLE, TOLES, LAMINEES A CHAUD,
RECUITES ET DECAPEES**

heat n° - n° coulée
Schmelze Nr
N 438080
coil n° - n° bobin
Band Nr
438080

Specifications - Spécifications - Vorschriften	Type - Nuance - Quality	Finish	Corrosion test - Corr. inter - Int krist Korros.
EN 10028-7/2000 ASTM A240/A240M-04AE1 ASME SA 240-04	WNR 1.4307 TYPE 304L - S 30403 TYPE 304L - S 30403	1D NO 1 NO 1	EN ISO 3651/2 ASTM A262 E - 02A.E
dimensions - Abmessungen mm 8.00 2000.00 6000.0 Inches	Material (Code Designation) Matière Werkstoff (Normbez.) X2 CRNI 18-9	Quenching Hypertrempe Abschreckung	EN 10028-7 1050°C

Particular requir. - Prescr. particul. - Sondervorschriften:
TRD 100 -- AD 2000 W2/2003 -- AD 2000 W10/10-2003 -- EN 13445-2/200

CHEMICAL ANALYSIS COMPOSITION CHIMIQUE CHEMISCHE ZUSAMMENSETZUNG			MECHANICAL PROPERTIES - PROPRIETES MEC. - MECH. WERTE			
ELEMENTS	LADLE ACIERIE SCHMELZE	PRODUCT PRODUIT STUCKANAL.	TENSILE TEST ESSAI DE TRACTION ZUG VERSUCH	ROOM TEMP. - TEMP. AMB. - RAUMTEMP. REQ.-EXIGE ANFORDERUNG	OBTAINED - OBTENU TEST N° - N° TEST - PROBE	TEMP. REQ.-EXIGE ANFORDER.
			EN 10028-7	N/MM2	43808024	
C	0.027	0.026	Section - Schnitt mm	min. max.	A (T) E	min.
Mn	1.49	1.48	yield 0.2%	200	316 314	
P	0.026	0.027	limite él. 1.0%	240	353 351	
S	0.004	0.004	tensile strength	520 670	624 623	
Si	0.44	0.46	rupture			
Cr	18.06	18.09	Zugfestigkeit			
Ni	8.04	8.07	elong. % A5	45	56 57	
Mo			ellong. A50		58 59	
Cu			Br Dehn.		50	
Ti	0.005	0.003	E 0.2 /R max %			
Co			hardness			
N	0.068	0.068	durée HRB		83.8 82.3	
Al						
			grain size astm	bend	impact strength test	
			grain astm	pliage	essai de résilience	
			Korngröße	Bliegeversuch	Kerbschlagbiegeversuch	
			TESTS TO VERIFY BATCH AND QUALITY HAVE BEEN CARRIED OUT TESTS DE VERIFICATION DE LA CONFORMITE DE LA NUANCE FOURNIE VERWECHSLUNGSPRÜFUNG WURDE DURCHGEFÜHRT			
			VISUAL INSPECTION AND DIMENSIONAL CHECK EXAMEN VISUEL ET DIMENSIONNEL DE SURFACE BESICHTIGUNGEN UND ABMESSUNGEN			

α - ferrite
δ - ferrite

DAI - 77220 TOURNAN EN-BE
Tel. 01 64 84 50 50 - Fax 01 64 84 50 50

Cde N° 218/50302 - 502

N. BL N° 0505143

Coussinnes ep 8 en 304L

QUANTITY / WEIGHT MEMO / QUANTITÉ MÉMO POIDS LIVRÉ ÜBERSICHT GELIEFERTER GEWICHTE (KG)					
PACKAGE Nr N° DE CAISSE PAKET NR	QTY. QTÉ. ANZ.	NET WEIGHT POIDS NET NETTO GEW.	PACKAGE Nr N° DE CAISSE PAKET NR	QTY. QTÉ. ANZ.	NET WEIGHT POIDS NET NETTO GEW.
41022402	2	1516			
41022410	2	1518			
TOTAL/GESAMT		QTY QTÉ ANZ	NET WEIGHT POIDS NET NETTO GEW.		
		4			3034 KG

The delivery is in accordance with the order.
La fourniture est conforme aux exigences de la commande.
Die Lieferung entspricht den Bestellbedingungen.

UGINE ET ALZ FRANCE SERVICE

ZI NORD- BP 48
01 BLD DU 19 MARS 1962
95500 GONESSE

FRANCE

UGINE & ALZ Belgium NV
THE SURVEYOR - L'EXPERT - DER WERKSSACHVERSTÄNDIG

Genk the
le
dan 01.12.2004

[Signature]