

From: [Vernon Uy](#)
To: [Green, Frank;](#)
cc: [Daly, Keith; Peppers, Nicki;](#)
Subject: Contract 8078 - Bubble Curtain Rings" Material Certs submittal
Date: Thursday, February 03, 2011 7:13:59 PM
Attachments: [BubbleCurtainRingsMaterialCertsSubmittal.pdf](#)
[TransmittalSheet.pdf](#)

Hi Frank.

Attached you'll find material certs submittals for the Bubble Curtain Rings (Bid Item 2 and 3).

Materials came from:

- Alaskan Copper & Brass 3223 6th Avenue South (Seattle, WA 98124)
- Nucor Steel 1505 River Road (Cofield, NC 27922)

Hard copies are in the mail. Thanks.

Vernon Uy
American Construction Company, Inc.
(425) 870-3217

*** eSafe scanned this email for malicious content ***

*** IMPORTANT: Do not open attachments from unrecognized senders ***

Marine Construction Dredging Pile Driving

1501 Taylor Way • Tacoma, Washington 98421

PHONES: Tacoma (253) 254-0118,

Seattle (206) 623-0114,

Fax (253) 254-0155



CONTRACTORS LIC NO. 223-01-AM-ER-IC*372 NO.

TO:

Columbia River Crossing Project Office
700 Washington Street, Suite 300
Vancouver, WA 98660

Attn: Frank Green, P.E.

DATE February 1, 2011

JOB #: MC 02-11

TITLE: Columbia River Bridge Temporary
Pile Test Program (#8078)

THE FOLLOWING ITEMS ARE BEING SENT:

Herewith

Under Separate Cover

Direct

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

QUANTITY	DESCRIPTION
4 EA	BUBBLE CURTAIN RINGS MATERIAL CERTS submittal

These items are being sent:

<input checked="" type="checkbox"/>	Per your request
<input checked="" type="checkbox"/>	Please keep us advised of action taken
<input checked="" type="checkbox"/>	For you to process
<input checked="" type="checkbox"/>	For your inspection and approval
<input checked="" type="checkbox"/>	For your general information and file
<input checked="" type="checkbox"/>	For your approval or corrections

REMARKS:

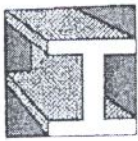
Please contact us promptly if there is a problem or question

COPY TO:

AMERICAN CONSTRUCTION COMPANY, INC.

BY:

Vernon Uy



**SEAPORT
STEEL**
SSC
ISCC, INC.

Phone: (206) 343-0700

WATS: (800) 835-4545

Fax: (206) 343-1366

In State: (800) 233-3660

3660 East Marginal Way South, P.O. Box 3625, Seattle, WA 98124

Certification of Compliance

Sold to

RAINIER WELDING

19020 N.E. 84TH

REDMOND

WA 98053

Work Order: G2087

All W/O Certifications

Page: 1

Additional Information

Customer Order: 2860-1
Order Date: 1/19/2011

Ordered By: BOB
Salesman: RP

Seaport Steel certifies that Mill Certification documents for materials shipped on this work order have been verified to comply with grade/specification requirements as listed below by material description and heat number.

A36 PL 3 X 96 30' 0"

Heat # 0504750

NUCOR P.O.Box 279
Winton, NC 27986
PLATE MILL (252) 356-3700

Mill Test Report

Page 4



Issuing Date : 08/16/2010 B/L No. : 269904 Load No. : 271701 Our Order No. : 83561/4 Cust. Order No. : E32813
 Vehicle No: ATW 116052 Sold To : SEAPORT STEEL COMPANY Ship To : SEAPORT STEEL COMPANY
 Specification : 3.0000" x 96.000" x 360.000" P.O. BOX 3625 3660 EAST MARGINAL WAY SOUTH SEATTLE, WA 98124
 ASTM A36-08/ASTM A709 Grade 36-09a/AASHTO M270 Grade 36/ASME SEATTLE, WA 98124
 SA36-03a 2009 Addenda AASHTO M270 36

Marking :

E32813

Heat No	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al _(tot)	V	Nb	Ti	N	Ca	B	Sn	Ceq	Pcm
0504750	0.18	0.89	0.009	0.003	0.17	0.16	0.05	0.05	0.01	0.019	0.004	0.002	0.001		0.0016	0.0001	0.009	0.38	0.25

Plate Serial No	Tensile Test						Charpy Impacts							
	Pieces	Tons	Dir.	(psi) Yield	(psi) Tensile	Elongation % In 2"	Dir.	1 shear	2 shear	3 shear	Ave.	Size	Temp	Min Ave.
0504750-07	1	14.70	T	40,000	70,700	31.6								
			T	38,600	69,600	32.2								

8/16/2010 3:25 PM nucorhertford.com -> 912063431388

Manufactured to fully killed practice by Electric Arc Furnace. Welding or weld repair was not performed on this material.
 Mercury has not been used in the direct manufacturing of this material. Produced as continuous cast discrete plate as-rolled, unless otherwise noted in Specification.

We hereby certify that the contents of this report are accurate and correct. All test results and operations performed by the material manufacturer are in compliance with the applicable specifications, including customer specifications.

Yield by 0.5EUL method unless otherwise specified. $Ceq = C + (Mn/6) + ((Cr + Mo + V)/5) + ((Cu + Ni)/15)$

$Pcm = C + (Si/30) + (Mn/20) + (Cu/20) + (Ni/60) + (Cr/20) + (Mo/15) + (V/10) + 58$

Melted and manufactured in the USA. ISO 9001:2000 certified (#006461) by SRI Quality System Registrar (#0995-08). PED 97/23/EC 7/2 Annex 1, Para. 4.3 Compliant.
 DIN 50049 3.1, BEN 10204 3.1B(2004), DIN EN 10204 3.1(2005) compliant. For ABS grades only, Quality Assurance certificate 06-MM-PQA-383

T. A. Depretis
T. A. Depretis, Metallurgist

08/16/2010 3:24:29 PM

CERTIFIED INSPECTION REPORT

A10:58 058760

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

Malcolm Murphy
 Malcolm Murphy
 Director of Manufacturing Davenport Works

Kenton P. Young
 Kenton P. Young
 Quality Assurance Manager

1195221 0
 Ship Date B.L. No. Invoice No. Alcoa No. Item Page 1
 2010-12-28 5519258 00000 1000253279-1 DE-53279-1
 P.O. No./Govt Contract No. Customer Alcoa Item:
 10077445 Ln#: 1 ALASKAN COPPER & B G041107416R06

Ship To: ALASKAN COPPER & BRASS COMPANIES, I
 ALASKAN COPPER AND BRASS
 27402 72ND AVE S
 KENT, WA 98032

Item Description
 0.25 IN TK (+.014 -0.000) X 48.5 IN W (+.375 -
 0.000) X 144.5 IN LN (+.5 -0.0) CAT X 134100 (N) A/T 6061-
 T651 TYPE 200 WROUGHT TOOLING PLATE MILL
 FINISH. AMS4027 REV N ANSIIH35.2 REV 2009 EXC_MRK ASME-SB-
 209 REV 10 EXC_MRK ASTM209 REV 07
 ((MARKED)) KRAFT PAPER INTERLEAVED
 MAX GROSS SKID WGT: 4500 LB QUAN TOL +/-
 40 % CQR D164055 REV 06 CUST REQ 10-12-
 27 *** W/R 11-01-01 ***

* Rainier Welding *
 PO# 2860-2
 DATE: 2-3-2011
 (AFC) # 76250)
 © 608 WEBSTER
 (3Pw)

Item	Package Ticket	Lot	Weight	Quantity	UOM	Inspector Clock Numbers
1	265577 ✓	423752 ✓	355	2	PC	47118
2	265612	207038	1594	9	PC	47007
3	265612	423751	1418	8	PC	47007
4	265612	423758	531	3	PC	47007
5	265614	207038	1593	9	PC	47007
6	265614	423758	2654	15	PC	47007
			8145	46		

Notes for CQR: D164055.6
 PRODUCT PRODUCED TO THE REQUIREMENTS OF AMS4027 REV N ALSO MEET THE REQUIREMENTS OF AMS-QQ-A-250_11 ORIGINAL REVISION DATED 1997-08-01.

CQR: D164055.6 -Specification Limits

Temp Dir	UTS KSI	TYS KSI	EL4D PCT
T651 Long Transv.	Max		
	Min	42.0	35.0 10

Chemical Composition	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other	
										Bach	Total	Aluminum
	Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15
	Min	0.40		0.15		0.8	0.04				

Notes for Lot: 207038
 TENSILE TEST VALUES IN MPA = 330, 330 YIELD TEST VALUES IN MPA = 294, 293.

PA1-03

1. UC

10310 0100

FEB-03-2011 THU 07:40 111 HLRDWHN CUFFEK

CERTIFIED INSPECTION REPORT

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

Malcolm Murphy
 Malcolm Murphy
 Director of Manufacturing Davenport Works

Kenton P. Young
 Kenton P. Young
 Quality Assurance Manager

1195221	0				
Ship Date	B.L. No.	Invoice No.	Alcoa No.	Item	Page 2
2010-12-28	5519258	00000	1000253279-1		DS-53279-1
P.O. No./Govt Contract No.	Customer	Alcoa Item			
10077445 Ln#: 1	ALASKAN COPPER & B G041107416R06				

Ship From:

Lot: 207038 - Mechanical, Physical, Metallography, Quantometer Results (cont.) -----
 Lot: 207038 - Mechanical, Physical, Metallography, Quantometer Results -----

Temp	Dir	No-> Test	UTS KSI	TYS KSI	EL4D PCT
T651	Long Transv.	2	47.8	42.6	15.6
			47.8	42.5	15.4

Cast Number	Chemical - OBS	SI	FE	CU	MN	MG	CR	ZN	TI
H9844092	Actuals	0.64	0.4	0.25	0.06	1.0	0.19	0.04	0.02

Notes for Lot: 423751
 TENSILE TEST VALUES IN MPA = 325, 326 YIELD TEST VALUES IN MPA = 292, 292

Lot: 423751 - Mechanical, Physical, Metallography, Quantometer Results -----

Temp	Dir	No-> Test	UTS KSI	TYS KSI	EL4D PCT
T651	Long Transv.	2	47.2	42.3	14.9
			47.3	42.4	15.2

Cast Number	Chemical - OBS	SI	FE	CU	MN	MG	CR	ZN	TI
H9844092	Actuals	0.64	0.4	0.25	0.06	1.0	0.19	0.04	0.02

Notes for Lot: 423752
 TENSILE TEST VALUES IN MPA = 331, 332 YIELD TEST VALUES IN MPA = 297, 296.

Lot: 423752 - Mechanical, Physical, Metallography, Quantometer Results -----

Temp	Dir	No-> Test	UTS KSI	TYS KSI	EL4D PCT
T651	Long Transv.	2	48	43.1	14.9
			48.2	42.9	15.3

Cast Number	Chemical - OBS	SI	FE	CU	MN	MG	CR	ZN	TI
H9844092	Actuals	0.64	0.4	0.25	0.06	1.0	0.19	0.04	0.02

Notes for Lot: 423758
 TENSILE TEST VALUES IN MPA = 330, 328 YIELD TEST VALUES IN MPA = 293, 294.

DP 2083

F. U3

FHX NU. 91201

FEB-03-2011 THU 07:45 AM ALASKAN COPPER

CERTIFIED INSPECTION REPORT

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

Per: 
 Malcolm Murphy
 Director of Manufacturing Davenport Works


 Kerbin P. Young
 Quality Assurance Manager

1195221 0
 Ship Date B.L. No. Invoice No. Alcoa No. Item Page 3
 2010-12-28 5519258 00000 1000253279-1 DS-53279-1
 P.O. No./Govt Contract No. Customer Alcoa Item
 10077445 Ln#: 1 ALASKAN COPPER & B G041107416R06

Lot: 423758 - Mechanical, Physical, Metallograpy, Quantometer Results (cont.) -----
 Lot: 423758 - Mechanical, Physical, Metallograpy, Quantometer Results -----

Temp	Dir	No->	UTS	TYS	EL4D
		Test	KSI	KSI	PCT
T651	Long Transv.	2	47.8	42.5	15
			47.5	42.6	14.9

PH 3073

Cast Number	Chemical - OES	SI	FE	CU	MN	MG	CR	ZN	TI
H9844092	Actuals	0.64	0.4	0.25	0.06	1.0	0.19	0.04	0.02

This material was melted in the United States or a Qualifying Country [REF DFARS 225.872.1(a)]; it was manufactured in the United States

F. U4

FAX NO. 91281

FEB-03-2011 THU 07:45 AM ALASKAN COPPER



Abnahmeprüfzeugnis 3.1 (EN 10204)
Inspection certificate – mill certificate

Zertifiziert nach / certified to ISO 9001, ISO/TS 16949, ENIAS 9100, ISO 14001, NADCAP

Nr.: 85336910 03 / 6

Rev. 0
 Seite / page: 1 von / of 2
 Datum / date: 2010 07 20

RA: NIKEL WELDING
PO# 2860-2
CALL# 762582
DATE: 2-3-11
© BOS
WEBSIDE

PT# 1-06
2

402:32 05805

Auftraggeber / customer: Empire Resources Inc. 1 Parker Plaza FORT LEE NJ 07024 USA	Bestell Nr. / order no.: R133210/ER-4348-P Datum / date: 2010 04 27
	Auftragsbest. Nr. / order confirm. no.: 612989 Datum / date: 2010 04 28
Warenempfänger / consignee: Empire Resources, INC 6901 Quad Avenue BALTIMORE MD 21237-2403 USA	Lieferschejn Nr. / delivery note: 85336910 Datum / date: 2010 07 20
	Akkreditiv Nr. / letter of credit no.:
Endkunde, Bestell-Nr. / Your cust., ord. no.:	

Produkt/product Form / form: Plate, stretched Werkstoff / material: 6061 Zustand / temper: T651 Dim. / dim: (inch): 0,500x48,50x144,50 Kundenartikel-Nr / customer article no.:	Bedingungen/terms Techn. Lieferbedingungen / techn. spec.: AMS-QQ-A-250/11, 08.1997 ASTM B 209 - 07 Material meets also AMS 4027N, 07.2008, but not marked ASTM B 594 - 06 ANSI H35.2-2006 ASME SB 209, 2007 Sondervorschrift / special terms:
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

AB-Pos. ord.-Item.	BNr/Los/Teillos Lot/No./Part	Guss Nr. cast no.	Werkstoff material	Kolle packng.	Gewicht netto weight net	Stk pcs.
06	44738/04/00	80/0066747/0	6061.1	6129890046	4289,51 lbs	12
06	44738/05/00	80/0067078/0	6061.1	6129890122	1761,464 lbs	5
06	44738/06/00	80/0067078/0	6061.1	6129890125	1748,236 lbs	5

Guss Nr. / cast no.		AMAG designation		Chemische Zusammensetzung / chemical composition: [%] Gewichtssanteile / weight proportion											
				Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti			
80/0066747/0	8061.1	actual		0,70	0,43	0,21	0,15	0,82	0,17	0,01	0,06	0,05			
				80/0067078/0	8061.1	actual		0,65	0,46	0,23	0,02	0,86	0,17	<0,01	0,13	0,02

10077756



Abnahmeprüfzeugnis 3.1 (EN 10204)
Inspection certificate – mill certificate

Nr.: 85336910 03 / 6

Rev. 0

Seite / page: 2 von / of 2

Datum / date: 2010 07 20

Zertifizierung nach / certified to ISO 9001, ISO/TS 16949, ENAS 8100, ISO 14001, NADCAP

Handwritten: 2012

Zugversuch / Tensile test						
BNr/Los Lot/No.	Zustand temper	Richtung direction		Rm [ksi]	Rp0.2 [ksi]	A2 ¹¹ [%]
44738/04	T651	LT		46,7	43,1	13
44738/04	T651	LT		47,0	43,2	13
44738/04	T651	LT		48,8	42,9	13
44738/04	T651	LT		46,8	43,1	13
44738/04	T651	LT		46,8	42,9	14
44738/05	T651	LT		46,7	43,4	13
44738/05	T651	LT		46,7	43,2	13
44738/05	T651	LT		47,4	43,2	11
44738/05	T651	LT		47,1	43,8	11
44738/05	T651	LT		47,0	43,5	13
44738/06	T651	LT		47,0	43,7	13
44738/06	T651	LT		46,7	43,2	13
44738/06	T651	LT		47,4	44,1	13
44738/06	T651	LT		47,3	43,8	13
44738/06	T651	LT		47,3	43,2	12

Es wird bestätigt, dass die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellung entspricht.
 We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Werkssachverständiger / factory specialist	E-Mail / e-mail
Josef Klampfer	j.klampfer@amag.at

Herstellerland: Österreich / goods origin: The goods are of Austrian origin.
 Maschinell erstellt - Gültig ohne Unterschrift / Automated - valid without being signed.

Certificate of Mechanical Properties

Customer: ALASKAN COPPER & BRASS-RENT

Report Number: 7126

Test Date: 11/8/2010

Description: 1 1/2 IN SQ BAR

Cust Purchase Order #: 10076903

Profile: 000842

CastNum: 93

Production Order #: 640381

Customer Part Number: 255118

Sales Order: SO-150183

P10:27 057466

PT/LT Number: 548984	Test Number: 62780		
Alloy/Temp: 6061-T6511			
Tensile	Actual 43.0 kpsi	Min 38.00	Max N/A kpsi
Yield	40.0 kpsi	35.00	N/A kpsi
*T6511 & T6510 meets requirements for T6 Elongation	11.7 %	8.00	N/A %
<p>Sapa Profiles, Inc. certifies Aluminum Extrusions are produced and tested in accordance with ASTM-B221-08 and ASTM-B557-06 and meet or exceed minimum requirements</p> <p>In addition to ASTM-B221 the extruded products meet the applicable requirements of ASTM-B308, ASTM-B429, AMS-QQ-A-200/3, AMS-QQ-A-200/8, AMS-QQ-A-200/9, AMS-QQ-A-200/11 or AMS-QQ-A-200/15 as determined by product type or alloy/temper. Manufactured in the U.S.A.</p>			
Test Results Reviewed by Employee # 6093			

All alloys and cast numbers have been inspected and found to be within Aluminum Association Chemical Composition Limits (Composition in percent by weight maximum unless shown as a range)

Alloy	Silicon	Iron	Copper	Manganese	Magnesium	Chromium	Zinc	Titanium	Other Elements	
									Each	Total
6005	.6 - .9	.35	.1	.1	.4 - .6	.1	.1	.1	.05	.15
6061	.4 - .8	.7	.15 - .4	.15	.8 - 1.2	.04 - .35	.25	.15	.05	.15
6063	.2 - .6	.35	.1	.1	.45 - .9	.1	.1	.1	.05	.15
6082	.7 - 1.3	.5	.1	.4 - 1.0	.6 - 1.2	.25	.2	.1	.05	.15
6351	.7 - 1.3	.5	.1	.4 - .8	.4 - .8	....	.2	.2	.05	.15
7075	.40	.5	1.2 - 2.0	.30	2.1 - 2.9	.18 - .28	5.1 - 6.1	.20	.05	.15
2024	.5	.5	3.8 - 4.9	.30 - .90	1.2 - 1.8	.10	.25	.15	.05	.15

RH ZIMMERMAN
808
2860-2
762983-1

Sapa Profiles, Inc.
 Address: 7933 NE 21st Avenue, P.O. Box 11263, Portland, OR 97211 USA
 Telephone: 503-802-3000 Toll Free: 800-547-0790 Fax: 503-802-3052
 Email: sapa-inc@sapagroup.com Website: www.sapagroup.com/us/profiles

DOCUMENT NO.: TLF-0103-A-1

ALASKAN COPPER & BRASS COMPANY

Stainless Steel

Aluminum

Post Office Box 3456 / Seattle, Washington 98124-3546 / 206-623-5800 / acbsea@alascop.com
Post-Office Box 5067 / Portland, Oregon 97208-5067 / 503-238-7171 / acbpdx@alascop.com

CERTIFICATE OF CONFORMANCE

Company Name: **RAINIER WELDING, INC.**

31 JAN 2011

PO#: **2860-2**

ACB#: **762483-1**

Item Number / Specification

2 1" NPS 6061-T6 ALUMINUM 150# THREADED FULL COUPLING

The undersigned hereby certifies that:

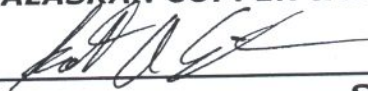
All items furnished in this shipment are in full compliance with all purchase order and specifications requirements.

When the above cited purchase order requires material test reports, the undersigned certifies that:

The test reports supplied represent the actual attributes of the items furnished and the test results are in full compliance with all applicable specifications and purchase order requirements.

The material shipped against the above cited purchase order is free from mercury contamination and weld repair.

ALASKAN COPPER & BRASS COMPANY



**Scott A Erickson,
Quality Control Representative**



COPPER & BRASS
SERVICENTER
ASSOCIATION, INC.





Certificate of Mechanical Properties

Customer: ALASKAN COPPER & BRASS-RENT

Report Number: 7413

7413

Test Date: 1/10/2011

Description: 3/8 X 2 IN RECT BAR

Cust Purchase Order #: 10078625

Profile: 000545

CastNum: 290

Production Order #: 653403

Customer Part Number: 135693

Sales Order: SO-155330

11:48 050038

PT/LT Number: 564214

Test Number: 68163

Alloy/Temper: 6061-T6511

	Actual	Min	Max
Tensile	43.5 kpsi	38.00	N/A kpsi
Yield	40.6 kpsi	35.00	N/A kpsi
Elongation	16.6 %	10.00	N/A %

*T6511 & T6510 meets requirements for T6

Sapa Profiles, Inc. certifies Aluminum Extrusions are produced and tested in accordance with ASTM-B221-08 and ASTM-B557-06 and meet or exceed minimum requirements

In addition to ASTM-B221 the extruded products meet the applicable requirements of ASTM-B308, ASTM-B429, AMS-QQ-A-200/3, AMS-QQ-A-200/8, AMS-QQ-A-200/9, AMS-QQ-A-200/11 or AMS-QQ-A-200/15 as determined by product type or alloy/temper. Manufactured in the U.S.A.

Test Results Reviewed by Employee # 6093

All alloys and cast numbers have been inspected and found to be within Aluminum Association Chemical Composition Limits (Composition in percent by weight maximum unless shown as a range)

Alloy	Silicon	Iron	Copper	Manganese	Magnesium	Chromium	Zinc	Titanium	Other Elements	
									Each	Total
6005A	.5 - .9	.35	.3	.5	.4 - .7	.3	.2	.1	.05	.15
6061	.4 - .8	.7	.15 - .4	.15	.8 - 1.2	.04 - .35	.25	.15	.05	.15
6063	.2 - .6	.35	.1	.1	.45 - .9	.1	.1	.1	.05	.15
6082	.7 - 1.3	.5	.1	.4 - 1.0	.6 - 1.2	.25	.2	.1	.05	.15
6351	.7 - 1.3	.5	.1	.4 - .8	.4 - .8	....	.2	.2	.05	.15
7075	.40	.5	1.2 - 2.0	.30	2.1 - 2.9	.18 - .28	5.1 - 6.1	.20	.05	.15
2024	.5	.5	3.8 - 4.9	.30 - .90	1.2 - 1.8	.10	.25	.15	.05	.15

Aluminum Association
6061
2560-2
761439-1

Sapa Profiles, Inc.
Address: 7933 NE 21st Avenue, P.O. Box 11263, Portland, OR 97211 USA
Telephone: 503-802-3000 Toll Free: 800-547-0790 Fax: 503-802-3052
Email: sapa-inc@sapagroup.com Website: www.sapagroup.com/us/profiles

DOCUMENT NO.: TLF-0103-A-1



Post Office Box 3456 / Seattle, Washington 98124-3546 / 206-623-5800 / acbsea@alascop.com
Post-Office Box 5067 / Portland, Oregon 97208-5067 / 503-238-7171 / acbpdx@alascop.com

CERTIFICATE OF CONFORMANCE

Company Name: **RAINIER WELDING, INC.**

27 JAN 2011

PO#: **2860-2**

ACB#: **761439-1**

Item Number / Specification

4 1" NPS 150# 6061-T6 ALUMINUM THREADED HALF COUPLING

The undersigned hereby certifies that:

All items furnished in this shipment are in full compliance with all purchase order and specifications requirements.

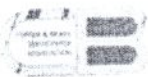
When the above cited purchase order requires material test reports, the undersigned certifies that:

The test reports supplied represent the actual attributes of the items furnished and the test results are in full compliance with all applicable specifications and purchase order requirements.

The material shipped against the above cited purchase order is free from mercury contamination and weld repair.

ALASKAN COPPER & BRASS COMPANY

**Scott A Erickson,
Quality Control Representative**



**COPPER & BRASS
SERVICENTER
ASSOCIATION, INC**



CUSTOMER NAME: *P.A. WELDER WELDING*
 28600-1
 143632



Certificate of Mechanical Properties

Customer: COAST ALUMINUM-PORTLAND

Report Number: 6332

Test Date: 6/14/2010

Description: 2-1/2" SCH. 80 PIPE

Cust Purchase Order #: D1669 - 2

Profile: 005914

CastNum: 747

Production Order #: 606635

Customer Part Number: 21280P61

Sales Order: SO-135955

PT/LT Number: 505660 <i>A.E.</i>	Test Number: 45701			
Alloy/Temper: 6061-T6				
Tensile	Actual 41.7 kpsi	Min 38.00	Max N/A	kpsi
Yield	38.0 kpsi	35.00	N/A	kpsi
*T6511 & T6510 meets requirements for T6 Elongation	10.5 %	10.00	N/A	%
Sapa Profiles, Inc. certifies Aluminum Extrusions are produced and tested in accordance with ASTM-B221-08 and ASTM-B557-06 and meet or exceed minimum requirements				
In addition to ASTM-B221 the extruded products meet the applicable requirements of ASTM-B308, ASTM-B429, AMS-QQ-A-200/3, AMS-QQ-A-200/8, AMS-QQ-A-200/9, AMS-QQ-A-200/11 or AMS-QQ-A-200/15 as determined by product type or alloy/temper. Manufactured in the U.S.A.				
Test Results Reviewed by Employee # 6093				

All alloys and cast numbers have been inspected and found to be within Aluminum Association Chemical Composition Limits
 (Composition in percent by weight maximum unless shown as a range)

Alloy	Silicon	Iron	Copper	Manganese	Magnesium	Chromium	Zinc	Titanium	Other Elements	
									Each	Total
6005	.6 - .9	.35	.1	.1	.4 - .6	.1	.1	.1	.05	.15
6061	.4 - .8	.7	.15 - .4	.15	.8 - 1.2	.04 - .35	.25	.15	.05	.15
6063	.2 - .6	.35	.1	.1	.45 - .9	.1	.1	.1	.05	.15
6082	.7 - 1.3	.5	.1	.4 - 1.0	.6 - 1.2	.25	.2	.1	.05	.15
6351	.7 - 1.3	.5	.1	.4 - .8	.4 - .8	....	.2	.2	.05	.15
7075	.40	.5	1.2 - 2.0	.30	2.1 - 2.9	.18 - .28	5.1 - 6.1	.20	.05	.15
2024	.5	.5	3.8 - 4.9	.30 - .90	1.2 - 1.8	.10	.25	.15	.05	.15

Sapa Profiles, Inc.
 Address: 7933 NE 21st Avenue, P.O. Box 11263, Portland, OR 97211 USA
 Telephone: 503-802-3000 Toll Free: 800-547-0790 Fax: 503-802-3052
 Email: sapa-inc@sapagroup.com Website: www.sapagroup.com/us/profiles

DOCUMENT NO.: TLF-0103-A-1