Air Balancing Engineers, Inc.
Complete Testing, Balancing And Commissioning Services

Leak Test Survey

Pleasant Mount Welding, Inc.

Standard-Duty Aluminum Interlocking Cover

Leak Test Survey

Carbondale, Pennsylvania

ABE Report No. J23-162

Revision (00)

09-Feb-24

Leak Test Survey

DATE:	09-Feb-24
PROJECT:	Pleasant Mount Welding, Inc. Standard-Duty Aluminum Interlocking Cover
ADDRESS:	Carbondale, Pennsylvania
ARCHITECT:	-
ENGINEER:	-
CONTRACTOR:	PMWI
NEBB TAB CONTRACTOR:	Air Balancing Engineers, Inc.
ADDRESS:	1175 N. Vine Street Berwick, PA 18603

PROJECT: Pleasant Mount Welding, Inc. - Standard-Duty Aluminum Interlocking Cover

ADDRESS: Carbondale, Pennsylvania

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB *Procedural Standard for Testing, Adjusting, and Balancing of Environmental Systems.*

The measurements shown, and the information given, in this report are certified to be accurate and complete, at the time and date information was gathered. For any abbreviations used in this report please refer to the current edition of NEBB *Fundamental Formulas.*

NEBB TAB CONTRACTOR: Air Balancing Engineers, Inc.

REG. NO. 2412

CERTIFIED BY: BART RADO **DATE:** 09-Feb-24

SUBMITTED & CERTIFIED BY

NEBB CONTRACTOR: Air Balancing Engineers, Inc.
TAB SUPERVISOR Bart Rado
REG. NO. 2412
EXPIRATION DATE: 31-Dec-24

NEBB CERTIFICATION SEAL

TABLE OF CONTENTS

PROJECT: **Pleasant Mount Welding, Inc. - Standard-Duty Aluminum Interlocking Cover**

Filename: 23162 / TOC

GENERAL NOTES AND OBSERVATIONS

PROJECT: Pleasant Mount Welding, Inc. - Standard-Duty Aluminum Interlocking Cover

EXECUTIVE SUMMARY:

On February 9th, 2024, Air Balancing Engineers, Inc. (ABE) performed a "Extruded Aluminum Cover Leak Test" evaluation at the Pleasant Mount Welding, Inc. manufacturing facility in Carbondale, Pennsylvania.

Scope of work included measuring the air leakage rate of a formed flat cover at a specific negative pressure within the tank. Actual leakage rate was compared to the maximum allowable leakage rate. Final Test results yielded an acceptable leakage rate for the Extruded Aluminum Cover Tested during this on-site survey.

Filename: 23162 / GNO

February 9, 2024 ABE Project # 23-162

Extruded Aluminum Cover Leak Test

1. SCOPE:

The objective of this test is to measure the air leakage rate of the Formed Flat Cover at a specific negative (-) pressure within the tank. The test was performed on a “mock–up” tank with the extruded flat cover completely installed. The “mock–up” tank was constructed of plywood with 2’x4’ framing (reference photo #1). To make the tank as airtight as possible, the interior of the structure was sealed with an epoxy sealant and the exterior was sealed with plastic and all joints caulked. With the tank made essentially “*airtight*” the resultant leakage would be that of the extruded aluminum cover. The actual leakage rate of the extruded flat cover was calculated in cubic feet per minute (CFM). ***The actual leakage rate was compared to the maximum allowance leakage rate.***

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2. DESCRIPTION OF SAMPLE COVER PANELS TESTED

There was a total of six (6) cover panels (top mounted) to the PMWI wooden test tank that were evaluated during the leak testing of the PMWI Standard-Duty Aluminum Interlocking Flat Panel Cover system. The wooden tank had inside dimensions of 9'-0" x 9'-0" and the cover panels' overall cover area was determined to be 89.85 square feet (sq ft.) in the top mounted configuration.

The PMWI cover panels leak tested were fabricated from 6061-T6 aluminum extruded components that comprise the PMWI Standard-Duty Aluminum Interlocking Flat Panel Cover system. There are over 20 extruded aluminum components that are included in the Standard-Duty Interlocking Cover system. There are many male and female components that allow the cover system to be configured in a multitude of ways to achieve project specific requirements for loading as well as geometry of the cover system required.

There are standard components of the cover system which typically comprise over 90% of cover systems and those are the parts that were used to fabricate the cover panels used for leak testing. Please reference attached drawing [RD Leak Test 2 Cover Layout Drawing] showing the fabrication of the cover panels.

All Standard-Duty Aluminum Interlocking Cover panels tested used the 6" wide Cover Plank (CS-1) which is the main component comprising each cover panel. This is typically the case for all cover panels. The CS-1 plank extrusion is the main decking component that the cover system is built upon. The CS-1 plank has double interlocking construction with 2 male protrusions on one side and 2 female receptors on the opposite side of each plank. This allows planks and other extruded components to be assembled together to form a rigid cover panel.

The components for the cover panels tested are listed in the Bill of Materials as shown on the attached drawings.

All of the cover panels (assembly callouts "4C1", "4C2" and "4C3") required the use of CS Interlock Edges (CSi-41). The CSi-41 Interlock Edges envelope all the decking components on each side of the panel and are held together by Sikaflex adhesive and aluminum rivets to form rigid cover panels. The Interlock Edges allow the cover panels to be supported by the Interlock Beam (CSi-40w) located at the center of the tank and the Interlock Angles (CSi-44) located at the perimeter of the tank.

Other standard components used to fabricate cover panels include the Interlock Female Handle (CSi-42) at panel-to-panel interfaces, CS Handle Male (CS-18) used at perimeter panels to allow use of Santoprene gaskets at the top mount locations for air seal protection. Also, at panel-to-panel interfaces the 3" Interlock Underlap extrusions are required (CSi-45 Male at one location and the CSi-46 Female at one location). The overlap of the Interlock Handles and the 3" Interlock Underlap components allow cover panels to hold down adjacent cover panels.

The other standard component used on all cover panels is the Interlock Slide Latch assemblies (SL-1 and SL-2) that are contained within the Handles of the system to allow panels to be latched to the support members preventing panel uplift. Also, the Interlock Beams (CSi-40w) and Interlock Angles (CSi-44) provide t-slots for Santoprene gaskets for sealing panels along the edges of cover panels in the direction of the Interlock Edges.

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As stated above, the 6061-T6 extruded components used to fabricate the leak test cover panels are a representative configuration for the most commonly assembled cover panels expected to be used in the vast majority of cover applications. Though there are many additional components comprising the Standard-Duty Aluminum Interlocking Cover system, the use of those parts do not adversely impact the capability of the cover system in regards to air leakage of the system. The same air intrusion leak rates would be expected no matter the configuration of an individual cover panel.

3. REQUIRED EQUIPMENT:

The following equipment was required to perform the leak test:

- Blower with a capacity of 500 CFM at 1/2- inch w. c. SP.
- Calibrated orifice plates.
- Manometer with graduations of a minimum of 0.01 inches in w. c.
- The equipment used was a Retrotec 400 Series Test Fan Serial Number 4XLF10326 with calibrated orifices and DM-32 Electronic Micromanometer. A series 18 orifice plate was used for testing. Please reference appendix 1 for Certificate of Calibration.

4. LEAK TEST PARAMETERS:

- Depressurize the structure to (-) 0.20 inches w. c. using the aforementioned test fan assembly.
- Maximum allowable leakage shall be 0.20 CFM per square foot of cover area or less.
- Allowable Leakage: 0.20 CFM / Sq. Ft. at 0.20 inches negative pressure. 89.85 sq. ft. x 0.20 CFM / Sq. Ft. = 17.97 Maximum Allowable Leakage

5. LEAK TEST RESULTS:

- Cover size: 9 ft. 5 inches X 9 ft. 9 ½ inches
- Total Overall Area of Cover: 89.85 sq. ft.
- Actual Test Pressure: (-) .2015 in. wc
- Actual Leakage: 14.00 CFM
- Actual CFM leakage per square foot of cover panel: 0.1558 CFM / Sq. Ft. (14.00 CFM / 89.85 Sq. Ft.= 0.1558 CFM / Sq. Ft.)
- Reference photo #2 for image of leak test results.

6. CONCLUSION:

Test results indicate a LEAKAGE RATE of ***0.1558 CFM / Sq. Ft.*** which is less than the MAXIMUM allowable leakage rate of ***0.20 CFM / Sq. Ft.*** indicating the aluminum cover panels tested are acceptable and below the maximum allowable leakage rate.

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APPENDIX 1

Instrument Calibration

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INSTRUMENT CALIBRATION REPORT

PROJECT: Pleasant Mount Welding, Inc. - Standard-Duty Aluminum Interlocking Cover

MANUFACTURER / INSTRUMENT	MODEL NO.	SERIAL NO.	CALIBRATION TEST DATE	CALIBRATION DUE DATE
Retrotec Test Fan	400 Series	4XLF10326	2020-11-04	2025-11-04

Certificate of Calibration

Tested in accordance to SMACNA, FD E51-767: **Pass**

Issued by: **Retrotec**

Certificate Number: **202011031304-4XLF10326**

Calibration Date: **2020-11-04**

Results: **As Left**

Calibration laboratory

Retrotec
1060 East Pole Road
Everson, WA, US 98274
+1 (360) 738-9835
calibration@retrotec.com
http://www.retrotec.com

ACCREDITED ISO/IEC 17025 CALIBRATION LABORATORY AC-1943

This calibration laboratory has been assessed by the ANSI-ASQ National Accreditation Board and meets the requirements of international standard ISO/IEC 17025. All pressure and flow devices used in this calibration are traceable to the International System of Units (SI), consensus standards, or ratio type measurements through national standards realized and maintained by NIST or an NMI.

Device being calibrated:

Description:	**Test Fan**
Manufacturer:	**Retrotec**
Model Number:	**400 Series**
Shell Serial Number:	**4XLF10326**
Main Voltage:	**120 V**
Main Frequency:	**60 Hz**

Calibrated by: Shelby Zettle

Signature

Issued Date: **2020-11-04**

Reference Flow:

LFE 2009 Chamber, in accordance with ANSI/AMCA 210-07:
Device Under Test Gauge: **DM-32** Gauge Serial number **401969**
Reference Gauge: **DM-32** Gauge Serial number **405346**

LFE 2009 Chamber, in accordance with ANSI/AMCA 210-07:
Device Under Test Gauge: **DM-32** Gauge Serial number **401969**
Reference Gauge: **DM-32** Gauge Serial number **405308**

LFE 2018 (US) Chamber, in accordance with ANSI/AMCA 210-07:
Device Under Test Gauge: **DM-32** Gauge Serial number **410149**
Reference Gauge: **DM-32** Gauge Serial number **412012**

LFE 2018 (US) Chamber, in accordance with ANSI/AMCA 210-07:
Device Under Test Gauge: **DM-32** Gauge Serial number **410149**
Reference Gauge: **DM-32** Gauge Serial number **407737**

Calibration Information:

The Device was calibrated against laboratory standards whose values are traceable to recognized national standards. The uncertainty represents an expanded uncertainty using a coverage factor of k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits without taking uncertainty into account. The uncertainty evaluation has been carried out in accordance with ISO/IEC 17025 requirements.

Calibration Procedure: **Procedure ID No.CP-CHB-01**

This calibration applies only to the unit listed on this certificate.

Name	Calibration Expiration Date	Name	Calibration Expiration Date
ISO 9972	2025-11-04	I.S. EN ISO 9972:2015	2022-11-04
CGSB 2002	2025-11-04	ATTMA-TS1	2021-11-04
ASTM-E779	2025-11-04	RESNET	2025-11-04

Certificate of Calibration

Tested in accordance to SMACNA, FD E51-767: **Pass**

Issued by: **Retrotec**

Certificate Number: **202011031304-4XLF10326**

Calibration Date: **2020-11-04**

Results: **As Left**

Calibration Results:

Flow rates are corrected to STP conditions of 20°C, 101.325 kPa, 50% RH and Air Density: 1.19886

Range	Humidity % (RH)	Temp (C)	Barometric Pressure (kPa)	Chamber Pressure (Pa)	Fan Pressure (Pa)	Reference Flow (m^3/h)	Fan Flow (m^3/h)	Error (%)
74	45.6	22.4	101.400	251.6	257.8	202.44	200.18	1.1%
74	45.9	22.3	101.400	252.7	1008.3	398.23	393.35	1.2%
74	44.4	23.1	101.400	251.0	1564.1	503.47	487.58	3.2%
47	46.1	22.4	101.400	260.8	318.8	89.32	92.75	3.8%
47	46.6	22.2	101.400	249.5	2924.6	283.05	280.70	0.8%
47	45.0	22.8	101.400	251.4	4980.6	368.07	364.32	1.0%
29	48.5	21.6	101.400	253.6	412.8	38.89	39.10	0.6%
29	45.0	22.8	101.400	247.9	2418.8	91.70	91.32	0.4%
29	44.7	22.8	101.400	261.1	4986.3	129.80	129.16	0.5%
18	47.4	21.7	101.400	250.7	667.6	19.13	18.78	1.8%
18	47.7	21.7	101.400	252.1	2651.0	38.23	37.68	1.4%
18	47.3	22.0	101.400	249.8	5016.0	52.74	52.16	1.1%
11	40.9	22.4	101.100	249.4	1357.4	10.82	10.78	0.3%
11	41.3	22.3	101.100	252.5	3085.5	16.82	16.67	0.9%
11	39.4	23.2	101.100	249.1	5052.7	21.65	21.66	0.0%
7	39.1	21.9	101.100	248.3	594.0	2.31	2.32	0.4%
7	40.4	21.3	101.100	245.4	2728.2	5.34	5.30	0.7%
7	38.4	22.3	101.100	251.7	5289.5	7.56	7.60	0.6%
3	49.6	17.4	101.200	249.3	961.3	0.55	0.53	3.3%
3	49.5	18.5	101.200	252.3	2983.8	1.23	1.22	0.8%
3	50.0	18.5	101.200	257.4	5202.9	1.75	1.84	5.3%
74 (Flex)	46.6	21.9	101.400	252.6	273.6	203.25	199.42	1.9%
74 (Flex)	46.7	21.9	101.400	252.2	1038.5	392.83	388.86	1.0%
74 (Flex)	45.0	22.7	101.400	254.2	1586.9	487.83	477.23	2.2%

Calibration and measurement capability (Expanded Uncertainty): Laminar Flow Elements (0.01 to 3300CFM) = 1.4% of reading + 0.11 CFM. Flow Nozzles (10 to 8200CFM) = 1.5% of reading + 78 CFM. The uncertainty statement is based on a 95% confidence interval, using a coverage of k=2.

Certificate of Calibration

Issued by: **Retrotec**
Calibration Date: **2020-11-04**

Tested in accordance to SMACNA, FD E51-767: **Pass**
Certificate Number: **202011031304-4XLF10326**
Results: **As Left**

Published Flow Equation Parameters (Units in m^3/h):

Range Configuration	n	k	MF (Pa)
74	0.497	12.77	250
47	0.497	5.33	250
29	0.479	2.20	250
18	0.506	0.71	250
11	0.531	0.24	250
7	0.544	0.07	250
3	0.738	0.0033	250
74 (Flex)	0.500	12.17	250

Flow = P^n x k
Where P = Fan Pressure in Pascals

Range Configuration	K1	K2	K3
74	0	0.15	0
47	0	0.12	0
29	0	0.15	0
18	0	0.15	0
11	0	0.14	0
7	0	0.08	0
3	0	0.1	0
74 (Flex)	0	0.15	0

Date Format:
This report adheres to ISO 8601: Data elements and interchange formats - Representation of dates and times.
All dates on this report are in the format: YYYY-MM-DD.

End of report

APPENDIX 2

ABE Abbreviations

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Cert. No. 2412

List of Abbreviations

ACH	Air Changes/Hour
AC / ACU	Air Conditioning Unit
AF	Air Foil
AH / AHU	Air Handling Unit
AMPS	Ampere
BAS	Building Automated System
BHP	Brake Horsepower
BI	Backwards Inclined
BTU	British Thermal Unit
BSC	Bio-Safety Cabinet
BTUH	BTU per Hour
CC	Coiling Coil
CD	Ceiling Diffuser
CF	Cubic Feet
CFM	Cubic Feet per Minute
CHW	Chilled Water
CHWR	Chilled Water Return
CHWS	Chilled Water Supply
CT	Cooling Tower
CUH	Cabinet Unit Heater
CWR	Condenser Water Return
CWS	Condenser Water Supply
DB	Dry Bulb (Temperature)
DD	Direct Drive
DDC	Direct Digital Control
DEG	Degree
DIA	Diameter
Dist.	Distance
DP	Differential Pressure
DWDI	Double Width Double Inlet
EA	Exhaust Air
EAT	Entering Air Temperature
EF	Exhaust Fan
EG	Exhaust Grille
ER	Exhaust Register
ERU/ERV	Energy Recovery Unit
ESP	External Static Pressure
EWT	Entering Water Temperature
F	Fahrenheit
FC	Forward Curve
FCU	Fan Coil Unit
FLA	Full Load Amps
FPM	Feet per Minute
FPS	Feet per Second
FT	Feet
FTR	Fin Tube Radiation
GPM	Gallons per Minute
HC	Heating Coil
HD	Head
Horz.	Horizontal
HP	Horsepower
HRU	Heat Recovery Unit
HZ	Hertz (Cycles per Second)
ID	Inside Diameter
IN	Inches
KW	Kilowatt
LAT	Leaving Air Temperature
LFM	Laminar Flow Module
LD	Linear Diffuser
LWT	Leaving Water Temperature
MAX	Maximum
MIN	Minimum
MU	Make-Up Water
MUA	Make-Up Air
NA / N/A	Not Applicable
NAV	Not Available
NR	No Requirement
OA / OSA	Outside Air
OBD	Opposed Blade Damper
OD	Outside Diameter
OP	Operating
PD	Pressure Drop
PH	Phase
PRV	Pressure Reducing Valve
PSI	Pounds per Square Inch
RA	Return Air
RG	Return Grille
RH	Relative Humidity
RLA	Running Load Amps
RPM	Revolutions per Minutes
RR	Return Register
RTU	Roof-Top Unit
SA	Supply Air
SCFM	Standard CFM
SD	Supply Diffuser
SF	Supply Fan
SG	Supply Grille
SP	Static Pressure
SR	Supply Register
SUP	Supply
SWR	Side Wall Register
SWSI	Single Width Single Insert
TBD	To be determined
TEMP	Temperature
TON	12,000 BTUH (Cooling Capacity)
TSP	Total Static Pressure
TSTAT	Thermostat
T-X	Traverse Test Location I.D. number
V	Volts
V-X	VelGRID Test Location I.D. number
VAV	Variable Air Volume
VD	Volume Damper
VEL	Velocity
VER.	Vertical
VFD	Variable Frequency Drive
WB	Wet Bulb Temperature
WC	Water Column
W.M.S.	Wire Mesh Screen
WSHP	Water Source Heat Pump
WTD	Water Temperature Difference

Note: NOT all abbreviations may appear in this report.

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APPENDIX 3

R&D LEAK TEST COVER

DRAWINGS

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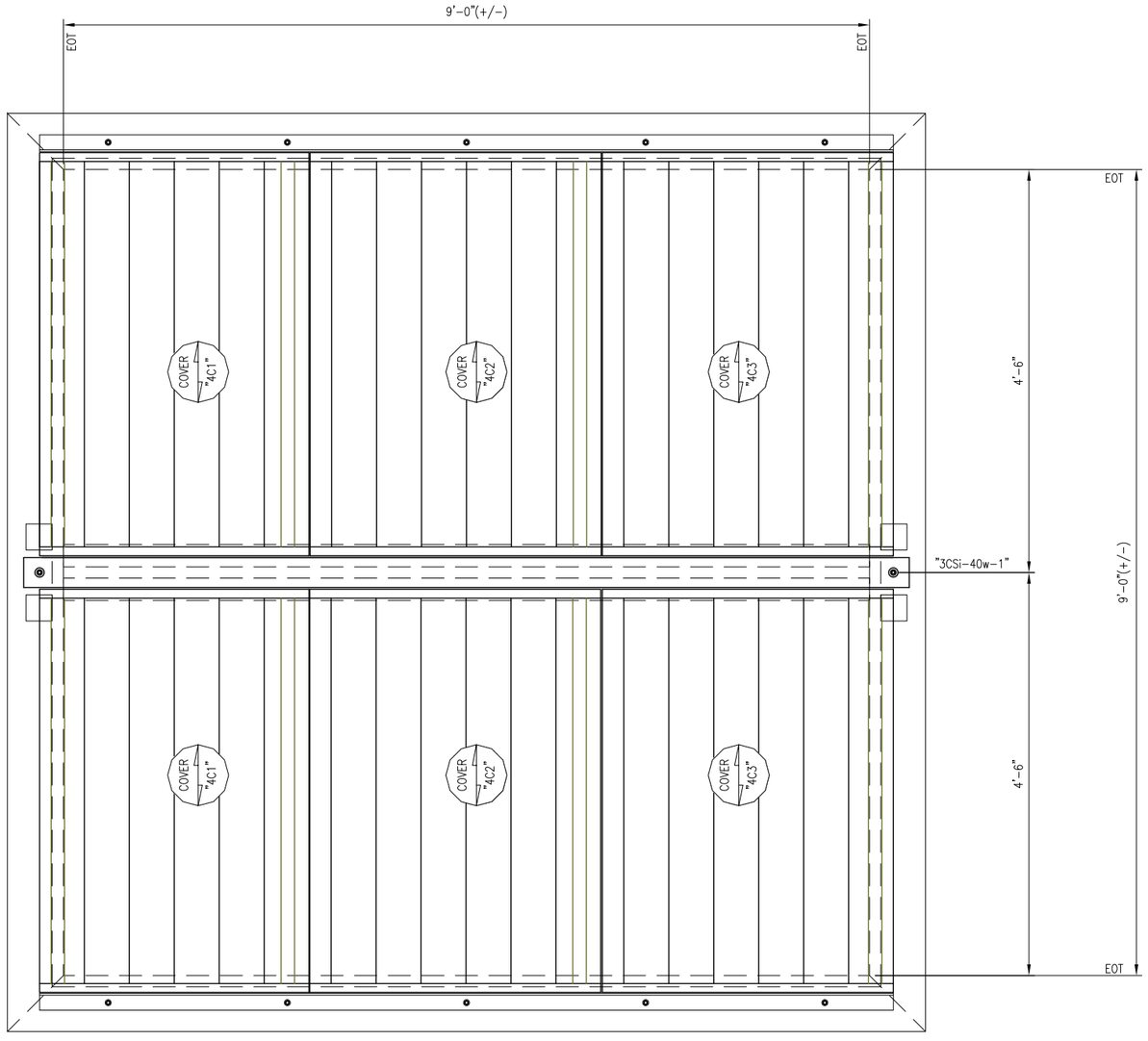


N

PMWI R&D WOODEN TANK

PLAN VIEW

STANDARD-DUTY ALUMINUM INTERLOCKING COVER LAYOUT

CONFIDENTIAL DOCUMENT

ENGINEERING STAMP

ALUMINUM COVER LOADING

LIVE LOAD : 50 psf
DEAD LOAD : 3.5 psf
CONCENTRATED LOAD : 400 #
CONCENTRATED LOAD AREA : 6" x 6" AREA
MAX PANEL WEIGHT : 150 #
DEFLECTION LIMIT : L/240
REFERENCED CODE : IBC 2012, ASCE 7-10

ALL COVER PANEL COMPONENTS TO BE ALUMINUM TYPE 6061-T6

ALUMINUM FABRICATION NOTES

ALL WELDING TO BE PERFORMED BY CERTIFIED WELDERS FOLLOWING ASME & ALUMINUM ASSOCIATION FABRICATION SPECIFICATIONS
ALL ALUMINUM WELDING SHALL UTILIZE THE **GMAW** PROCESS OR THE **TIG** WELDING PROCESS.
THE **GMAW** PROCESS SHALL UTILIZE:
1) SHIELDING GAS - 100% PURE ARGON
2) **ALL ALUMINUM EXCEPT ANODIZED ALUMINUM** - FILLER WIRE -.045" 4043 (QUALIFIED TO AWS A5.10 ER 4043, ABS, ISO DESIGNATION A1SI5)
3) **ANODIZED ALUMINUM** - FILLER WIRE -.045" 5356 (QUALIFIED TO AWS A5.10 ER 5356)
THE **TIG** PROCESS SHALL UTILIZE:
1) SHIELDING GAS - 100% PURE ARGON
2) FILLER ROD - 5356 ALUMINUM ALLOY (QUALIFIED TO AWS A5.10 ER5356)
ALL HOLES SHALL BE PUNCHED OR DRILLED. ALUMINUM SHAPES SHALL BE ALLOY 6061-T6 U.N.O.
ALL RE-ENTRANT CORNERS TO BE SHAPED NOTCH-FREE PER AWS D1.2-10 TO A MINIMUM RADIUS OF ½"
FASTENERS SHALL BE TYPE SS-304 U.N.O.
COAT ALUMINUM IN CONTACT WITH DISSIMILAR MATERIAL WITH ONE SHOP COAT BITUMASTIC 5 MILS (DFT).

PMWI
PHONE: (570) 282-6164 FAX: (570) 281-5931
AISC CERTIFIED FABRICATOR
VISIT US ON THE WEB @ www.pmwi.net
PLEASANT MOUNT WELDING, INC.
45 DUNDAFF STREET
CARBONDALE, PA. 18407
STATE OF N.J. CERT. OF AUTH.: 24GA28256200

#	DATE	REVISIONS & NOTES	BY	CHK
1	5/24/23	INITIAL RELEASE	MHB	N/A
1	2/2/24	LEAK TESTING 2	MHB	N/A

PROJECT: PLEASANT MOUNT WELDING

PMWI R&D COVER LEAK TESTING 2

TITLE: STANDARD-DUTY ALUMINUM INTERLOCKING COVER REF. C'TRACT DWG.-N/A

COVER & SUPPORTS ARRANGEMENT PLAN

TEAM	DETAILER	DATE	CHKD BY	DATE	SHEET NO.	REV
R&D	M. Burke	5/24/23	XCHKR	XCHDT	23-RDLT-0001A	1

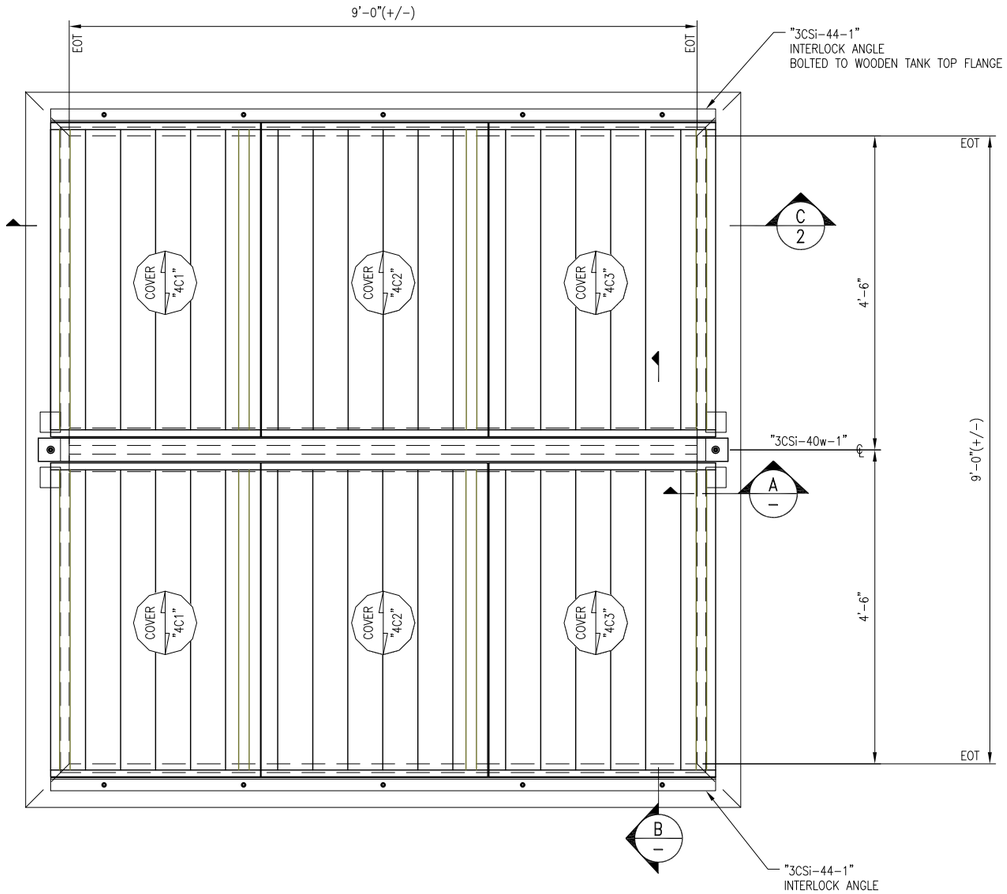
APPROVAL AUTHORITY: VERIFICATION OF DIMENSIONS, DETAILS, ETC ARE REQUESTED WHERE INDICATED. IF EACH VERIFICATION IS NOT NOTED OTHERWISE, IT WILL BE ASSUMED CORRECT AS SHOWN.

THE ENGINEER OF RECORD HAS THE FINAL AND TOTAL RESPONSIBILITY FOR THE ADEQUACY AND SAFETY OF THE STRUCTURE, SINCE HE IS THE ONLY PERSON WHO HAS ALL THE INFORMATION NECESSARY TO EVALUATE THE TOTAL IMPACT OF THE CONNECTION DETAILS ON THE STRUCTURAL DESIGN.

ADDITIONAL COSTS ASSOCIATED WITH FIELD MODIFICATIONS TO ITEMS ON THIS SHEET WILL NOT BE ACCEPTED WITHOUT WRITTEN AUTHORIZATION FROM PMWI TO PROCEED.

TOLERANCE(S) FOR ITEMS DETAILED ON THIS SHEET THAT ARE NOT APPLICABLE TO, OR GOVERNED BY AISC CODE, NAAMM STANDARDS, THE ALUMINUM ASSOC., WILL BE PROVIDED ON REQUEST.

PMWI'S SHOP DRAWINGS ARE PRODUCED PER SPECIFICATIONS & CONTRACT DRAWINGS AND WILL BE DETAILED ONLY ONCE. ANY ADDITIONAL ALTERATIONS OR CHANGES WILL WARRANT A CHANGE ORDER TO PMWI.



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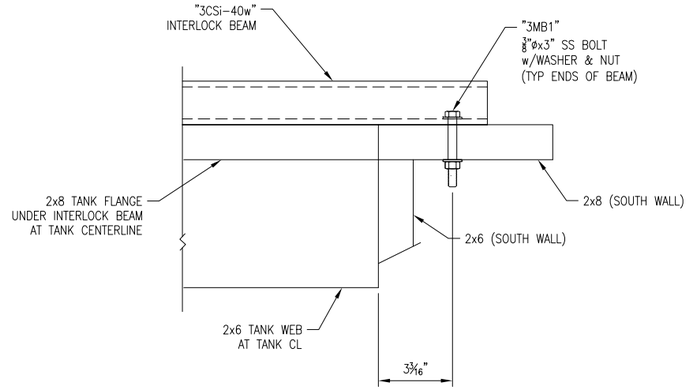
PMWI R&D WOODEN TANK

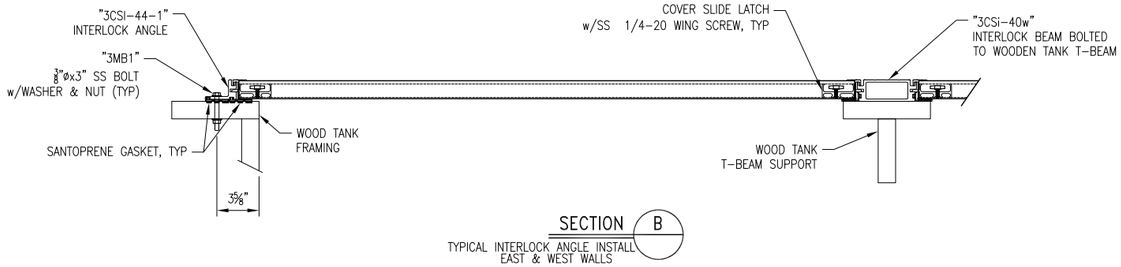
PLAN VIEW

STANDARD-DUTY ALUMINUM INTERLOCKING COVER LAYOUT



SECTION A

INTERLOCK BEAM INSTALL
NORTH & SOUTH WALLS



SECTION B

TYPICAL INTERLOCK ANGLE INSTALL
EAST & WEST WALLS

PMWI
PHONE: (570) 282-6164 FAX: (570) 281-5931
VISIT US ON THE WEB @ www.pmwi.net
PLEASANT MOUNT WELDING, INC.
45 DUNDAFF STREET
CARBONDALE, PA. 18407
STATE OF N.J. CERT. OF AUTH.: 24GA28256200

#	DATE	REVISIONS & NOTES	BY	CHK
1	5/24/23	INITIAL RELEASE	MHB	N/A
2	2/2/24	LEAK TESTING 2	MHB	N/A

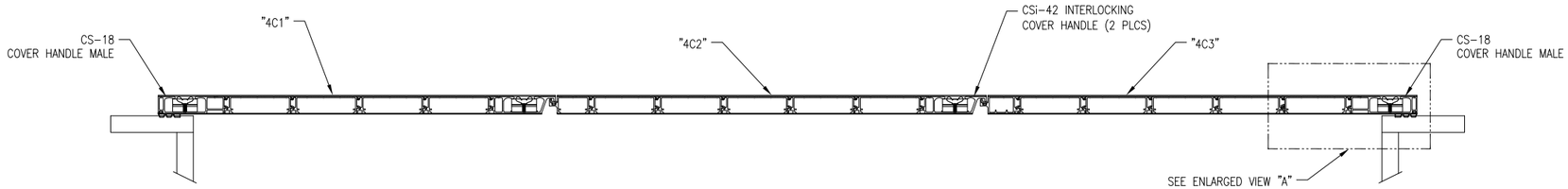
PROJECT: PLEASANT MOUNT WELDING

PMWI R&D COVER LEAK TESTING

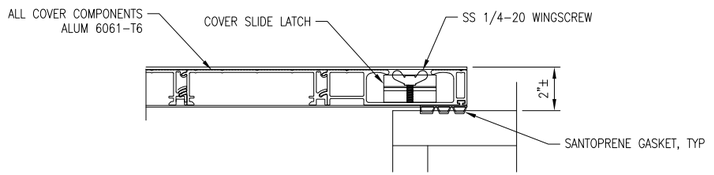
TITLE: STANDARD-DUTY ALUMINUM INTERLOCKING COVER — REF. C'TRACT DWG.-N/A

SECTIONS

TEAM	DETAILER	DATE	CHKD BY	DATE	SHEET NO.	REV
R&D	M. Burke	5/24/23	XCHKR	XCHDT	23-RDLT-0001	1



SECTION C 1



ENLARGED VIEW A –

PMWI
PHONE: (570) 282-6164 FAX: (570) 281-5931
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PLEASANT MOUNT WELDING, INC.
45 DUNDAFF STREET
CARBONDALE, PA. 18407
STATE OF N.J. CERT. OF AUTH.: 24GA28256200

#	DATE	REVISIONS & NOTES	BY	CHK
1	5/24/23	INITIAL RELEASE	MHB	N/A
2	2/2/24	LEAK TESTING 2	MHB	N/A

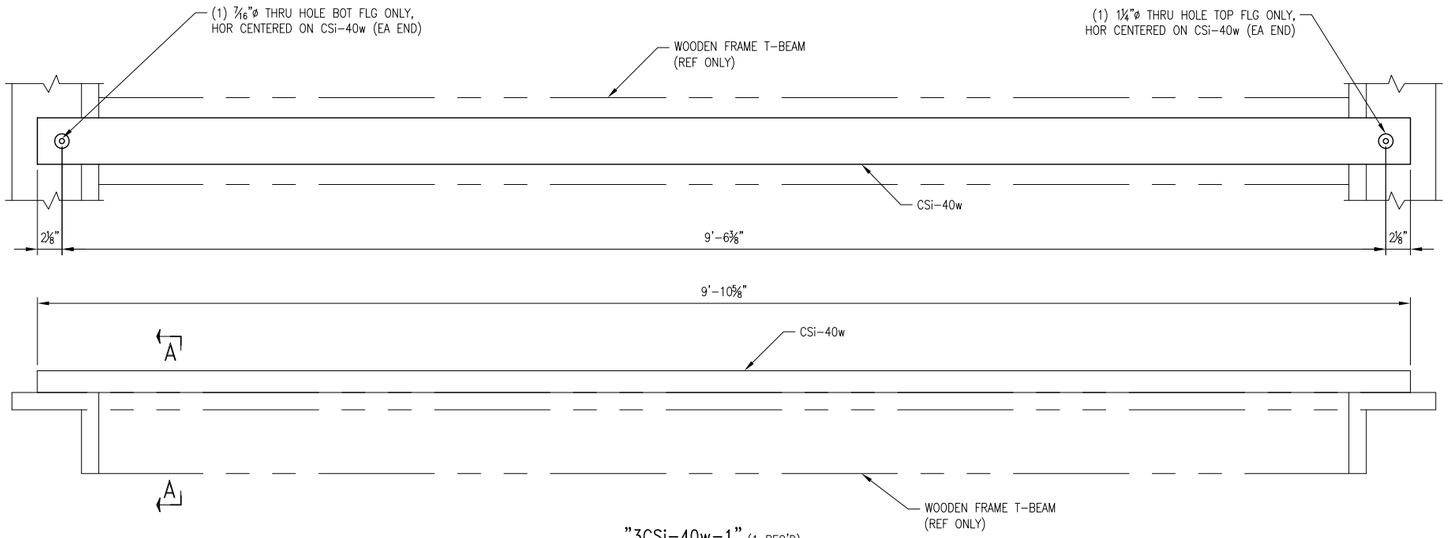
PROJECT: PLEASANT MOUNT WELDING

PMWI R&D COVER LEAK TESTING

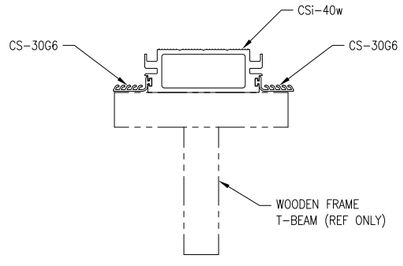
TITLE: STANDARD-DUTY ALUMINUM INTERLOCKING COVER REF. C'TRACT DWG.-N/A

SECTIONS

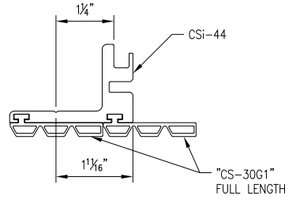
TEAM	DETAILER	DATE	CHKD BY	DATE	SHEET NO.	REV
R&D	M. Burke	5/24/23	XCHKR	XCHDT	23-RDLT-0002	1



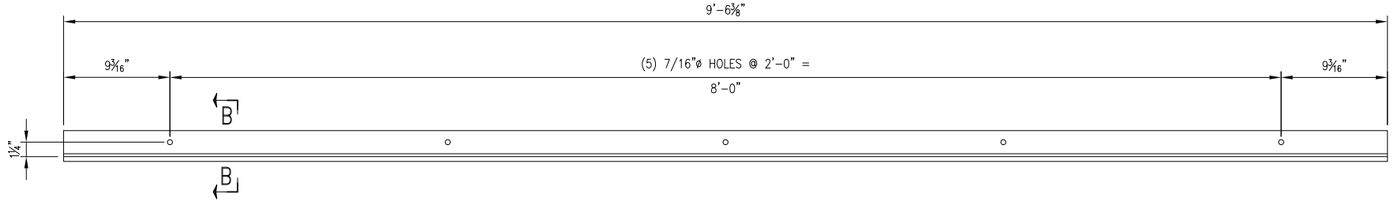
"3CSi-40w-1" (1 REQ'D)
BILLING CODE: X-XXX



SECTION A-A



SECTION B-B



"3CSi-44-1" (2 REQ'D)
BILLING CODE: X-XXX

BILL OF MATERIALS

REL. DATE	Pcs	Assembly	TEMP	No. Pcs	SECTION	GRADE	LENGTH Ft.	LENGTH In.	FIN.	NOTES
H	1	3CSi-40w-1			CS INTERLOCK BEAM (CSI-40w)	6061-T6	9	10 5/8	M	
			CS-30G6	2	CS INTERLOCK BEAM GASKET (CS-3006)	6061-T6	9	10 5/8	M	
H	2	3CSi-44-1			CS INTERLOCK ANGLE (CSI-44)	6061-T6	9	6 3/8	M	
			CS-30G1	4	CS EDGE/ANGLE GASKET (CS-3001)	6061-T6	9	6 5/8	M	
H	12	3MB1			MB 3/8x3	SS-316-B-N-W				LOOSE

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#	DATE	REVISIONS & NOTES	BY	CHK
1	5/24/23	INITIAL RELEASE	MHB	N/A
2	2/2/24	LEAK TESTING 2	MHB	N/A

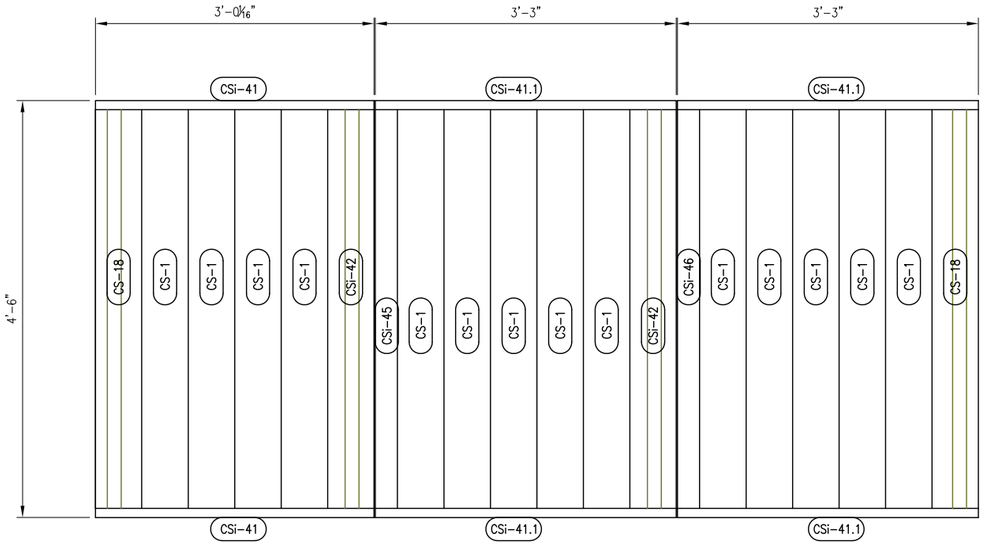
PROJECT: PLEASANT MOUNT WELDING

PMWI R&D COVER LEAK TESTING

TITLE: STANDARD-DUTY ALUMINUM INTERLOCKING COVER — REF. C'TRACT DWG.-N/A

DETAILS

TEAM	DETAILER	DATE	CHKD BY	DATE	SHEET NO.	REV
R&D	M. Burke	5/24/23	XCHKR	XCHDT	23-RDLT-0003	1



"4C1" (2 REQ'D)
BILLING CODE: X-XXX

"4C2" (2 REQ'D)
BILLING CODE: X-XXX

"4C3" (2 REQ'D)
BILLING CODE: X-XXX

BILL OF MATERIALS

REL. DATE	Pcs	Assembly	TEMP	No. Pcs	SECTION	GRADE	LENGTH Ft.	LENGTH In.	FIN.	NOTES
H	2	4C1			STANDARD COVER					
			CS-18	2	CS HANDLE MALE (CS-18)	6061-T6	4	5	M	
			CS-1	8	CS 6" PLANK (CS-1)	6061-T6	4	5	M	
			CSi-42	2	CS INTERLOCK FEMALE HANDLE (CSi-42)	6061-T6	4	5	M	
			CS-30G2	2	CS PLANK GASKET (CS-30G2)	SANTOPRENE	4	2 3/4	M	
			CSi-41	4	CS INTERLOCK EDGE (CSi-41)	6061-T6	3	0 1/16	M	
			SL-1	4	CS INTERLOCK SLIDE LATCH (SL-1)	6061-T6	0	2 1/4	M	
			SL-2	2	CS INTERLOCK SLIDE LATCH (SL-2)	6061-T6	0	3 5/8	M	
			SL-2m	2	CS INTERLOCK SLIDE LATCH (SL-2m)	6061-T6	0	3 5/8	M	
H	2	4C2			STANDARD COVER					
			CSi-45	2	CS 3" INTERLOCK UNDERLAP MALE (CSi-45)	6061-T6	4	5	M	
			CS-1	10	CS 6" PLANK (CS-1)	6061-T6	4	5	M	
			CSi-42	2	CS INTERLOCK FEMALE HANDLE (CSi-42)	6061-T6	4	5	M	
			CS-30G5	2	CS INTERLOCK OVERLAP GASKET (CS-30G5)	SANTOPRENE	4	5	M	
			CSi-41.1	4	CS INTERLOCK EDGE (CSi-41)	6061-T6	3	3	M	
			SL-1	4	CS INTERLOCK SLIDE LATCH (SL-1)	6061-T6	0	2 1/4	M	
H	2	4C3			STANDARD COVER					
			CSi-46	2	CS 3" INTERLOCK UNDERLAP FEMALE (CS-46)	6061-T6	4	5	M	
			CS-1	10	CS 6" PLANK (CS-1)	6061-T6	4	5	M	
			CS-18	2	CS HANDLE MALE (CS-18)	6061-T6	4	5	M	
			CS-30G2	2	CS PLANK GASKET (CS-30G2)	SANTOPRENE	4	2 3/4	M	
			CS-30G5	2	CS INTERLOCK OVERLAP GASKET (CS-30G5)	SANTOPRENE	4	5	M	
			CSi-41.1	4	CS INTERLOCK EDGE (CSi-41)	6061-T6	3	3	M	
			SL-2	2	CS INTERLOCK SLIDE LATCH (SL-2)	6061-T6	0	3 5/8	M	
			SL-2m	2	CS INTERLOCK SLIDE LATCH (SL-2m)	6061-T6	0	3 5/8	M	
H	18	4WS1			WING SCREW 1/4-20x3/4	SS 18-8				MC-MASTER 91185A921
H	2	SIKA			SIKAFLEX 221 ALUMINUM 10.1oz					MC-MASTER 6937T2
H	58	4RRIV			1/8x3/8SS-RIVET					

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1	5/24/23	INITIAL RELEASE	MHB	N/A
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PROJECT: PLEASANT MOUNT WELDING

PMWI R&D COVER LEAK TESTING

TITLE: STANDARD-DUTY ALUMINUM INTERLOCKING COVER REF. C'TRACT DWG.-N/A

PMWI STANDARD-DUTY COVER PANELS

TEAM	DETAILER	DATE	CHKD BY	DATE	SHEET NO.	REV
R&D	M. Burke	5/24/23	XCHKR	XCHDT	23-RDLT-0004	1

APPROVAL AUTHORITY: VERIFICATION OF DIMENSIONS, DETAILS, ETC ARE REQUESTED WHERE INDICATED. IF EACH VERIFICATION IS NOT NOTED OTHERWISE, IT WILL BE ASSUMED CORRECT AS SHOWN.

THE ENGINEER OF RECORD HAS THE FINAL AND TOTAL RESPONSIBILITY FOR THE ADEQUACY AND SAFETY OF THE STRUCTURE, SINCE HE IS THE ONLY PERSON WHO HAS ALL THE INFORMATION NECESSARY TO EVALUATE THE TOTAL IMPACT OF THE CONNECTION DETAILS ON THE STRUCTURAL DESIGN.

ADDITIONAL COSTS ASSOCIATED WITH FIELD MODIFICATIONS TO ITEMS ON THIS SHEET WILL NOT BE ACCEPTED WITHOUT WRITTEN AUTHORIZATION FROM PMWI TO PROCEED.

TOLERANCE(S) FOR ITEMS DETAILED ON THIS SHEET THAT ARE NOT APPLICABLE TO, OR GOVERNED BY AISC CODE, NAAMM STANDARDS, THE ALUMINUM ASSOC., WILL BE PROVIDED ON REQUEST.

PMWI'S SHOP DRAWINGS ARE PRODUCED PER SPECIFICATIONS & CONTRACT DRAWINGS AND WILL BE DETAILED ONLY ONCE. ANY ADDITIONAL ALTERATIONS OR CHANGES WILL WARRANT A CHANGE ORDER TO PMWI.