

INSPECTION CERTIFICATE

STAINLESS STEEL WELDED PIPE

EN 10204/3.1B

231216

Commodity

Customer

OUTKUMBU B. V.

Shipper

TA CHEN STAINLESS PIPE CO., LTD.

TA CHEN STAINLESS PIPE CO., LTD.
NO. 125 HSIEN-TIEN 2ND ST. HSIEN-TIEN
TAIPEI-TEH, TAIWAN TAIWAN R.O.C.

Specification

ASTM A312 2001

Destination

ROTTERDAM

Grade

TP 316/316L TP 304/304L

Customer's O/N

107571

Certificate No. 5002023-4/5

FAX: (06)2791382-2791154

Supply Condition: ANNEALED & PICKLED

Factory O/N

0/N

Date: FEB. 16, 2004

INVOICE No: H014FB527

Item No.	Case No. (Crate No.)	Heat No.	Size	Quantity (Pcs)	Weight (Kgs)	Chemical Composition in %					
						C	Si	Mn	P	S	Ni
019	F1	15576	2" SCH10 T316/T316L			.012	.47	1.71	.024	.002	10.10
020	F1	223804	2" SCH10 T316/T316L			.024	.53	.72	.024	.007	10.19
021	F1	122004	2" SCH10 T304/T304L			.021	.43	1.33	.023	.004	8.21
022	F1	129262	2" SCH10 T304/T304L			.020	.36	1.31	.027	.012	8.18
023	F2	F31369	2 1/2" SCH10 T316/T316L			.020	.40	1.28	.025	.002	11.24
024	F1	F31368	4" SCH10 T316/T316L			.024	.43	1.27	.026	.002	11.21
Total											

Item No.	Tensile Test			Hardness Test HRB	Bend Test	FLATTENING TEST	HEAT TREATMENT TEMP. °F	DIMENSION AND SURFACE CONDITION	HYDROSTATIC TEST PSI	Remarks
	0.2% Yield Strength PSI	1% Yield Strength PSI	Elongation %							
019	34200	77700	59.0	73.0	OK	OK	1960	OK	1400	RAW MATERIAL FOR BUTT WELDING FITTING
020	40600	85200	50.0	75.0	OK	OK	1960	OK	1400	
021	41300	90900	48.0	80.0	OK	OK	1960	OK	1400	
022	44200	86500	52.0	82.0	OK	OK	1960	OK	1400	
023	42600	83600	47.0	77.0	OK	OK	1960	OK	1300	
024	47800	84900	48.0	80.0	OK	OK	1960	OK	800	

We hereby certify the above statement to be true and correct every detail

TA CHEN STAINLESS PIPE CO. LTD.

Chen Chen

EN 10204/3.1B

Commodity STAINLESS STEEL BUTT-WELDING FITTING

Customer

АУТОКУРПУ Б. В.

STRAIGHT TEE

Shipper

TA CHEN STAINLESS PIPE CO., LTD.

Specification

ASTM A403-2000B/ASME SA403-1992

Destination

ROTTERDAM

ANSI B16.9-1993

Grade : WP316/316L-W; WP304/304L-W

Customer's O/N: 107571

Certificate No.:

Certificate No: 5002023-2/2

Supply Condition:

Factory ☒ ON.

H014DC220

Date : FEB. 16, 2004 INVOICE No:

H014FB527

Item No.	Case No. (Crate No.)	Heat No.	Size (TEE)	Quantity (Pcs)	Weight (Kgs)	Chemical Composition in %							
						C	Si	Mn	P	S	Ni	Cr	Mo
007 FI		122004	2" SCH10 WP304/304L-W	50		.021	.43	1.33	.023	.004	8.21	18.12	
008 FI		E31368	4" SCH10 WP316/316L-W	50		.024	.43	1.27	.026	.002	11.21	17.25	2.10
				Total	100								

[illegible]Remarks

HARDNESS : NACE MR 0175-94
ASTM A262 PRACTICE E : O.K.
PMI TEST : O.K.



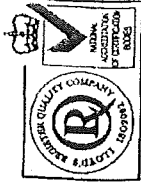
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Will have his notice, the above statement to be true and correct even/ detail

DATA CLIENT STAINLESS STEEL CO LTD

Inspection Certificate

EN 10204/3.1B



Commodity: STAINLESS STEEL BUTT-WELDING FITTING
 STRAIGHT TEE
 Specification: ASTM A403-2002B/ASME SA403-1992
 ANSI B16.9-1993
 Customer: SANTRADE LTD
 Shipper: TA CHEN STAINLESS PIPE CO., LTD.
 Destination: ROTTERDAM
 Grade: WP304/304L-W
 Customer's O/N: 20468...
 Certificate No: FB559005
 Supply Condition: HEATTREATED AT 1040° AND WATER QUENCHED
 Factory: SL02EB153
 Date: 2005/2/21
 INVOICE No: SL02FB559
 TA CHEN STAINLESS PIPE CO., LTD.
 NO. 125 HSIN-TIEN 2ND ST, HSIN-TIEN
 JENG-TEH, TAINAN TAIWAN R.O.C
 TEL: (06)2783254 • 2701756-8
 FAX: (06)2701382 • 2791154

Item No. Case No. (Crate No.) Heat No. Size (TEES) Weight (Kgs) Quantity (Pcs) Chemical Composition in %
 C Si Mn P S Ni Cr Mo

Item No.	Case No. (Crate No.)	Heat No.	Size (TEES)	Weight (Kgs)	Quantity (Pcs)	C	Si	Mn	P	S	Ni	Cr	Mo
01	A4	228353A	3/4-10S		300	0.030	0.450	1.350	0.024	0.002	8.070	18.110	-
02	A5	230745	1-10S		500	0.026	0.420	1.370	0.024	0.006	8.130	18.290	-
03	A4	134602A	1-40S		200	0.020	0.400	1.370	0.028	0.002	8.150	18.350	-
04	A1	225903	1-1/2-40S		100	0.028	0.460	1.340	0.025	0.009	8.130	18.170	-
05	A1	231032	2-10S		300	0.021	0.480	1.410	0.034	0.004	8.060	18.240	-
06	A2	230806	3-10S		100	0.026	0.440	1.350	0.030	0.002	8.130	18.380	-
Total					1500								

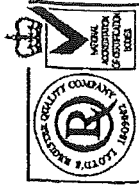
Item No.	Tensile Test			Hardness Test	Bend Test	Heat Treatment Temp.	Dimension And Surface Condition	Remarks
01	0.2% Yield Strength PSI	1% Yield Strength PSI	Elongation %	HRB		1960	OK	231647 PREMATERIAL : WELDED PIPE A312 HARDNESS : NACE MR 0175-98 O.K. ASTM A282 PRACTICE E : GUARANTEED PMI TESTED : O.K. ADDENDA ASME CODE SEC II PART A & LA SOCIETE... GARANTIT QUE LES PRODUITS OBJET DU PRESENT CERTIFICAT RESPECTENT EN LEUR TOTALITE LES PRESCRIPTIONS DE L'ARTICLE 15 DE L'ARRETE MINISTERIEL DU 24 MARS 1978 MODIFIE. C<=0.25%, P<=0.05%, S<=0.05%, R<=800N/MM2 E<=0.8 X R%, A%(LO=5.65 VSO) MIN. 16% EN LONG. R(A-2)>=10500
02	36500	90600	53.00	78.00		1960	OK	
03	44200	94200	47.00	84.00		1960	OK	
04	44200	89300	48.00	83.00		1960	OK	
05	44800	94300	52.00	83.00		1960	OK	
06	46500	92300	48.00	85.00		1960	OK	
06	42900	94100	50.00	82.00		1960	OK	

We here by certify the above statement to be true and correct every detail
 TA CHEN STAINLESS PIPE CO., LTD.

Santra

Inspection Certificate

EN 10204/3.1B



STAINLESS STEEL WELDED PIPE

SANTRADE LTD

Commodity

Customer

TA CHEN STAINLESS PIPE CO., LTD.

TA CHEN STAINLESS PIPE CO., LTD
NO. 125 HSIN-TIEN 2ND ST, HSIN-TIEN
JENG-TEH, TAINAN TAIWAN R.O.C
TEL : (06)2793254 • 2701756-8

Shipper

ASTM A312-2001

Specification

Destination

ROTTERDAM

TP-304/304L

Grade

Customer's O/N :

20468... Certificate No

FAX: (06)2701382 • 2791154
(03 / 05)

Supply Condition:

ANNEALED & PICKLED

Factory

O/N :

Date : 2005/2/21

INVOICE No.:

SL02FB559

Item No.	Case No. (Crate No.)	Heat No.	Size	Quantity (Pcs)	Weight (Kgs)	Chemical Composition in %						
						C	Si	Mn	P	S	Ni	Cr
13	A5	230745	1" SCH-10			0.026	0.420	1.370	0.024	0.006	8.130	18.290
14	A10	230745	2" SCH-10			0.026	0.420	1.370	0.024	0.006	8.130	18.290
15	A2	230806	3" SCH-10			0.026	0.440	1.350	0.030	0.002	8.130	18.380
16	A1	231032	2" SCH-10			0.021	0.480	1.410	0.034	0.004	8.060	18.240
17	A6	231068	1" SCH-40			0.014	0.460	1.380	0.029	0.005	8.100	18.250
18	A4	231246	2" SCH-10			0.023	0.470	1.390	0.025	0.002	8.170	18.220
Total												

Item No.	Tensile Test			Hardness Test HRB	Bend Test	Flattening Test	Heat Treatment TEMP. °F	Dimension And Surface Condition	Hydrostatic Test PSI	Remarks
	0.2% Yield Strength PSI	1% Yield Strength PSI	Elongation %							
13	44200	94200	47.00	84.00		OK	1960	OK	2100	WELDING FACTOR V=1.0 HARDNESS : NACE MR 0175-98 O.K. ASTM A262 PRACTICE E : GOOD PMI TESTED : O.K. RAW MATERIAL FOR BUTT-WELDING PIPE FITTINGS
14	44200	94200	47.00	84.00		OK	1960	OK	1100	
15	42900	94100	50.00	82.00		OK	1960	OK	850	
16	46500	92300	48.00	85.00		OK	1960	OK	1100	
17	38700	90000	52.00	80.00		OK	1960	OK	2500	
18	42100	88400	52.00	83.00		OK	1960	OK	1100	

We here by certify the above statement to be true and correct every detail

TA CHEN STAINLESS PIPE CO., LTD.


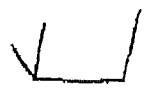
George Yang

AST

CERTIFICATE EN 10204/3.1.B.

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231626

BUYER SANDVIK BENELUX B V POB 248 NL-3100 AE SCHIEDAM HOLLAND		DATE 030816		CERTIFICATE NO N0313432 / 1	
		MANUFACTURERS ORDER NO 2306044		ITEM 10	
		BUYERS ORDER NO 300052586		SHIPMENT NO 780486	
PRODUCT FORM LONGITUDINALLY WELDED STAINLESS STEEL TUBES, WELD OUTSIDE GROUND, PICKLED, PLAIN ENDS, IN MILL LENGTHS, HEAT TREATMENT 1100 C QUENCHED IN WATER					
SPECIFICATION ASTM A 312/ASME SA 312 (EFW)				TOLERANCES ASTM A 999	
GRADE TP 304/TP 304L		MANUFACTURERS GRADE 4307T		MANUFACTURERS MARK AST-N	
TUBE MARKING AST-N; TP 304/TP 304L; WLD; A/SA 312; 168,30 X 2,77; 6" SCH 5S; 4211633; TWH-304L-6-SCH5S					
EXTENT OF DELIVERY					
PCS 24		METER 144,63		DIMENSION 168,30 2,77	
				HEAT NO 4211633	
				TEST NO (A)	
CHEMICAL COMPOSITION					
C	SI	MN	P	S	CR
0.014	0.48	1.44	0.028	0.007	18.19
NI	9.07				
TEST ANALYSIS					
TEST RESULT					
Temp	RPO,2 MPa	RP1,0	RM MPa	AZ %	HRB HRB
	205		615	35	90
A OTT	20	286	336	584	62 79
EDDY CURRENT TEST ASTM A 450 / E 426 EDDY CURRENT TEST ASTM A 312 / E 426 FLATTENING TEST ASTM A 530 VISUAL AND DIMENSIONAL INSPECTION MATERIAL IDENTIFICATION TEST INTERGRANULAR CORROSION TEST ASTM A 262:E HARDNESS ACC TO NACE MR 0175 Certified acc: PED (97/23/EC), TUEV Nord gruppe for pressure equipment NOB No:0045 Certificate no: 07 202 0111 Z 0019/O/H Base material EN 10028-7. Acc to requirement in EN 10217-7					
SATISFACTORY SATISFACTORY SATISFACTORY SATISFACTORY SATISFACTORY SATISFACTORY SATISFACTORY					
Procedures and personnel approved by notified bodies. WPS/WPAR EN 288/ Personnel/WLD: EN 1418 NOT: EN 473					
 QA 07 100 381		E/AOD		THE REQUIREMENTS ARE FULFILLED AS SPECULATED QC-DEPT. Björn Zetterberg ISSUED BY  Yvonne Wannestrand	
AVESTARLART STAINLESS TUBE AB Torshälla Box 48 S-64421 Torshälla Sweden		TELEPHONE NO +46 18 34 95 00		Telephone QC-Dept +46 18 34 95 80	
				Telephone Cert.Dept +46 18 34 95 82	
				Telefax QC/Cert.Dept +46 18 34 97 00	

QUALITY ASSURANCE APPROVAL

07. April 2005


SANTRADE LTD LUCERNE


231577

AST

CERTIFICATE EN 10204/3.1.B.

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CLIENT SANDVIK SAS DIV. SANDVIK MATERIALS TECHNOL BP 6227 4 AVENUE BUFFON FR-45062 ORLEANS CEDEX 2 FRANKRIKE		DATE 040401	CERTIFICAT NO N0407818 / 1
		NON DE COMMANDE USINE 2402432	POST 10
		NON DE COMMANDE CLIENT 300060784	EXPEDITION NOMBRE 788269
EXECUTION DE PRODUIT TUBES D'ACIER INOXYDABLE SOUDES LONGITUDINALEMENT, BASE MATERIEL EN 10028-7, SOUDURE EXTERIEURES MEULE, CORDON LAMINE, A LONGUEURS DE FABRICATION, TRAITEMENT THERMIQUE 1080 C REFROIDISSEMENT A L GAZ			
SPECIFICATION NF A 49-147		TOLERANCES SS EN ISO 1127 D3 T3	
NUANCE TSZ2 CN 18-10		DESIGNATION DE L'USINE 4307S	
MARQUAGE DE TUBE AST-N; SS 2352-23; ASS 150; Z=1,0; EN 1.4307/TP304L; K3G; WLD; PK 1; MAR-N1; TSZ2 CN 18-10; NF A 49-147; 33,70 X 1,60; 4213823;			
QUANTITE			
NOMBRE 153	METRE 924,00	DIMENSION 33,70 1,60	COULEE NO 4213823
COMPOSITION CHIMIQUE		RESULTAT NO (A)	
COULE ANALYSE	C 0,018	SI 0,47	MN 1,48
	P 0,026	S 0,007	CR 18,21
	NI 10,11	CO 0,25	CU 0,41
RESULTAT DES ESSAIS			
Temp	RPO,2 MPa	RP1,0 MPa	RM MPa
	A5 %		
	175		460 860
			35
A 01L	20	219	252
A 02L	20	217	254
			557 558
			64 66
CONTROLE AUX COURANTS DE FOUCAULT SS 114306-E2 20%/SEP 1914 CONTROLE AUX COURANTS DE FOUCAULT SS 114306-E1/SEP 1925 ESSAI D'EVAISEMENT EN 10234 CONTROLES VISUELS, CONTROLES ET DIMENSIONS VERIFICATION DE LA NUANCE ESSAI DE CORROSION INTERGRANULAIRE EN ISO 3851-2:A Reglementation du 24/3 1978 valeurs garanties C <= 0,25% S <= 0,05% P <= 0,05% R(A-2) > 10500 Rm <= 780 A > 16% (LO=5,65 VS) AQUAP PV NO: 1110-6337 Fulfills the requirements acc.to prEN 10217-7 May 2002.			
Satisfaisant Satisfaisant Satisfaisant Satisfaisant Satisfaisant Satisfaisant			
		Certified acc: PED 97/23/EC and AD2000-W0/TRD 100 by TÜV Nord groupe for pressure equipment NOB no: 0046 Certificate no: 07 202 0111 Z 0019/0/H (no: 0121)WLD47801 Procedures and personnel approved by notified bodies. WPS/WPAR: EN 288 / WLD Personnel: EN 1418 / NDT: EN 473	
04 07 100 781		LES STIPULATIONS DE LA COMMANDE SONT CONFORMES DEPT DE QC TIME D'INSPECTOR / MAR Björn Zetterberg DELIVRE PAR	

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV =ISO 9001/2000= CERT-00149-94-AQ-MIL-SINCERT	Ita Inox S.r.l. Sede Legale e unità produttiva : Strada Statale 45 bis 26010 Robecco d'Oglio (CR) - ITALIA Tel. (0372) 9801 - Fax. 921538/980262	Cap. soc. int. vers. € 21.850.400 Trib. Cremona 6861/36 R.B.A. Cremona 119060 Cod. Fisc. e P. IVA IT 00883040198 Home-page = http://www.arvedi.it E-mail = sales.ita@arvedi.it E-mail = quality.ita@arvedi.it	


TEST CERTIFICATE ACCORDING TO EN 10204/3.1B

N°11026

ABNAHMEPRÜFZEUGNIS - CERTIFICAT D'ESSAIS - CERTIFICATO DI COLLAUDO

for longitudinally welded tubes/längsnahgeschweisste rohre/pour tubes soudés longitudinalement/Per tubi saldati longitudinalmente

117454

Customer : VAN LEEUWEN STAINLESS Besteller/Client/Clientèle : POSTBUS 19, - 4153 ZG BEESD NL	
Customer Order N° : 305158 -061.14.189 Bestellung/Commande Client/Ordre Clientèle :	
Specifications : ASTM A312-530/ASME SA312-530 / Anforderungen/Specifications/Spécifications : SECTION 2 PART A 1998	
Manufacturer's mark:  Herstellerzeichen/Marque du fabricant/Marchio del produttore Inspector's stamp : M.S. Stempel des Sachverständigen/Poinçon de l'inspecteur/Punzone dell'ispettore	
Marking: ASTM A312/ASME SA312	
Item N° Pos.	DIMENSIONS Abmessungen Dimensions/Dimensioni
PIECES N° Stückzahl Pièces/Pezzi	METERS Meter Mètres/Metri
WEIGHT(Kg.) Gewicht/Poids Pesa	GRADE Werkstoff/Nuance Materiale
STANDARD CODE Normbezeichnung Designation/Designazione	EXECUTION Ausführung Execution/Esecuzione
006	88.90x 2.11x 6000 66 396.00 1796.00 TP 304L S30403 ER

Chemical analysis acc.to : ASTM A240 / EN 10088-2/EN 10028-7 Last Edition
Steel making process : E/AOD

Erschmelzungsart/Procédé d'élaboration/Procedimento di elaborazione acciaio

Item N°	Manuf. Hersteller	HEAT N° Schmelze/Coulée/Colata	% C	% Si	% S	% P	% Mn	% Cr	% Ni	% Mo	% Ti	% Co	% Cu	% N
006	*****	477011	0.019	0.450	0.001	0.027	1.080	18.100	10.050	0.130		0.050	0.220	0.044

Mechanical test acc.to tab. :

Mechanische Prüfungen/Essais mécaniques/Caratteristiche meccaniche

MECHANISCHES TEST ZERTIFIKAT										
MECHANISCHE PRÜFUNGEN/ESSAIS MÉCANIQUES/Caratteristiche meccaniche										
Item Pos. N°	HEAT N° Schmelze Coulée Colata	HOMOLOG. Zulassung Omologazione		TEST Probe Epreuve Prova N°	SPECIMEN SIZE Abmessung Probestab Dimen. Epreuve Dimensione provetta mm.	YIELD STRENGTH Streck-Dehngrenze Limite d'élasticité Limite di snervamento 0,2% N/mm² 1%		TENSILE STRENGTH Zugfestigkeit Résistance à traction... Limite di rottura N/mm²	ELONGAT. Bruchdehnung Allongement 2" %	HARDNESS Härte Dureté Durezza HRB
Requirement /Anforderungen /Exigences/Requisiti					S30403	>= 170	>=	>= 485	>= 35	Max.
006	477011				20 x 2.11	308		585	56.5	

Test Results

Ergebnisse der Prüfungen/Résultat des essais/Risultati delle prove

Heat treatment : Bright annealed at 1050°C and rapidly cooled

Technological test : Flattening: OK

Residual Corrosion Test acc. to :
Intergranular Corrosion Test acc. to : ASTM A262/Practice E:

Non Destructive Test acc. to : Eddy current acc. to ASTM A999/E426 to 100%: OK

Leak Test/Hydrostatic test to :
Uncorrect Material Test : OK

Visual and gauging control : FAVOURABLE

 Wärmebehandlung/ Traitement thermique/ Trattamento termico
 Technologische Prüfung/Examen technologique/Prove tecnologiche
 Korrosionsfördernde Rückständen/Essai résidues corrosif/Prova residui corrosivi
 IK Beständigkeit/Essai corr. intergr./Prova di corrosione intergranulare
 Zerstörungsfreie Prüfung/Contrôle non destructif/Controllo non distruttivo
 Dichtheitsprüfung/ Essai d'étanchéité/Prova di tenuta
 Verwechlungsprüfung/ Essai P.M.I./Prova antimiscuglio
 Besichtigung und Ausmessung/Contrôle visuel et dimensionnel/Controllo Visivo e dimensionale

Notes : • Material fully conforms to Type AISI 304

 • La società ILTA INOX garantisce che tutti i prodotti oggetto del presente certificato, rispettano le prescrizioni dell'articolo 15 de l'Arrêté Ministériel du 24 mars 1978 modifié : C ≤ 0,25%, P ≤ 0,05%, S ≤ 0,05%, R < 800 N/mm², E ≤ 0,9 x R - A% (L₀ = 5,65 sqrt(S₀)) min. 16% en long. R (A-2) >= 10500

We certify that the delivered products comply with the specification of the order.

Wir bestätigen, dass die gelieferte Ware den Bestellvorschriften entspricht/Nous attestons que les produits livrés sont conformes aux références de la commande/ Noi attestiamo che il materiale spedito è conforme ai requisiti dell'ordine

Robecco d'Oglio, 21/07/2003

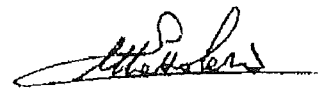
Issued by : Cordani A.

Mill's Inspector / Der Werksachverständige

Inspecteur de l'usine / Firma Ispettore

Mazzolari p.i. Stefano

Arvedi





CERTIFICATE EN 10204:2004/3.1

This inspection certificate fulfills the requirements of EN 10204:2004 type 3.1
and EN 10204:1991+A1:1995 type 3.1.B.

231758

155880

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BUYER VAN LEEUWEN STAINLESS B.V. INDUSTRIEWEG 26 NL-4153 BW BEESD HOLLAND		DATE 2005-09-30		CERTIFICATE NO N0527689/ 1	
		MANUFACTURES ORDER NO 2005007859		ITEM 10	
		BUYERS ORDER NO 509210		SHIPMENT 781658	
PRODUCT FORM LONGITUDINALLY WELDED STAINLESS STEEL TUBES, WELD OUTSIDE GROUND, PICKLED, PLAIN ENDS, IN MILL LENGTHS, HEAT TREATMENT 1080 C QUENCHED IN GAS					
SPECIFICATION ASTM A 312/ASME SA 312 (EFW)				MANUFACTURES MARK OUTOKUMPU-N	
GRADE TP 304/TP 304L		MANUFACTURES GRADE 4307T		TOLERANCES ASTM A 999	
TUBE MARKING OUTOKUMPU-N; TP 304/TP 304L; WLD; A/SA 312; 48,30 X 1,65; 1 1/2 " SCH 5S; 4221328;					
EXTENT OF DELIVERY					
PCS 37	METER 222,00	DIMENSION 48,30 1,65		HEAT NO 4221328	TEST NO A
CHEMICAL COMPOSITION					
HEAT ANALYSIS 1	C 0,018	SI 0,320	MN 1,74	P 0,027	S 0,007
				CR 18,55	NI 8,11
TEST RESULT					
	TEMP C	RP0,2 MPa	RP1,0 MPa	RM MPa	A2 %
		205		515	35
					90
A1 L	20	325	367	648	60
					83
<p>EDDY CURRENT TEST ASTM A 450/ASTM A 999, ASTM E 426 FLATTENING TEST ASTM A 999 VISUAL AND DIMENSIONAL INSPECTION MATERIAL IDENTIFICATION TEST INTERGRANULAR CORROSION TEST ASTM A 262:E HARDNESS ACC TO NACE MR 0175 Base material, EN 10028-7. Fulfill the requirements in EN 10217-7 Welding factor Z=1,0 based on EC-test acc to EN 10246-3</p>					
<div style="display: flex; justify-content: space-between;"> <div> No. 78 100 3711 </div> <div> Certified acc: PED 97/23/EC and AD2000-W0/TRD 100 by TÜV Nord gruppe for pressure equipment NOB no: 0045 Certificate no: 07 202 0111 Z 0019/0/11 (no: 0121WL04780) Procedures and personnel approved by notified bodies. WPS/WPAR: EN 288 / WLD Personnel: EN 1418 / NDT: EN 473 MELTING PROCESS: E/AOD Base material from PED 97/23/EC approved suppliers. </div> <div> THE REQUIREMENTS ARE FULFILLED AS STIPULATED INSPECTOR / MAR Björn Zetterberg ISSUED BY Yvonne Wannestrand </div> </div>					


OUTOKUMPU STAINLESS TUBULAR PRODUCTS
Torshälla Box 48 S-64421 Torshälla Sweden

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+46 16 34 96 62

Telefax
+46 16 34 97 00

yvonne.wannestrand@outokumpu.com


BUYER SANDVIK BENELUX B V POB 248		DATE 2005-04-29		CERTIFICATE NO N0517006/ 1												
NL-3100 AE SCHIEDAM HOLLAND		MANUFACTURES ORDER NO 2005003386		ITEM 30												
		BUYERS ORDER NO 001011		SHIPMENT 778043												
PRODUCT FORM LONGITUDINALLY WELDED STAINLESS STEEL TUBES, WELD OUTSIDE GROUND, PICKLED, PLAIN ENDS, IN MILL LENGTHS, HEAT TREATMENT 1080 C QUENCHED IN GAS																
SPECIFICATION ASTM A 312/ASME SA 312 (EFW)				MANUFACTURES MARK OUTOKUMPU-N												
GRADE TP 304/TP 304L		MANUFACTURES GRADE 4307T		TOLERANCES ASTM A 999												
TUBE MARKING OUTOKUMPU-N; TP 304/TP 304L; WLD; A/SA 312; 114,30 X 2,11; 4 " SCH 5S; 4221756;																
EXTENT OF DELIVERY																
PCS 95		METER 570,00		DIMENSION 114,30 2,11												
				HEAT NO 4221756												
				TEST NO A												
CHEMICAL COMPOSITION																
HEAT ANALYSIS 1		C	SI	MN	P	S	CR	NI								
		0,026	0,295	1,73	0,028	0,006	18,32	8,10								
TEST RESULT																
	TEMP C	RP0,2 MPa	RP1,0 MPa	RM MPa		A2 %	HRB HRB									
		205		515		35	90									
A1 L	20	335	376	629		57	84									
EDDY CURRENT TEST ASTM A 450/ASTM A 999, ASTM E 426								SATISFACTORY								
FLATTENING TEST ASTM A 999								SATISFACTORY								
VISUAL AND DIMENSIONAL INSPECTION								SATISFACTORY								
MATERIAL IDENTIFICATION TEST								SATISFACTORY								
INTERGRANULAR CORROSION TEST ASTM A 262:E								SATISFACTORY								
HARDNESS ACC TO NACE MR 0175								SATISFACTORY								
Base material, EN 10028-7.								SATISFACTORY								
Fulfill the requirements in EN 10217-7																
Welding factor Z=1,0 based on EC-test acc to EN 10246-3																
 No. 78 100 3711		Certified acc: PED 97/23/EC and AD2000-W0/TRD 100 by TÜV Nord groupe for pressure equipment NOB no: 0045 Certificate no: 07 202 0111 Z 0019/0/H (no: 0121WL04780) Procedures and personnel approved by notified bodies. WPS/WPAR: EN 288 / WLD Personnel: EN 1418 / NDT: EN 473 MELTING PROCESS: E/AOD Base material from PED 97/23/EC approved suppliers.				THE REQUIREMENTS ARE FULFILLED AS STIPULATED INSPECTOR / MAR Björn Zetterberg ISSUED BY Yvonne Wannestrand										

BUYER SANDVIK BENELUX B V POB 248		DATE 2005-04-29		CERTIFICATE NO N0517004/ 1	
NL-3100 AE SCHIEDAM HOLLAND		MANUFACTURES ORDER NO 2005003386		ITEM 10	
		BUYERS ORDER NO 001011		SHIPMENT 778043	
PRODUCT FORM LONGITUDINALLY WELDED STAINLESS STEEL TUBES, WELD OUTSIDE GROUND, PICKLED, PLAIN ENDS, IN MILL LENGTHS, HEAT TREATMENT 1080 C QUENCHED IN GAS					
SPECIFICATION ASTM A 312/ASME SA 312 (EFW)				MANUFACTURES MARK OUTOKUMPU-N	
GRADE TP 304/TP 304L		MANUFACTURES GRADE 4307T		TOLERANCES ASTM A 999	
TUBE MARKING OUTOKUMPU-N; TP 304/TP 304L; WLD; A/SA 312; 60,30 X 1,65; 2 " SCH 5S; 4221929;					
EXTENT OF DELIVERY					
PCS 74	METER 444,00	DIMENSION 60,30 1,65		HEAT NO 4221929	TEST NO A
CHEMICAL COMPOSITION					
HEAT ANALYSIS 1	C 0,022	SI 0,400	MN 1,76	P 0,034	S 0,002
				CR 18,30	NI 8,10
TEST RESULT					
	TEMP C	RP0,2 MPa	RP1,0 MPa	RM MPa	A2 %
		205		515	35
					90
A1 L	20	342	383	636	54
					83
<p>EDDY CURRENT TEST ASTM A 450/ASTM A 999, ASTM E 426</p> <p>FLATTENING TEST ASTM A 999</p> <p>VISUAL AND DIMENSIONAL INSPECTION</p> <p>MATERIAL IDENTIFICATION TEST</p> <p>INTERGRANULAR CORROSION TEST ASTM A 262:E</p> <p>HARDNESS ACC TO NACE MR 0175</p> <p>Base material, EN 10028-7.</p> <p>Fullfill the requirements in EN 10217-7</p> <p>Welding factor Z=1,0 based on EC-test acc to EN 10246-3</p>					
<p>SATISFACTORY</p> <p>SATISFACTORY</p> <p>SATISFACTORY</p> <p>SATISFACTORY</p> <p>SATISFACTORY</p> <p>SATISFACTORY</p>					
 No. 78 100 3711		Certified acc: PED 97/23/EC and AD2000-W0/TRD 100 by TÜV Nord groupe for pressure equipment NOB no: 0045 Certificate no: 07 202 0111 Z 0019/0/H (no: 0121WL04780) Procedures and personnel approved by notified bodies. WPS/WPAR: EN 288 / WLD Personnel: EN 1418 / NDT: EN 473 MELTING PROCESS: E/AOD Base material from PED 97/23/EC approved suppliers.		THE REQUIREMENTS ARE FULFILLED AS STIPULATED INSPECTOR / MAR Björn Zetterberg ISSUED BY Yvonne Wannestrand	

OUTOKUMPU**CERTIFICATE EN 10204:2004/3.1**



This inspection certificate fulfils the requirements of EN 10204:2004 type 3.1 and EN 10204:1991+A1:1995 type 3.1.B.

Page 1(1)

BUYER VAN LEEUWEN STAINLESS B.V. INDUSTRIEWEG 26		DATE 2005-08-18	CERTIFICATE NO N0524610/ 1											
NL-4153 BW BEESD HOLLAND		MANUFACTURES ORDER NO 2005004461	ITEM 10											
PRODUCT FORM LONGITUDINALLY WELDED STAINLESS STEEL TUBES, WELD OUTSIDE GROUND, PICKLED, PLAIN ENDS, IN MILL LENGTHS, HEAT TREATMENT 1080 C QUENCHED IN GAS		BUYERS ORDER NO 505306	SHIPMENT 780602											
SPECIFICATION ASTM A 312/ASME SA 312 (EFW)			MANUFACTURES MARK OUTOKUMPU-N											
GRADE TP 304/TP 304L		MANUFACTURES GRADE 4307T	TOLERANCES ASTM A 999											
TUBE MARKING OUTOKUMPU-N; TP 304/TP 304L; WLD; A/SA 312; 114,30 X 2,11; 4 " SCH 5S; 4222649;														
EXTENT OF DELIVERY														
PCS 19	METER 114,00	DIMENSION 114,30 2,11	HEAT NO 4222649	TEST NO A										
CHEMICAL COMPOSITION														
HEAT ANALYSIS 1	C 0,026	SI 0,274	MN 1,71	P 0,027	S 0,006	CR 18,35	NI 8,11							
TEST RESULT														
	TEMP C	RP0,2 MPa	RP1,0 MPa	RM MPa		A2 %	HRB HRB							
		205		515		35								
A1 L	20	263	304	574		59	80							
EDDY CURRENT TEST ASTM A 450/ASTM A 999, ASTM E 426 FLATTENING TEST ASTM A 999 VISUAL AND DIMENSIONAL INSPECTION MATERIAL IDENTIFICATION TEST INTERGRANULAR CORROSION TEST ASTM A 262:E HARDNESS ACC TO NACE MR 0175 Base material, EN 10028-7. Fullfill the requirements in EN 10217-7 Welding factor Z=1,0 based on EC-test acc to EN 10246-3														
SATISFACTORY SATISFACTORY SATISFACTORY SATISFACTORY SATISFACTORY SATISFACTORY														
 No. 78 100 3711		Certified acc: PED 97/23/EC and AD2000-W0/TRD 100 by TÜV Nord gruppe for pressure equipment NOB no: 0045 Certificate no: 07 202 0111 Z 0019/0/H (no: 0121WL04780) Procedures and personnel approved by notified bodies. WPS/WPAR: EN 288 / WLD Personnel: EN 1418 / NDT: EN 473					THE REQUIREMENTS ARE FULFILLED AS STIPULATED INSPECTOR / MAR Björn Zetterberg ISSUED BY Yvonne Wannestrand							

OUTOKUMPU STAINLESS TUBULAR PRODUCTS
Torshälla Box 48 S-64421 Torshälla SwedenTelephone no
+46 16 34 96 52Telefax
+46 16 34 97 00

yvonne.wannestrand@outokumpu.com

BUYER HANDELMIJ ROESTVRIJ BV POSTBUS 1111 NL-5700 BC HELMOND HOLLAND		DATE 2005-07-07	CERTIFICATE NO F0504467/ 1											
		MANUFACTURES ORDER NO 2005005454	ITEM 30											
		BUYERS ORDER NO 111124	SHIPMENT 779767											
PRODUCT FORM LONGITUDINALLY WELDED STAINLESS STEEL TUBES, BASE MATERIAL EN 10028-7, WELD OUTSIDE GROUND, BEAD WORKED, SURFACE FOR GRINDING, PLAIN ENDS, IN MILL LENGTHS, QUENCH ANNEALING 1100 C COOLED IN WATER														
SPECIFICATION DIN 11850 BC, CC/17457 Pk 1 prEN 10217-7			MANUFACTURES MARK OUTOKUMPU-F											
GRADE EN 1.4307		MANUFACTURES GRADE 4307T	TOLERANCES SS EN ISO 1127 D4 T3											
TUBE MARKING OUTOKUMPU-FAGERSTA; EN 1.4307; K2G; BC; W; PK 1; V=1,0; MAR-F3; 76,10 X 1,50; 5103152;														
EXTENT OF DELIVERY														
PCS 39	METER 234,00	DIMENSION 76,10 1,50 6000	HEAT NO 5103152	TEST NO A										
CHEMICAL COMPOSITION														
HEAT ANALYSIS 1	C 0,021	SI 0,340	MN 1,67	P 0,027	S 0,006	CR 18,23	NI 8,13	N 0,071						
TEST RESULT														
	TEMP C	RP0,2 MPa	RP1,0 MPa	RM MPa	A %			RA BI µm	RA WI µm	RA BE µm	RA WE µm			
		220	250	520 670	40			0,80	1,60	0,80	1,60			
A1 L A2 L	20 20	325 310	355 340	607 610	55 57			0,33	0,39	0,44	0,55			
EDDY CURRENT TEST SEP 1914/SEP 1925 VISUAL AND DIMENSIONAL INSPECTION FLARING TEST EN 10234 INTERGRANULAR CORROSION TEST EN ISO 3651-2:A MATERIAL IDENTIFICATION TEST Fulfills the requirements acc.to EN 10217-7 Feb 2005.												SATISFACTORY SATISFACTORY SATISFACTORY SATISFACTORY SATISFACTORY		
 097116														
 No. 78 100 3711		Certified acc: PED 97/23/EC and AD2000-W0/TRD 100 by TÜV Nord gruppe for pressure equipment NOB no: 0045 Certificate no: 07 202 0111 Z 0019/0/H (no: 0121WL04780) Procedures and personnel approved by notified bodies. WPS/WPAR: EN 288 / WLD Personnel: EN 1418 / NDT: EN 473 MELTING PROCESS: E/AOD Base material from PED 97/23/EC approved suppliers.							THE REQUIREMENTS ARE FULFILLED AS STIPULATED INSPECTOR / MAR Kari Hautakangas ISSUED BY Birgit Nylund					

HERTECANT N.V.**STAINLESS STEEL FLANGES**

CERTIFICATE EN 10204 / 3.1.B

Date 21/11/2002

Ref: ASTM SA/A 182

Stamp of manufacturer:

Your order 103915
Our order 58135

No: 23295/7

Buyer: AVESTAPOLARIT BV
ALPHA TOWERS
ZEKERINGSTRAAT 32 E
1014 BS AMSTERDAM
Nederland



030933

Requirments: ANSI B 16-5
NACE MR-01-75

Grade: F304/304L

Mechanical properties:

Qty	description	test no	Rp 0,2 % N/mm2	Rp 1,0 N/mm2	Rm N/mm2	Elongation %	Reduction of area	Impact test 20 d.J.
-----	-------------	---------	-------------------	-----------------	-------------	-----------------	----------------------	------------------------

10	WELD-NECK 4" SCHEDULE 40 150 LBS 304 L	31144249						
D89278B	47670	300	321	547	59	62	121-125-111	
HARDNESS HB BRINELL 2.5/187.5 KG RESULTS:			158-158-164					

Chemical analysis:

Heat no	C	Si	Mn	P	S	Cr	Mo	Ni	Ti	N	Cu	Al
---------	---	----	----	---	---	----	----	----	----	---	----	----

Melting process / Producer

D89278B	0.019	0.38	1.63	0.029	0.026	18.25		10.13		0.058		
EAF + CLU / AVESTA POLARIT												

Heat treatment: solution annealed at 1050 D.C. quenched in water

Inspection and gauge measurement: No remarks

P.M.I. test: 100% result: No remarks

Works inspector:

IC test: ASTM A262 Pract. E: No Remarks

QUALITY CONTROL
P. PEETERS

HERTECANT N.V.
Lossing 22,
2260-Heultje Westerlo
Belgium

Tel. + 32(0) 15 224910
Fax + 32(0) 15 225388
Fax Shipping/Q.A.:
+ 32(0) 15 225586

IBAN BE60 320 0216310 70
SWIFT-code : BBRUBEBB 200
BTW/VAT/TVA No BE 425.003.718
HR Turnhout 59.174



**Rti industries**

18110 VASSELAY-France

☎ 02 48 69 74 20

☎ 02 48 69 74 29

ACCEPTANCE CERTIFICATE EN 10204/3.1.B
CERTIFICAT DE RECEPTION EN 10204/3.1.B

231839

#

N° 60088002

DISPATCH NOTE #

AVIS EXPEDITION N°

60088

YOUR ORDER: 109979

OUR ORDER / NOTRE CDE: 100700

CUSTOMER / CLIENT: OUTOKUMPU

PRODUCT / PRODUIT

ITEM POSTE	QTY QTE	DESCRIPTION & SIZE DESIGNATION & DIMENSION	REQUIREMENTS SPECIFICATIONS	GRADE NUANCE
28	10	RED. CONC DIN 2616 168.3 x 114.3 x 2 1.4404-W	DIN 2616.	1.4404

BASE MATERIAL / MATIERE DE BASE

HEAT NUMBER COULEE	IDENTIFICATION IDENTIFICATION	MATERIAL SUPPLIER FOURNISSEUR	REQUIREMENTS SPECIFICATIONS	PQR QMS-AQUAP
4213745	04B188	AST	TUBE SOUDE 4" Sch 10S 316 L	

CHEMICAL COMPOSITION / COMPOSITION CHIMIQUE

HEAT COULEE	%C	%Si	%Mn	%P	%S	%Cr	%Ni	%Mo									
4213745	0.028	0.500	1.600	0.023	0.007	16.850	10.610	2.540									

MECHANICAL CHARACTERISTICS - TESTINGS / CARACTERISTIQUES MECANIQUES - ESSAIS

HEAT	YIELD STRENGTH LIMITE ELASTIQUE		TENSILE STRENGTH RESISTANCE RUPTUR		ELONGATION ALLONGEMENT		HARDNESS DURETE		HEAT TREATMENT HYPERTREMPE		IC TEST CORROSION INTE.		PMI TEST TEST SPECTRO		WELDING FACTOR FACTEUR SOUDAGE	
	0.2% Re Mpa		Rm Mpa		A%						A262 PRACT.E				Z	
COULEE	BASE	PRODUCT	BASE	PRODUCT	BASE	PRODUCT	BASE	PRODUCT	BASE	PRODUCT	BASE	PRODUCT	BASE	PRODUCT	BASE	PRODUCT
4213745	267		585		63						yes		no			


ADD ON TESTING(S) / TEST(S) COMPLEMENTAIRE(S)


TESTINGS ESSAIS	REQUIREMENTS SPECIFICATIONS	ORDER REFERENCE REFERENCE COMMANDE	TEST REPORT # PV N°



082459

REMARKS / REMARQUES

DIMENSIONAL & ASPECT / DIMENSION ET ASPECT: GOOD	STATE OF DELIVERY / ETAT DE LIVRAISON: PICKLED AND PASSIVATED
BRAND'S MANUFACTURER / SIGLE FABRICANT: Rti industries  Manufacturing according to PED 97/23/EC Annex 1 - 4.3 Fabrication conforme PED 97/23/CE Annexe 1 - 4.3 001 Reg N° 9917426	We Certify that delivered products comply requirements's customer. Nous certifions les produits conformes aux spécifications de la commande et de A.M du 24/03/78. Rm ≤ 760 MPA. A% (Lo=5.65 √So) > 16.Rm (A-2) ≥ 10500. Chemical composition and mechanical characteristics are according to the original's Certificate. This certificate, made from data processing treatment, is applicable without signing. L'analyse chimique et les caractéristiques mécaniques sont conformes au certificat original. Ce certificat réalisé par traitement informatique est applicable sans signature. DATE 01/12/2004 FACTORY INSPECTOR EXPERT USINE Assurance Qualité

CLIENT RTI INDUSTRIES 22, ROUTE DU CRETON FR-18110 VASSELAY FRANKRIKE		DATE 040426	CERTIFICAT NO N0409372 / 1
		NON DE COMMANDE USINE 2402998	POST 70
		NON DE COMMANDE CLIENT 3289	EXPEDITION NOMBRE 768857
EXECUTION DE PRODUIT TUBES D'ACIER INOXYDABLE SOUDES LONGITUDINALEMENT, SOUDURE EXTERIEURES MEULE, CORDON LAMINE, DECAPES, A LONGUEURS DE FABRICATION, TRAITEMENT THERMIQUE 1080 C REFROIDISSEMENT A L AIR/EAU			
SPECIFICATION ASTM A 312/ASME SA 312 (EFW)		TOLERANCES ASTM A 999	
NUANCE TP 316L		DESIGNATION DE L'USINE 4432T	SIGNE DE L'USINE AST-N
MARQUAGE DE TUBE AST-N; TP 316/TP 316L; WLD; A/SA 312; 114,30 X 3,05; 4 " SCH 10S; 4213745;			
QUANTITE			
NOMBRE 19	METRE 114,00	DIMENSION 114,30 3,05	COULEE NO 4213745
RESULTAT NO (A)			
COMPOSITION CHIMIQUE			
COULEE ANALYSIS	C 0,028	SI 0,50	MN 1,60
	P 0,023	S 0,007	CR 16,85
	NI 10,61	MO 2,54	
RESULTAT DES ESSAIS			
	Temp	RPO,2 MPa	RP1,0
		170	485
			35
			90
A 01L	20	267	300
		585	63
			78
ESSAI D'APLATISSEMENT ASTM A 530 CONTROLE AUX COURANTS DE FOUCAULT ASTM A 450/A 312, E 426 CONTROLES VISUELS, CONTROLES ET DIMENSIONS VERIFICATION DE LA NUANCE ESSAI DE CORROSION INTERGRANULAIRE ASTM A 262:E DURETE SELON NACE MR 0175 Base material acc to EN 10028-7 Fullfill the requirements in EN 10217-7			
SATISFAISANT SATISFAISANT SATISFAISANT SATISFAISANT SATISFAISANT SATISFAISANT			
 QA 07 100 281		Certified acc: PED 97/23/EC and AD2000-W0/TRD 100 by TÜV Nord groupe for pressure equipment NOB no: 0045 Certificate no: 07 202 0111 Z 0019/O/H (no: 0121WL04780) Procedures and personnel approved by notified bodies. WPS/WPAR: EN 288 / WLD Personnel: EN 1418 / NDT: EN 473 ELABORATION: E/AOD Base material from PED 97/23/EC approved suppliers.	
LES STIPULATIONS DE LA COMMANDE SONT CONFORMES DEPT DE QC TIMRE D'INSPECTOR / MAR Björn Zetterberg DELIVRE PAR Yvonne Wannestrand			

231235

ERIKS

FM.05.01.01

INTERN CERTIFICAATVOORBLAD

Datum: 21-10-04

ERIKS intern chargenr.: 103379

GOB-nr.: 50939495

Indien TA-nr niet gevuld, archiveren bij bovenstaand nummer

Bestelling: 4500339621

Leveranciersnaam: Senior Berghöfer GmbH

TA-nr./TA-pos.: /

Indien TA-nr gevuld, archiveren bij TA

Klantnaam:

Verwerking volgens WI.05.01.08 Behandelen certificaten

Artikelnr.	Omschrijving	Aantal
10066367	DEMACO KS321 PN16 2" 60,3x1,65 L=224,	100

Opmerkingen:

Abnahmeprüfzeugnis 3.1B

INSPECTION CERTIFICATE 3.1B nach IACC TO EN 10204

 Auftraggeber:
 CLIENT:

 ERIKS B.V.
 NL - Alkmaar

 Bestell-Nr./Datum:
 ORDER-NO./DATE:

 4500339821
 27.09.2004

 Berghöfer-Auftragsnummer:
 BERGHÖFER-COMM.-NO.:

C 4.90862

 Lieferdatum:
 DELIVERY DATE:

19.10.04

 Prüfobjekt:
 OBJECT:

 ERIKS Item No. 1086367
 BERGHÖFER-Axial-Expansion-Joint
 bellows S/S AISI 321 (f.4541) - PN 16
 on both ends welded pipe socket S/S AISI 316 Ti
 (f.4571) - 60,3 x 1,65 mm
 works order no. Type ANS / 50 - 16 - 50
 100 pieces - DN 50 - 224 mm

 Mitgeltende
 Unterlagen:
 DOCUMENTATION:

--

 Kennzeichnung:
 MARKING:

 SB - ERKS ALKMAAR
 C 490862
 DN 50 PS 16
 AXIAL: +/- 25 MM
 4500339821

 Prüfanforderungen / -umfang:
 TEST-REQUIREMENT:

-

Prüfungen / TEST TYPES:

 Druck- und Dichtheitsprüfung:
 PRESSURE AND TIGHTNESS TEST:

-

 Helium-Lecktest:
 HELIUM-LEAK-TEST:

 Leakrate: $\leq 1 \times 10^{-7}$ mbar x L / s

 Besichtigung und Maßprüfung:
 VISUAL EXAMINATION AND
 DIMENSION CONTROL:

ohne Beanstandung / without objection

 Dokumentationsprüfung:
 DOCUMENTATION:

 Die Aufrechterhaltung der Werkstoffnachweiskette wird bestätigt.
 Die Nachweisdokumente nach Tabelle 1 können auf begründeten Bedarf zur Verfügung
 gestellt werden / WE GUARANTEE THAT ALL MATERIAL CERTIFICATION ACC. TO
 TABLE 1 CAN BE TRACED BACK AND WILL BE AVAILABLE ON FOUNDED REQUEST.

 Sonstige Prüfungen:
 OTHER TESTS:

-

 Prüfergebnis:
 TEST-RESULT:

ohne Beanstandung / without objection

Nachweis der verwendeten Werkstoffe / CERTIFICATION OF MATERIAL USED:

Tab. 1 / TABLE 1

Bauteil COMPONENT	Werkstoff MATERIAL	Schmelzen-Nr. HEAT-NO.	Ident-Nr. IDENT-NO.
Balg / Bellows	1.4541 (AISI 321)	485773	
Rohr / Tube	1.4571 (AISI 316 Ti)	33574	14111


 Bemerkungen:
 REMARKS:

-

 Es wird bestätigt, dass die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht.
 WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED ABOVE HAS BEEN TESTED AND COMPLIES WITH THE TERMS OF
 THE ORDER CONTRACT.

 Qualitäts- / Quality Management nach / to DIN EN ISO 9001: 2000 Kassel, 20.10.04
 Zertifikat-Nr. / Certificate No. 34121/03-02
 Umwelt- / Environmental Management nach / to DIN EN ISO 14001
 Zertifikat-Nr. / Certificate No. 34121/02-03 und geprüft nach /
 and inspected to EG-Verordnung / EG-Decree 761/2001 EMAS
 Register-Nr./No. D-139-00081
 Hersteller nach AD 2000-Merkblatt HP 0 und TRD 201 in Verbindung
 mit DIN EN 729-2 und Druckgeräte-Richtlinie 97/23/EG - Modul A1 /
 Manufacturer acc. to AD 2000 - Sheet HP 0 and TRD 201 in
 combination with DIN EN 729-2 and PED 97/23/EG - Module A1

Senior Berghöfer GmbH


 (Vertragserfüllung / WORKS INSPECTOR)


norder band

Umstempelbescheinigung

Norder Bandstahl GmbH
Postfach 449
25494 Norden

Telefon: 04931/178161
Telefax: 04931/178160
E-Mail: nb@glove.de
Internet: www.glove.de

Senior Flexonics
Berghöfer GmbH
Frankfurter Straße 199

D- 34070 Kassel
.2001

Datum: 02.10

Norder Bandstahl GmbH
Qualitätswesen
Blaufärberstraße 2 26506 Norden

Versender: Dirk Freitag
Tel.: 04931/178160 Fax-Nr.: 04931/178161

Bescheinigung der Materialumstempelung

Auftrag Nr.: 03958/01/250

NB : 161649 Pos. 3

Wir bestätigen, daß das/die gelieferte/n
Teile : 0,40 x 157,00 mm Werkstoff: 1.4541
aus der Abmessung : 0,40 x 1000,00 mm
des Herstellers : Otelinor
ausgewiesen durch : APZ 3.1.B ADW 2 Zeugnisnummer: CD1731

nb WST 4541 CH-NR 465773

übertragen worden ist.

Zum Zeichen der ordnungsgemäßen Umstempelung haben wir das
Material mit unserem Stempel versehen.

nb 3

Beauftragter der Umstempelung : Anke Grimm

Das Umstempeln erfolgte mit Zustimmung des TÜV-Nord e.V.
unter Aktenzeichen: 0263BU01000.

Bemerkungen: Druckbehälterverordnung AD - W2

Mit freundlichen Grüßen

NB

Norder Bandstahl GmbH

Diese Bescheinigung ist auch ohne Unterschrift gültig.

Ein Unternehmen der



Glove
Gruppe

Hausanschrift:
Drechslerstraße /
Blaufärberstraße
26506 Norden

Geschäftsführer: Volker Glove
Eingetr. HRB Nr. 1242
UStIdNr.: DE 117 375 783

Oldano Landesbank (OLB) AG
Norden (BLZ 233 200 14)
Commerzbank AG
Norden (BLZ 250 400 90)
ING Bank, Amsterdam - NL

Kto.-Nr. 861 3950 800
SWIFT-Code: OLB0 DE 33 280
Kto.-Nr. 562 8888
SWIFT-Code: CCB1 DE 33 233
Kto.-Nr. 66 43 01 247

FREIGABE
ERTEILT

1.4541/465773

9.10.1

Datum

Unterschrift



INSPECTION CERTIFICATE 3.1.B

(according to DIN EN 10204)
Abnahmeprüfzeugnis 3.1.B

No.: CD1731

Prüf-Nr.:

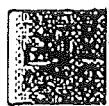
Manufacturer:

Hersteller:

OTELINOX

RO-0200 Targoviste

Telefax: 00-40-45-217758



Certificate No. 008

CUSTOMER

Besteller:

Customer Ord. No.:

Bestell.-Nr.

Product: Coils

Prüfgegenstand: Bandrolle

Materialbezeichnung:

Melting process: E

Erschmelzungsart:

Specification: AD-W2, DIN 17441/97, EN 10088-2/95; ASTM A240M/98

Anforderungen:

St.Pr. / Coil No. Ist. / Band Nr.	Heat No. Schmelznr.	Weight Gewicht (kg)	Chemical analysis (%) / Schmelzenanalyse (Gew.-%)										
			C	Mn	Si	P	S	Cr	Ni	Mo	Ti	N	Notes
1H7-4/11685 A	0465773 1/	7140.000	0.038	1.050	0.620	0.028	0.001	17.070	9.050	xxxx	0.320	0.013	
1H7-4/11685 B	0465773 2/	7210.000	0.038	1.050	0.620	0.028	0.001	17.070	9.050	xxxx	0.320	0.013	

Surface and dimensional control, material identity test, intercrystalline corrosion acc. to DIN 50914: O.K.

Oberflächen-Dimensionalkontrolle, Vervielfachungsprüfung, interkristalline Korrosionsprüfung nach DIN 50914: O.K.

Marking: Producer Trade Mark, Material, Heat No., Coil-No., Workinspector stamp

Kennzeichnung: Herstellerzeichen, Werkstoff, Schmelz-Nr., Coil-Nr., Werkinspektoren-Stempel

Heat treatment: 1080 °C / Air cooling

Wärmebehandlung

Luft

ENTZELT DUSO

Extent of delivery/Lieferumfang

Coil No. Band-Nr.	Dimensions Abmessungen (mm)	Pieces Stück	Test No. Probe-Nr.	P O S.	0.2% Yield Str. 0.2% Grenze (N/mm ²)	1% Yield Str. 1% Dehngrenze (N/mm ²)	Tens. Str. Zugfestigkeit (N/mm ²)	Elong. Bruchl. A80 (%)	Elong. Bruchl. A50(%)	Hardness Härte 118H	Notes
1H7-4/11685 A	0.40 X 1030 SLIT	1	377	T	300.0	330.0	645.0	54	56	82	
1H7-4/11685 B	0.40 X 1030 SLIT	1	378	B	302.0	333.0	642.0	56	60	81	
			377	T	300.0	330.0	645.0	54	56	82	
			378	B	302.0	333.0	642.0	56	60	81	

In accordance to TÜV Bayern Sachsen (July 1994)

in Übereinstimmung mit dem TÜV Bayern Sachsen (Juli 1994)

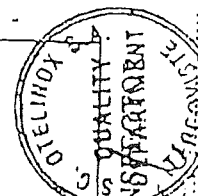
Date of countersigning, January 16, 1998.

Datum der Unterschrift vom 16. Januar 1998.

T=Top/Ansatz B=Bottom/Ende Sample direction: / Proberichtung: transversal/ quer

Targoviste, 28 December 2000

CQ-10-05-73.



WORK

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

Zertifizierter Hersteller nach DGR 97/23/EC
Certified Manufacturer to PED 97/23/EC
von / by LRQA GmbH
Kernnummer / Identification No.: 0325



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: C107484

Seite/Page: 1 / 4

Datum/Date: 040720

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

Besteller/Purchaser/Commandant
THYSSEN MANNESMANN HANDEL GMBH
POSTFACH 10 36 51

THYSSEN MANNESMANN HANDEL AG
ZENTRALLAGER
BORSIGSTR. 2

DE- 40027 DÜSSELDORF

D - 40880 RATINGEN

Bestell-Nr./Purchaser's Order No/No. de commande: 279/45771864

Auftrags-Nr./Works Order No/No. de commande d'usine: 0428669/ 2

Lieferschein/Delivery note/Avis d'expédition: 0428669/ 2 Date: 04-05-13

Erzeugnis/Product/Produit

NAHTLOSE EDELSTAHLROHRE - SEAML. STAINL. STEEL TUBES/PIPES,
SBS MARKE / GRADE A300, 1.4571, TP316TI, TUZ6CNDT17-12,
AUSF. H = KALTGEFORMT, WÄRMEBEHANDELT, GEBEIZT,
FINISH H = COLD FINISHED, HEAT-TREATED, PICKLED,
LIEFERUNG NACH / TECHN. COND. ACC.
AD-W2/01.2000, AD 2000 W2/01.2003,
DIN 17458/07.85 PKL.1 EINBAUROHRE,
AD-W10/05.2000, AD 2000 W10/01.2003,
ASTM A312/A312M-01A, ASTM A269-02,
ASME SECT.II PART.A SA312/SA312M-2001 ED. 2003 ADD,
CORROSION TESTED TO ASTM A262 PRACTICE E,
NFA 49-117 SEPT.1985, NACE MR0175-2003,
TOLERANZEN NACH / TOLERANCES ACC. ASTM A999/A999M-01,
ASME SECT.II PART.A SA530/SA530M-2001 ED. 2002 ADD,
NFA49-117/SEPT.1985, EN ISO 1127/03.97, D2/T2,
EINGEENGTE LÄNGE / RANDOM LENGTH 6000/ 7000 MM
GERADE ENDEN / PLAIN ENDS,

** IDENT-NR. 45373574 **

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**

Harather
FR. H. HARATHER

(DER WERKSACHVERSTÄNDIGE)
(WORKS INSPECTOR/L'EXPERT DE USINE)

Zeichen des Lieferwerkes:

Brand of Manufacturer: **SBS**

Marques de l'usine:

Zeichen des Prüfers:

Symbol of Inspector

Symbole de l'inspecteur:



**SCHOELLER
BLECKMANN
EDELSTAHLROHR**
SEAMLESS STAINLESS
PIPELINES TO SUCCESS

Zertifizierter Hersteller nach DIN 9103/EC
Certified Manufacturer to PED 97/23/EC
von / by LRQA GmbH
Kontaktnummer / Identification No.: 0523



TUV

AD-Marketing
WARTAD 100

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
Rohrstraesse 1
A-2630 Ternitz, Austria
Tel: +43 02630/316 469
Fax: +43 02630/316 683

Zert./cert: C107484

Seite/Page: 2 / 4

Datum/Date: 040720

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

Lieferung/Descr./Liste descr.:

Pos	Abmessung Dimensions Dimensione	Menge Quantity Poids	Gewicht Netweight Poids net	Stk Pcs	Schmelze Heat Coulee	Prüf-Nr Test-No No.Epr.
20	60,3 X 2,9 MM	639,91 M	2671,00 KG	104	033574	150173

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

coulee	C	SI	MN	P	S	CR	MO	NI	CO	TI
033574	0,045	0,430	1,730	0,027	0,001	17,000	2,180	12,200	0,060	0,260

Produktanalyse/Product-analysis/Analyse chimique sur produit

Nr./No	C	SI	MN	P	S	CR	MO	NI	V	W
000002	0,047	0,440	1,740	0,029	0,001	17,030	2,210	12,370	0,060	0,040
	CU	CO	TI	AL	NB	B(ppm)	N			
	0,276	0,060	0,260	0,021	0,013	15	0,013			

Mechanische Eigenschaften/Mechanical Properties/Charact. mecaniques

Prüf-Nr	Proben-Nr.	HRB	HV
Test-No	Sample-no.	HRB	HV
No.Epr.	sample-no.	min	
		max	
150173	1	74	
	2	73	

	TEMP °C	RP0.2 MPA	RP1.0 MPA	RM MPA	A5 %	A2" %
min		210	245	515	45	35
max				690		
1	20	272	315	569	53	49

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**

Harather
FR. H. HARATHER

(DER WERKSACHVERSTÄNDIGE)
(WORKS INSPECTOR/L'EXPERT DE USINE)

Zeichen des Lieferwerks:

Brand of Manufacturer:

Marques de l'usine:

SBS

Zeichen des Prüfers:

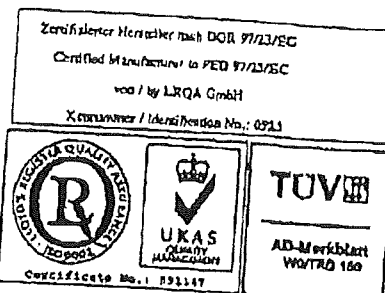
Symbol of inspector

Symbol de l'inspecteur:



**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 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: C107484

Seite/Page: 3 /4

Datum/Date: 040720

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

Ergebnisse weiterer Prüfungen/Further test results/Résultat d'autre essais
AUFWEITVERSUCH: IN ORDNUNG
FLARING TEST: SATISFACTORY
RINGFALTVERSUCH: IN ORDNUNG
FLATTENING TEST: SATISFACTORY
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND
DIN 50914/DIN EN ISO 3651-2 VERF.A: IN ORDNUNG
INTERGRANULAR CORROSION TEST ACCORDING TO
DIN 50914/DIN EN ISO 3651-2 PRACT.A: SATISFACTORY
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND
NFA 05-159: IN ORDNUNG
INTERGR. CORR. TEST ACC. TO NFA 05-159: SATISFACTORY
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND
ASTM A262 Pract.E: IN ORDNUNG
INTERGR. CORR. TEST ACC. TO ASTM A262 PRACT.B: SATISFACTORY
VERWECHSLUNGSPRUEFUNG AN JEDEM ROHR
MIT "RÖNTGEN-FLUORESZENZ-ANALYSATOR": IN ORDNUNG
POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE
BY "X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY

LÖSUNGSGEGLÜHT BEI / SOLUTION ANNEALED AT / HYPERTREMPE
1090°C, 10 MINUTES, LUFT/AIR

THE TUBES/PIPES CONFORM ALSO TO NACE STANDARD MR0175-2003

WASSERDRUCKVERSUCH AN JEDEM ROHR: IN ORDNUNG
HYDROSTATIC TEST ON EACH TUBE: SATISFACTORY
ESSAI HYDRAULIQUE SUR CHAQUE TUBE: SATISFAISANT
PRÜFDRUCK / TEST PRESSURE / PRESSION D'ESSAI: 100 BAR

BESICHTIGUNG UND NACHMESSUNG: IN ORDNUNG
INSPECTION AND CHECKING OF DIMENSIONS: SATISFACTORY
INSPECTION ET CONTROL DES DIMENSIONS: SATISFAISANT

KENNZEICHNUNG: HERSTELLERZEICHEN: SBS

Ergebnis der Prüfungen/Test Result/Résultat 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 WERKSACHVERSTÄNDIGER)
(WORKS INSPECTOR/EXPERT DE USINE)

14 MM

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

Zertifizierter Hersteller nach DGA 97/23/50
Certified Manufacturer to PED 97/23/EC
von / by LRQA GmbH
Kennnummer / Identification No.: 0323



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
Rohrtrasse 1
A-2630 Ternitz, Austria
Tel: +43 02630/316 469
Fax: +43 02630/316 683

Zert./cert: C107484

Seite/Page: 4 /4

Datum/Date: 040720

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

ZEICHEN DER WERKSABNAHME: T/A
-WERKSTOFF (NR) -ABMESSUNG-SCHMELZE-PL NR.
MARKING: SBS-T/A-MATERIAL -DIMENSION-HEAT NO.-LOT NO.
MARQUAGE: SBS-T/A-MATERIAUX-DIMENSION-COULEE -NO.DE LOT
-SMLS/S-H-PKL.1

ERSCHMELZUNGSART/STEELMAKING PROC./PROC.D'ACIERIATION: EF+AOD

Die Anzahl der Prüfungen entsprechen den
zulässigen Losgrößen in Fertigungslängen.
The number of tests is based on the size of the
manufacturing lot before cutting to lengths

Im Einvernehmen mit dem TÜV-Bayern (Juli 1959).
In accordance with / en accord avec TÜV-Bayern (Juli 1959).
Auf eine Gegenzeichnung durch die zuständige Technische
Überwachungs-Organisation kann auf Grund des Schreibens
des TÜV-Bayern vom 23.6.1969 verzichtet werden.

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/EXPERT DE USINE)

INSPECTION CERTIFICATE No 116785
ACCORDING TO DIN EN 10204 3.1.B. (Ex DIN 50049 3.1.B) - NF EN 10204 3.1.B.

231649

PAGE 3

VOTRE COMMANDE YOUR ORDER/IHRE BEST.
17483

Date
09/05/01

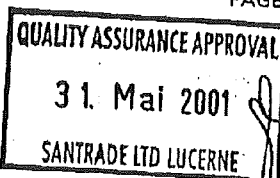
Client / Customer / Besteller
SANTRADE LTD

SANDVIKSTRAAT 10
NL-3125 BW SCHIEDAM

NOTRE REFERENCE OUR REF/WERKS Nr
BL 98238/01

Date
17/05/01

PAYS BAS



PRODUIT PRODUCT / PRODUKT COLD FORMED.

V/Ref. Produkt Y/Product Ref. / Ihre Zeichen : FBBW3-304L-60.3-1.65

Qté Qty / Stückzahl	Désignation Description / Gegenstand	Dimensions Size / Abmessung	Spécifications Requirements / Anforderungen	Nuance Grade / Werkstoff
200	BENDS 90° WELDED	60,3X1,6	ISO 5251	Z3 CN 18-10 / 304 L / 1.4306
Contrôle visuel et dimensionnel Visual inspection and / Besichtigung und Abmessung dimensional control Ohne beanstandung			Yes	Contrôle nuance PMI : Yes

MATIERE BASE MATERIAL / VORMATERIAL

WELDING FACTOR V = 1

Coulée Heat/Schmelze	No CCPU Cert. No / Zeugnisnr.	Tubiste Material Supplier / Vormaterial Lieferant	Spécifications Requirements / Anforderungen	AQUAP
460132	4163		NFA 49147	1454

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	.000	.00	.00	.000	.000	18.00	10.00	.00	.00	.00	.00	.00		
460132	.022	.48	1.16	.001	.029	18.23	10.02	.00	.00	.06	.00	.00		
Maxi	.030	.75	2.00	.030	.040	20.00	12.50	.50	.05	.00	.00	.00		

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.

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 % 5,65 √s		Dureté Hardness / Härte HRB		Hypertrempe Heat treat. / Wärmebehand. 1070°		Essai de corrosion Intergranular Corrosion / Interkristalline Korrosion		Essai non destruct. Non destructive testing / Zerstörungsfreie Prüfungen	
	Base Base / Vermet.	Produit Produit / Produkt	Base Base / Vermet.	Produit Produit / Produkt	Base Base / Vermet.	Produit Produit / Produkt	Base Base / Vermet.	Produit Produit / Produkt	Base Base / Vermet.	Produit Produit / Produkt	Base Base / Vermet.	Produit Produit / Produkt	Base Base / Vermet.	Produit Produit / Produkt
Mini	180		485		40									
460132	307		580		58		80		Yes		NFA05159		Yes	
Maxi			660										Conform Normast	

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

Products decontaminated with controlled passivation and rinsing with pollution free recycled demineralised water.

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

Carbone <= 0,28 % - Rm <= 800 N/mm² - Soufre <= 0,05 % - Rm (A-2) >= 10500 N/mm² - Phosphore <= 0,05 % - A % sur 5,65 √s >= 16

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

The chemical analysis and mechanical characteristics are conform to the Base Material Certificate supplied by the pipe manufacturer (pieces manufactured by PROFORM) or by the fittings manufacturer (fittings re-sold by Proform). This certificate has been printed by computer and as such is valid without a signature. Any alterations made to this certificate will render the document as false and fraudulent, and any persons connected with this falsification are liable to legal action.

17/05/01
L'expert d'usine,
Factory Inspector / Werksachverständiger
A. WALUGA



Marque de fabrique

Ita Inox S.r.l.
Strada Statale 45 bis
26010 Robecco d'Oglio (CR) - Italia
Tel. 0372 9801 - Fax 921538
Cod. Fisc. e P. IVA IT 00883040198

Cap. soc. int. vers. 42.020.000.000
Trib. Cremona 6861/36
R.E.A. Cremona 119060
E-Mail = sales.ita@arvedi.it
Home-page = http://www.arvedi.it

Unità Produttive:
Ita: Strada Statale 45 bis
26010 Robecco d'Oglio (CR) - Tel. 0372 9801
Gilby: Via Dante Sedini, 10
16039 Sestri Levante (GE) - Tel. 0185 482471



SINCERT



Certificato di collaudo N° 4163

☐ TEST CERTIFICATE - SPECIFICATIONS ASTM / EN 10204
☒ CERTIFICAT D'ESSAIS - (NF A 49-000 5.2.2.1) MODÈLE D (NF A 49-001 / EN 10204) 3.1B
CERTIFICAT DE CONTROLE DES PRODUITS PAR L'USINE (C.C.P.U.)

PER TUBI SALDATI LONGITUDINALMENTE / FOR LONGITUDINALLY WELDED TUBES / POUR TUBES SOUDÉS LONGITUDINALEMENT

CLIENTE Customer / Client				ETS. PROFORM 8 Route Caillou				Z.I. 69630 CHAPONOST (FRANCE)							
ORDINE DEL CLIENTE N. Customer Order No. / Commande Client N°				20175				CONFERMA N. Order No. / Commande Intérieure N°				2000/2164			
SPECIFICHE Specifications Spécifications				NF A49-147 * V-1,0 S.T.A. 131 Rev. 8				TOLLERANZE Tolerances Tolérances				NF A49-147 / S.T.A. 131			
Pos. N°	DIMENSIONI Dimension mm. Dimensions mm.		N° PEZZI Pieces No. Pièces N°	QUANTITÀ Quantity mt. Quantité mt.		PESO Weight Kg. Poids Kg.	TIPO ACCIAIO Steel type Nuance acier	ESECUZIONE Execution Exécution	PROVA IDRAULICA Hydrostatic test: Epreuve hydraulique:						
006	60,30x 1.65x 6000		316	1895.60		4992.00	Z2 CN 18-10	MR							
Pos. N°	N° COLATA Heat No. Coulée N°		COMPOSIZIONE CHIMICA (Chemical Analysis) (Chimique Analyse)												
			% C	% Si	% S	% P	% Mn	% Cr	% Ni	% Mo	% Ti	% Co			
006	460132		0.022	0.480	0.001	0.029	1.160	18.230	10.020			0.060			
CARATTERISTICHE MECCANICHE E TECNOLOGICHE (Mechanical and Technological Characteristics) (Caractéristiques mécaniques et technologiques)															
Pos. N°	COLLAUDO Test No. Essais N°	COLLAUDO Homolog. No. Essais N°	in N/mm² = MPA Long. = □ Transv. = T □				APPIAT. Flattening test Aplatissem.		ALLARC. Expanding test Evasement		BORDAT. Flanging test Emboutiss.		PIEÇA INVERSA Revers bend test Retournem.		
			PROVA DI TRAZIONE / Tensile test / Essai de traction (1)												
			SNERVAM. Yield streng. (2) Limite élastique	ROTTURA Ult. streng. Charge de rupt.	ALLUNGAM. Elong. (3) Allongem.	DUREZZA Hardness Dureté									
N°		AQUAP	≥ 180	≥ 485	680	≥ 40	c (HRB ≤ 90	N°	Esito Result	N°	Esito Result	N°	Esito Result	
006	7261 7262 7263	1454 1454 1454	295 300 307	588 565 580	59.5 60.0 58.5	79 79 80			4	OK	4	OK		4 OK	
PROVA DI CORROSIONE INTERCRISTALLINA (5) Intergranular corrosion test / Essai de corrosion intergranulaire							NF A05-159 : OK						TRATTAMENTO TERMICO 1050 Heat treatment (4) RECUIT BLANC Traitement thermique		
CONTROLLO NON DISTRUTTIVO A MEZZO COURANT DE FOUCAULT : OK Not destructive control by / Contrôle non destructif par															
CONTROLLO VISIVO E DIMENSIONALE Visual and gauging control FAVORABLE Contrôle visuel et dimensionnel							Prova antimiscuglio: PMI test:			PROCEDIMENTO DI ELABORAZIONE Steel making process E / A.O.D. Procédé d'élaboration					
Not attestiamo che il materiale spedito è conforme alla consegna d'ordine. We certify that the delivered products comply with the specification of the order. Nous attestons que les produits livrés sont conformes aux stipulations de la commande.							Sestri Levante 31/08/2000			S.R.E. INSPECTOR Mario Capellini					

Arvedi