

**From:** [Ablson, Maha](#)  
**To:** [Daly, Keith](#);  
**cc:** [Peppers, Nicki](#); [Molohon, Rob](#);  
**Subject:** 008078 RAM#8, 9, 10, 11 & 12  
**Date:** Tuesday, March 08, 2011 12:36:55 PM  
**Attachments:** [8078 RAM8 Compressor.pdf](#)  
[Cont 8078 RAM 9 2-17-11.pdf](#)

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Keith,

I tried to send you 4 attachments but it looks like they were a bit too big of a file to e-mail. I will be sending them in 3 different e-mails. If you have any problem with reading the files, please let me know.

*Maha Ablson*

*RAM Engineer  
WSDOT, Materials Lab  
Office: 360.709.5403  
Fax: 360.709.5588  
mahaab@wsdot.wa.gov*

---

**From:** Ablson, Maha  
**Sent:** Tuesday, March 08, 2011 12:26 PM  
**To:** Daly, Keith  
**Cc:** 'Peppers, Nicki'; Molohon, Rob  
**Subject:** 008078 RAM#8, 9, 10, 11 & 12

Good afternoon Keith,

A copy of the processed electronic RAMs are attached. The coded RAMs were sent back on the 18<sup>th</sup> of February. RAM # 11 is a PEO approved RAM. if you have any questions concerning this issue, please feel free to either call or e-mail me.

Thank you,

*Maha Ablson*

*RAM Engineer  
WSDOT, Materials Lab  
Office: 360.709.5403  
Fax: 360.709.5588  
mahaab@wsdot.wa.gov*

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

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

RAM-0009



Washington State  
Department of Transportation

Request for Approval of Material

Contract 8078	FA Number _____	SR Interstate 5	Date 2/8/11
Section I-5 Columbia River Bridge (WA 0.3 to OR MP 308.0)		County WA and OR states	
Contractor American Construction Company, Inc.		Subcontractor _____	

This form shall be completed prior to submittal. If this form is not complete at time of submittal it may be returned for information that was omitted.  
For assistance in completing, see Instructions and Example

**For WSDOT Use Only**  
RAM # 9

Bid Item No.	Material or Product/Type	Name and Location of Fabricator, Manufacturer or Pit Number	Specification Reference	PE/QPL Code	Hdqtr./QPL Code
2.01	59" OD Bubble Rings	Rainier Welding, Inc. 19020 NE 84th Street Redmond, WA 98053	Special Provisions Page 98	7	5
	Only for Confined Bubble System				
2.13	506 80 6061-T6 Aluminum Pipe				
2.15	Seating Ring				
2.16	Steel Plate				
2.02	63" OD HDPE				

Project Engineer <i>Ricki Peppers for Frank Green</i>	Date 2/9/11	State Materials Engineer <b>Steve Hughes</b>	Date 2-17-11
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Acceptance Action Codes for use by Project Engineer and State Materials Laboratory

- Acceptance Criteria: Acceptance based upon 'Satisfactory' Test Report for samples of materials to be incorporated into project.
- Acceptance Criteria: Mfg. Cert. of Compliance for 'Acceptance' prior to use of material.
- Acceptance Criteria: Catalog Cuts for 'Acceptance' prior to use of material. Catalog Cut Approved  Yes  No
- Acceptance Criteria: Submit Shop Drawings for 'Approval' prior to fabrication of material.
- Acceptance Criteria: Only 'Approved for Shipment', 'WSDOT Inspected' or 'Fabrication Approved Decal' material shall be used.
- Acceptance Criteria: Submit Certificate of Materials Origin to Project Engineer Office.
- Acceptance Criteria: Request Transmitted to State Materials Laboratory for Approval Action.
- Source Approved:
- Approval Withheld: Submit samples for preliminary evaluation.
- Approval Withheld:
- Miscellaneous Acceptance Criteria.

Remarks: **Notify Fabrication Inspection office**

\* Shop drawing attached APPROVED

cc: American Construction, peppers

Project Engineer Distribution

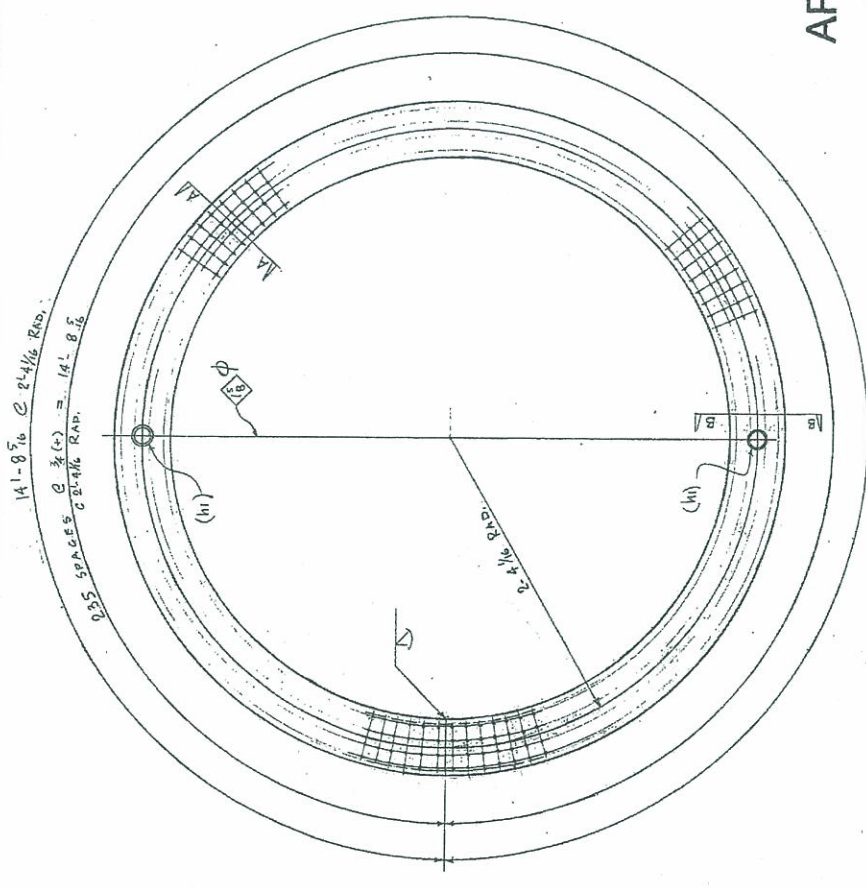
- Contractor  
 Region Operations Engineer  
 Fabrication Inspection  
 Region Materials  
 State Materials Lab  
M/S 47365

State Materials Engineer Distribution

- General File  
 Other  
 Signing Inspection

SDR - 0001

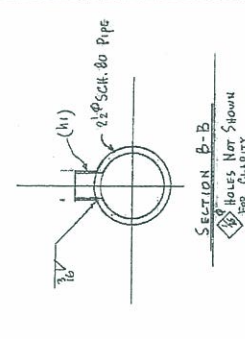
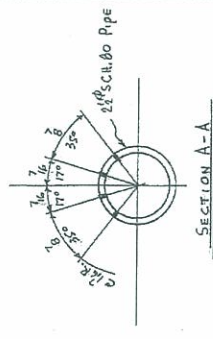
8078



141-8 7/8  $\phi$  2'-4 1/8 RAD.  
 0.35 SPACES  $\phi$  2'-4 1/8 RAD. = 141-8 5/8

**BILL OF MATERIAL**

ITEM NO.	QTY	UNIT	DESCRIPTION	REMARKS	DATE	BY
1	1	EA	2'-4 1/8 SCIL. 80 PIPE			
2	10A	EA	2'-4 1/8 SCIL. 80 PIPE			



MATERIAL: AL 6061-T6  
 MILL CERTS. REQ.

**APPROVED AS NOTED**  
 WASHINGTON STATE  
 DEPARTMENT OF TRANSPORTATION  
 BRIDGE AND STRUCTURES OFFICE  
 BY: CONSTRUCTION SUPPORT ENGINEER

DATE: JAN 31 2011

GEOMETRY NOT REVIEWED

APPROVED STS  
 1-31-2011

STATE	W.A.	FED. DISTRICT	U.S.
COUNTY	B.	CITY	
PROJECT NO.	N.O. PA. 157		
CONTRACTOR	RAINIER WELDING		
DESIGNER	STEEL AND ALUMINUM FABRICATING		
DATE	1-5-11		
BY	AMERICAN CONST.		

MAKE  $\phi$  2'-4 1/8 SCIL. 80 PIPE x 141-8 7/8 ~ M.L. 10A  
 REF: NDB



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	WA 98053
REDMOND	

**Work Order: G2087**  
All W/O Certifications

Page: 1

Additional Information	
Customer Order: 2860-1	Ordered By: BOB
Order Date: 1/19/2011	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**  
**PLATE MILL**

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

**Mill Test Report**

Page 4



Our Order No.: 835614  
 Cust. Order No.: E32813  
 Sold To: SEAPORT STEEL COMPANY  
 P.O. BOX 3625  
 SEATTLE, WA 98124  
 Ship To: SEAPORT STEEL COMPANY  
 3650 EAST MARGINAL WAY SOUTH  
 SEATTLE, WA 98134

Load No.: 271701

Our Order No.: 835614  
 Cust. Order No.: E32813

Vehicle No.: ATW 116952

Specification: 3.0000" x 96.0000" x 360.0000"

ASTM A36-08/A STM A709 Grade 36-59a/AASHTO M270 Grade 36/ASME SA36-03a 2009 Addenda AASHTO M270 36

*E32813*

Marking:

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	0.0001	0.009	0.36	0.25

Plate Serial No	Tensile Test			Elongation		
	Pieces	Tons	Dir.	% In 2"	% In 4"	% In 8"
0504750-07	1	14.70	T	40,000	70,700	31.6
			T	38,600	69,600	32.2

Charpy Impacts					
Dir.	1	2	3	Ave.	Min
	(F) shear	(F) shear	(F) shear	(F) shear	(F) shear

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.

Yield by 0.0020" method unless otherwise specified. Ceq = C+(Mn/6)+(Cr+Mo+V/5)+(Cu+Ni/15)

Pcm = C+(Si/20)+(Mn/20)+(Cr/20)+(Ni/20)+(V/10)+B

Metal and manufactured in the USA. ISO 9001:2000 certified (#006461) by SRI Quality System Registrar (#0965-08), PED 9723VEC 712 Annex 1, Part. 4.3 Compliant.

DN 50049 3.1.BEN 10204 3.1(2005) compliant. For AB.S grades only. Quality Assurance certificate 06-MM POA-363

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.

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

08/16/2010 3:24:29 PM

**CERTIFIED INSPECTION REPORT**

A10:58 050760

**Alcoa Inc.**

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

*[Signature]*  
 Director of Manufacturing Inspection Works

*[Signature]*  
 Kenon P. Young  
 Quality Assurance Manager

PITTSBURGH, PA DAVENPORT WORKS

Ship From:

LI95221  
 Ship Date 10-12-28  
 B.L. No. 5519258  
 Invoice No. 00000  
 Alcoa No. Item 1000253275-1  
 P.O. No./Govt Contract No. 10077445  
 Customer ALASKAN COPPER & B  
 Alcoa Item G0411C7416R06  
 Page 1  
 DE-53275-1

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

*RAVINE 12/15/09 \**  
*DATE 28-02-2011*  
*DATE 16-2-581*  
*DATE 608 (800)*

Item Description  
 0.25 IN TX (+.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 5061-  
 T651 TYPE 200 WROUGHT TOOLING PLATE MILL  
 FINISH: AMS4027 REV N ANS1H15 2 REV 2009 EXC\_MRK ASME-SS-  
 209 REV 10 EXC\_MRK ASTM209 REV 07  
 ((MARKED)) KRAFT PAPER INTERLEAVED  
 MKG GROSS SKID WGT: 4500 LB QUAN TOL +/-  
 40 % CQR D164055 REV 06 CUST REQ 10-12-  
 27 \*\*\* W/K 11-01-01 \*\*\*

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	1416	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-00-A-250\_11 ORIGINAL REVISIO N DATED 1997-08-01.

CQR: D164055.6 -Specification Limits

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

Chemical Composition

Alloy 6061	SI	FE	CU	MN	MG	CR	ZN	TI	Other
Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05
Min	0.40		0.15		0.8	0.04			REMAIN

Notes for Lot: 207038

TENSILE TEST VALUES IN MPA = 330, 330 YIELD TEST VALUES IN MPA = 294, 293.

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.

*[Signature]*

Director of Manufacturing Development Works

*Karen P. Young*

Quality Assurance Manager

1195221 Ship Date 0 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 Lot#: 1 ALASKAN COPPER & B G041107416R06

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

Temp Dir	Test	UTS	YS	ELAD
T651	Long Transv.	KSI	KSI	PCT
		47.8	42.6	15.6
		47.8	42.5	15.4

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

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	Test	UTS	YS	ELAD
T651	Long Transv.	KSI	KSI	PCT
		47.2	42.3	14.9
		47.3	42.4	15.2

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

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	Test	UTS	YS	ELAD
T651	Long Transv.	KSI	KSI	PCT
		48	43.1	14.9
		48.2	42.9	15.3

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

Notes for Lot: 423758

TENSILE TEST VALUES IN MPa = 330, 328 YIELD TEST VALUES IN MPa = 293, 294

017 283

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.

*[Signature]*

*Karen P. Young*

Karen P. Young  
Quality Assurance Manager

1195221 Ship Date  
2010-12-28  
P.O. No./Govt Contract No. 10077445 Lot#: 1  
0 R.L. No. 5519258  
Invoice No. 00000  
Alcoa No. Item 1000253279-1  
Customer Alcoa Item  
Ship From: DAVENPORT WORKS  
Page 3  
DS-53279-1

Medwin Murphy  
Director of Manufacturing Davenport Works

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

Temp	Dir	Long	Transv.	2	UTS	KSI	47.8	47.5	IVS	KSI	42.5	42.6	PL4D	PCT	15	14.9

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

OK 2 2013





**Abnahmeprüfzeugnis 3.1 (EN 10204)**  
**Inspection certificate – mill certificate**

Zertifizierung 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

*PAV/IKL WEIDING  
 PO# 2860-2  
 SALE # 762582  
 DATE: 2-3-11  
 © BOB  
 WEISSNER*

A02:32 05605

<b>Auftraggeber / customer:</b> Empire Resources Inc. 1 Parker Plaza FORT LEE NJ 07024 USA  <b>Wareneempfänger / consignee:</b> Empire Resources, INC 6901 Quad Avenue BALTIMORE MD 21237-2403 USA  Endkunde, Bestell-Nr. / Your cust., ord. no.:	<b>Bestell Nr. / order no.:</b> R139210/ER-4348-P <b>Datum / date:</b> 2010 04 27
	<b>Auftragsbest. Nr. / order confirm. no.:</b> 612989 <b>Datum / date:</b> 2010 04 28
	<b>Lieferschein Nr. / delivery note:</b> 85336910 <b>Datum / date:</b> 2010 07 20
	<b>Akkreditiv Nr. / letter of credit no.:</b>

<b>Produkt/product</b>  Form / form: Plate, stretched Werkstoff / material: 6061 Zustand / temper: T651 Dim. / dim: [Inch]: 0,500x48,50x144,50 Kundenartikel-Nr / customer article no.:	<b>Bedingungen/terms</b>  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:
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AB-Pos. ord.-item.	BNr/Los/Tellos Lot/No./Part	Guss Nr. cast no.	Werkstoff material	Kollo packng.	Gewicht netto weight net	Stk pcs.
06	44738/04/00	80/0066747/0	6061.1	6129890046	4283,51 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

Chemische Zusammensetzung / chemical composition: [%] Gewichtanteile / weight proportion											
Guss Nr. / cast no.	AMAG designation	Si	Pb	Cu	Mn	Mg	Cr	Ni	Zn	Ti	
80/0066747/0	6061.1										
	actual	0,70	0,43	0,21	0,15	0,92	0,17	0,01	0,06	0,05	
80/0067078/0	6061.1										
	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

*M. 2011*

Zertifizierung nach / certified to ISO 9001, ISO/TS 16949, ENAS 9100, ISO 14001, NADCAP

Zugversuch / Tensile test						
BNr/Los Lot/No.	Zustand temper	Richtung direction		Rm [kN]	Rp0.2 [kN]	A2 [%]
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 Josef Klampler	E-Mail / e-mail j.klampler@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/Temper: 6061-T6511				
Tensile	<u>Actual</u> 43.0 kpsi	<u>Min</u> 38.00	<u>Max</u> 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	%
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

Handwritten notes:  
762483-1  
2868-2  
BDB  
KAT...  
...

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.**

**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.**

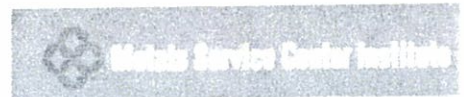
**The material shipped against the above cited purchase order is free from mercury contamination and weld repair.**

**ALASKAN COPPER & BRASS COMPANY**

**Scott A Erickson,  
Quality Control Representative**



COPPER & BRASS  
SERVICE CENTER  
ASSOCIATION, INC.





## Certificate of Mechanical Properties

Customer: ALASKAN COPPER & BRASS-RENT      Report Number: 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

MIL: 48 056633

PT/LT Number: 564214	Test Number: 68163		
Alloy/Temper: 6061-T6511			
Tensile	Actual 43.5 kpsi	Min 38.00	Max N/A kpsi
Yield	40.6 kpsi	35.00	N/A kpsi
*T6511 & T6510 meets requirements for T6	Elongation	16.6 %	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
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

761435-1  
 2060-2  
 808  
 ALUMINUM UNIDOC

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  
SERVICE CENTER  
ASSOCIATION, INC.**



*PAINTER 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
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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



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: G2733**  
All W/O Certifications

Page: 1

Additional Information	
Customer Order: 2860-5 Order Date: 2/1/2011	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 3/8 X 96      30' 0"

Heat # 0508157



**NUCOR**  
**PLATE MILL**

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

**Mill Test Report**

Page 1

E33446



Issuing Date : 11/25/2010 B/L No. : 278549 Our Order No. : 86588/M CusL Order No. : E33446  
 Vehicle No. : NOKL 725008 Sold To : SEAPORT STEEL COMPANY P.O. BOX 3625 SHIP TO : SEAPORT STEEL COMPANY 3660 EAST MARGINAL WAY SOUTH SEATTLE, WA 98134  
 Specification : 0.3750" x 96.000" x 360.000" ASTM A36-08/ASTM A709 Grade 36-08w/AASHTO M270Grade 36/ASME SEATTLE,WA 98124 SA 36-03a 2009 Addenda AASHTO M270 36

Marking :

Heat No	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	A1(%)	V	Nb	Ti	N	Ca	B	Sn	CEQ	PCM
0508157	0.06	0.83	0.013	0.001	0.30	0.14	0.05	0.05	0.01	0.028	0.004	0.002	0.003		0.0021	0.0002	0.011	0.23	0.12

Plate Serial No	Tensile Test			Charpy Impacts			Min Ave.
	Pieces	Tons	Dir.	Dir.	1 shear	2 shear	
0508157-02	7	12.86	T	Yield	Elongation		
				60,200	31.0		
				43,300	30.0		
0508157-03	7	12.86	T	Yield	Elongation		
				60,200	31.0		
				43,300	30.0		

Manufactured to fully killed fine grain practice by Electric Arc Furnace. Welding or weld repair was not performed on this material. 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.

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.

Yield by 0.0005 in. method unless otherwise specified. Ceq = C+(Mn/16)+(Cr+(Mo+V)/5)+(Cu+Ni)/15

Pcm = C+(Si/30)+(Mn/20)+(Cu/20)+(Ni/40)+(Cr/20)+(Mo/15)+(V/10)+B

Melted and manufactured in the USA. ISO 9001:2008 certified (#008063) by SRI Quality System Registrar (#0695-08). PED 97/23/EC 7/2 Annex 1, Part. 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 09-MMPQA-546

T. A. Deparis, Metallurgist

11/29/2010 11:31:28 AM