

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Manufactured and certified by AXTON INCORPORATED, 441 DERWENT PLACE, ANNACIS BUSINESS PARK, DELTA, BC V3M 5Y9
(Name and address of manufacturer)
Manufactured for TECHNIP USA CORPORATION, 555 WEST ARROW HIGHWAY, CLAREMONT, CALIFORNIA, USA 91711-4805
(Name and address of purchaser)
3. Location of installation SUNCOR 220 MMSCFD HYDROGEN PLANT, FORT McMURRAY, ALBERTA, CANADA
(Name and address)
4. Type VERTICAL 69647 U3572.2 69647A01 REV. 07 N/R 2008
(Horiz or vert tank) (Mfg's serial No) (CRN) (Drawing No) (Nat'l Bd No) (Year built)
5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2004
(Year)
to 2006 N/A N/A
(Addenda (date)) (Code Case Nos.) (Special Service per UG 120(d))
6. Shell: SA-516-70N (see remarks) 1.375" N/A 8'-6.25" 24'-0"
(Mat'l (Spec. No., Grade)) (Nom. Thk. (in)) (Corr. Allow. (in)) (Diam. I.D. (ft & in)) (Length (overall) (ft & in))
7. Seams: TYPE 1 FULL 100 N/A N/A Type 1 FULL 4
(Long (Welded, Dbl., Sngl., Lap, Butt)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (°F)) (Time (hr)) (Girth (Welded, Dbl., Sngl., Lap, Butt)) (R.T. (Spot, Partial, or Full)) (No. of Courses)
8. Heads: (a) Mat'l SA-516-70N (see remarks) (b) Mat'l SA-516-70N (see remarks)
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	Top Head	1.375"	N/A	N/A	N/A	2:1	N/A	N/A	N/A	CONCAVE
(b)	Btm Head	1.375"	N/A	N/A	N/A	2:1	N/A	N/A	N/A	CONCAVE
(c)	N/A									
(d)	N/A									

If removable, bolts used (describe other fasteners) N/A
(Mat'l, Spec., No., Gr., Size, No.)
9. MAWP 501 psi at max. temp. 300 °F
Min. design metal temp. -20 (-50 for skirt) °F at 501 psi. ☒ Hydro. or ☐ Pneu. or ☐ Comb. test pressure 652 psi.
10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l	Nom. Thk.	Reinforcement Mat'l	How Attached	Location
INLET	1	24" X 28"	600# RFWN	SA105 & SA516-70N	0.500" / 1.375"	1-1/4" SA516-70N	UW-16.1e	SHELL
VAPOR OUTLET	1	24"	600# RFWN	SA105 & SA516-70N	1.375"	3/4" SA516-70N	UW-16.1e	TOP HEAD
LIQUID OUTLET	1	6"	600# RFWN	SA105 & SA516-70N	0.718"	3/4" SA516-70N	UW-16.1e	BTM HEAD
DRAIN	1	3"	600# RFWN	SA106B SMLS & SA105	0.438"	N/R	UW-16.1e	SHELL
VENT	1	3"	600# RFLWN	SA106B SMLS & SA105	0.438"	N/R	UW-16.1e	TOP HEAD
LEVEL CONNECTIONS	3	3"	600# RFLWN	SA105	0.650"	N/R	UW-16.1e	SHELL
MANWAY	1	24"	600# RFWN	SA105 & SA516-70N	1.375"	1-1/4" SA516-70N	UW-16.1e	SHELL

11. Supports: Skirt YES Lugs 0 Legs 0 Other N/A Attached WELDED TO BTM. HEAD
(Yes or No) (No.) (No.) (Describe) (Where and How)
12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report:
ALL PRE-FABRICATED NOZZLES (ITEM 10) BY UNIVERSAL WELD OVERLAYS INC. : SERIAL NOS. UWO1990N3.1, UWO1990L2.1, UWO1990L2.1, UWO1990L2.1, L2.2, L2.3, L2.4, L2.5, L2.6, UWO1990B3.1, B2.2, UWO1990D6.1
(Name of part, item number, Mfg's name and identifying stamp)

CUSTOMER RESPONSIBLE FOR PRESSURE RELIEF DEVICES. MATERIALS FOR SHELL, HEAD AND SKIRT IMPACT TESTED TO -50 °F AS PER UCS-66(a). CARBON STEEL C/W CHEMISTRY LIMITS AS PER CUSTOMER REQUIREMENT.
SHELL, HEADS, NOZZLES & MANWAYS C/W 1/8" THK. SA-240-304/304L CLADDING OR OVERLAY. CORROSION ALLOWANCE: N/A
RT INCLUDED ALL NOZZLES AND MANWAYS AS PER CUSTOMER REQUIREMENT.
CATEGORY D WELDS WERE UT INSPECTED AS PER CUSTOMER SPECIFICATION ONLY.
PROCESS CONDENSATE SEPARATOR EQUIP. #: 206C-104.

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

U Certificate of Authorization No. 14284 Expires 20-Dec-2009

Date 2008/06/26 Name AXTON INCORPORATED
(Manufacturer)

Signed [Signature]
(Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

I, undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province and employed by British Columbia Safety Authority of the Province of British Columbia have inspected the pressure vessel described in this Manufacturer's Data Report on 2008/06/26 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 2008/06/26 Signed [Signature]

(Authorized Inspector)

Commissions

BC #82
(Nat'l Board incl. endorsements, State, Province and No.)

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
A Part of a Pressure Vessel Fabricated by one Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by Universal Weld Overlays Inc. 135 East Lake Blvd. Airdrie, Alberta, Canada, T2A 2G1
(Name and Address of Manufacturer)

2. Manufactured for Axton Incorporated, 441 Derwent Place, Delta, B.C., Canada, V3M 5Y9
(Name and Address of Purchaser)

Location of installation UNKNOWN
(Name and Address)

4. Type NOZZLES, DRAIN & BLINDS SEE ITEM 11 ON U-4 N/A
[Description of Vessel Part (shell, two piece head, tube bundle)] (Mfg.'s serial No.) (CRN)

N/A UWO 07-1990 (A), (B), (C), (D) & (E) Rev. 0 UWO 2007
(Nat'l. Bd. No.) (Drawing No.) (Drawing prepared by) (Year built)

5. ASME Code, Section VIII, Div. 1 2004 EDITION 2006 ADDENDA N/A N/A
(Edition and Addenda (date)) (Code Case No.) [Special Service per UG-120(d)]

6. Shell (a) No. of course(s) _____ (b) Overall length (ft & in.): _____

Course(s)			Material	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B, & C)			Heat Treatment	
No.	Diameter, in.	Length, ft & in.	Spec. Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time

7. Heads: (a) _____ (b) _____
(Mat'l Spec. No., Grade or type) H.T. - Time & Temp. (Mat'l Spec. No., Grade or type) H.T. - Time & Temp.

05-1480	Location	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side To Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.

If removable, bolts used (describe other fastening) _____
(Mat'l Spec. No., Grade, Size, No.)

8. MAWP _____ psi at max. temp. _____ °F Min. design metal temp. _____ °F _____ psi.
(internal) (external) (internal) (external)

9. Impact test _____ At test temperature of _____ °F.
(Indicate yes or no and the component(s) impact tested)

10. Hydro., pneu., or comb. Test press. _____ Proof Test _____

11. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Cor.		Nozzle	Flange	
SEE ITEM 11 ON U-4											

12. Identification of part(s)

Name of part	Quantity	Line No.	Mfr's. Identification	Mfr's. Drawing No.	CRN	National Board No.	Year Built

13. Supports: Skirt _____ Lugs _____ Legs _____ Others _____ Attached _____
(Yes or No) (No) (No) (Describe) (Where and how)

14. Remarks A) OVERLAY TYPE: 2 LAYERS ER 309L / ER 308L
B) LIQUID PENETRANT TESTING: 100% WELD OVERLAY
C) RADIOGRAPHY: 100% BUTT WELDS
C) WELDER OPERATOR: T, K, D, N, C, B, O18
NOTE #1: UWO PERFORMED BUTT WELD ATTACHMENT WELD AND WELD OVERLAY ONLY.
NOTE #2: UWO TAKES NO RESPONSIBILITY IN THE DESIGN FUNCTION OF THESE ITEMS.

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this pressure vessel part conform to the ASME Code for pressure Vessels, Section VIII, Division 1.

U Certificate of Authorization No. 28525 Expires JULY 2nd/2010
 Date DEC. 03/2007 Name Universal Weld Overlays Inc. Signed _____
(Manufacturer) (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Alberta and employed by ABSA of Alberta
 have inspected the pressure Vessel part described in the Manufacturer's Data Report on DEC. 03/2007
 certificate, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part in accordance with ASME Code, Section VIII, Division 1. By signing this certificate, neither the inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel part described in this Manufacturer's Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
 Date DEC. 03/2007 Signed _____ Commissions AB# 270
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)

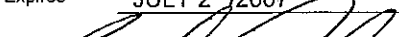
1. Manufactured and certified by	Universal Weld Overlays Inc. 135 East Lake Blvd. Airdrie, Alberta, Canada			
	(Name and Address of Manufacturer)			
2. Manufactured for	Axton Incorporated, 441 Derwent Place, Delta, B.C., Canada, V3M 5Y9			
	(Name and Address of Purchaser)			
3. Location of installation	UNKNOWN			
	(Name and Address)			
4. Type			SEE ITEM 11	
	(Horiz., vert., or sphere)	(Tank, separator, heat exh., etc.)	(Mfg's. Serial No.)	
(CRN)	UWO 07-1990 (A), (B), (C), (D) & (E) Rev. 0		(Nat'l Bd. No.)	2007
	(Drawing No.)			(Year built)


Data Report
Item Number

Remarks

[illegible]

Certificate of Authorization: Type U No. 28525 Expires JULY 2nd 2007

Date Dec. 03/2007 Name Universal Weld Overlays Inc. Signed  (Manufacturer) (Representative)

Date Dec. 03/2007 Name  Commissions AB#270 (Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)



CERTIFIED BY:

Axton

INCORPORATED

ALBERTA CRN #

441 DERWENT PLACE, ANNACIS BUSINESS PARK
DELTA, B.C. CANADA V3M 5Y9

W
RTI

SHELL MAWP 50 P.S.I. AT 300 OF

SHELL MAEWP 0 P.S.I. AT 300 OF

SHELL MDMT 20 OF AT 501 P.S.I.

TUBE / JKT. MAWP P.S.I. / AT OF

TUBE / JKT. MAEWP P.S.I. AT OF

TUBE / JKT. MDMT OF AT P.S.I.

SERIAL NO. 69647

CRN U3572.2

JOB NO. 69647

YEAR BUILT 2008

206C-104 PROCESS CONDENSATE SEPARATOR

P.O. No.: 30056H0006

M.T.I.

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FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by AXTON INCORPORATED, 441 DERWENT PLACE, ANNACIS BUSINESS PARK, DELTA, BC V3M 5Y9
(Name and address of manufacturer)
Manufactured for TECHNIP USA CORPORATION, 555 WEST ARROW HIGHWAY, CLAREMONT, CALIFORNIA, USA 91711-4805
(Name and address of purchaser)
3. Location of installation SUNCOR 220 MMSCFD HYDROGEN PLANT, FORT MCMURRAY, ALBERTA, CANADA
(Name and address)
4. Type VERTICAL 69647 U3572.2 69647A01 REV. 07 N/R 2008
(Horiz or vert tank) (Mfg's serial No) (CRN) (Drawing No) (Nat'l Bd No) (Year built)
5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2004
(Year)
to 2006 N/A N/A
(Addenda (date) Code Case Nos. Special Service per UG 120(d))
6. Shell: SA-516-70N (see remarks) 1.375" N/A 8'-6.25" 24'-0"
(Mat'l (Spec. No., Grade) Nom. Thk. (in) Corr. Allow. (in) Diam. I.D. (ft & in) Length (overall) (ft & in)
7. Seams: TYPE 1 FULL 100 N/A N/A Type 1 FULL 4
(Long (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot or Full) Eff. (%) H.T. Temp (°F) Time (hr) Girth (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot, Partial, or Full) No. of Courses)
8. Heads: (a) Mat'l SA-516-70N (see remarks) (b) Mat'l SA-516-70N (see remarks)
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	Top Head	1.375"	N/A	N/A	N/A	2:1	N/A	N/A	N/A	CONCAVE
(b)	Btm Head	1.375"	N/A	N/A	N/A	2:1	N/A	N/A	N/A	CONCAVE
(c)	N/A									
(d)	N/A									

If removable, bolts used (describe other fasteners) N/A
(Mat'l, Spec., No., Gr., Size, No.)
9. MAWP 501 psi at max. temp. 300 °F
Min. design metal temp. -20 (-50 for skirt) °F at 501 psi. ☒ Hydro. or ☐ Pneu. or ☐ Comb. test pressure 652 psi.
10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l	Nom. Thk.	Reinforcement Mat'l.	How Attached	Location
INLET	1	24" X 28"	600# RFWN	SA105 & SA516-70N	0.500" / 1.375"	1-1/4" SA516-70N	UW-16.1e	SHELL
VAPOR OUTLET	1	24"	600# RFWN	SA105 & SA516-70N	1.375"	3/4" SA516-70N	UW-16.1e	TOP HEAD
LIQUID OUTLET	1	6"	600# RFWN	SA105 & SA516-70N	0.718"	3/4" SA516-70N	UW-16.1e	BTM HEAD
DRAIN	1	3"	600# RFWN	SA106B SMLS & SA105	0.438"	N/R	UW-16.1e	SHELL
VENT	1	3"	600# RFLWN	SA106B SMLS & SA105	0.438"	N/R	UW-16.1e	TOP HEAD
LEVEL CONNECTIONS	3	3"	600# RFLWN	SA105	0.650"	N/R	UW-16.1e	SHELL
MANWAY	1	24"	600# RFWN	SA105 & SA516-70N	1.375"	1-1/4" SA516-70N	UW-16.1e	SHELL

11. Supports: Skirt YES Lugs 0 Legs 0 Other N/A Attached WELDED TO BTM. HEAD
(Yes or No) (No.) (No.) (Describe) (Where and How)
12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report:
ALL PRE-FABRICATED NOZZLES (ITEM 10) BY UNIVERSAL WELD OVERLAYS INC.: SERIAL NOS. UWO1990N3.1, UWO1990L2.1, UWO1990L2.1, UWO1990L2.1, L2.2, L2.3, L2.4, L2.5, L2.6, UWO1990B3.1, B2.2, UWO1990D6.1
(Name of part, item number, Mfg'r's name and identifying stamp)
CUSTOMER RESPONSIBLE FOR PRESSURE RELIEF DEVICES. MATERIALS FOR SHELL, HEAD AND SKIRT IMPACT TESTED TO -50 °F AS PER UCS-66(a). CARBON STEEL C/W CHEMISTRY LIMITS AS PER CUSTOMER REQUIREMENT.
SHELL, HEADS, NOZZLES & MANWAYS C/W 1/8" THK. SA-240-304/304L CLADDING OR OVERLAY. CORROSION ALLOWANCE: N/A
RT INCLUDED ALL NOZZLES AND MANWAYS AS PER CUSTOMER REQUIREMENT.
CATEGORY D WELDS WERE UT INSPECTED AS PER CUSTOMER SPECIFICATION ONLY.
PROCESS CONDENSATE SEPARATOR EQUIP. #: 206C-104.

CERTIFICATE OF SHOP/FIELD COMPLIANCE	
We certify that the statements in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.	
U Certificate of Authorization No. <u>14284</u>	Expires <u>20-Dec-2009</u>
Date <u>2008/06/26</u> Name <u>AXTON INCORPORATED</u>	Signed <u>[Signature]</u>
	(Manufacturer) (Representative)
CERTIFICATE OF SHOP/FIELD INSPECTION	
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of <u>British Columbia</u> and employed by <u>British Columbia Safety Authority</u> have inspected the pressure vessel described in this Manufacturer's Data Report on <u>2008/06/26</u> and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.	
Date <u>2008/06/26</u> Signed <u>[Signature]</u>	Commissions <u>Bc #82</u>
	(Authorized Inspector) (Nat'l Board incl. endorsements, State, Province and No.)

CERTIFIED BY:

Axton

INCORPORATED

ALBERTA CRN #

441 DERWENT PLACE, ANNACIS BUSINESS PARK
DELTA, B.C. CANADA V3M 5Y9

W
RTI

SHELL MAWP 501 P.S.I. AT 300 OF

SHELL MAEWP 0 P.S.I. AT 300 OF

SHELL MDMT 20 OF AT 501 P.S.I.

TUBE / JKT. MAWP P.S.I. AT OF

TUBE / JKT. MAEWP P.S.I. AT OF

TUBE / JKT. MDMT OF AT P.S.I.

SERIAL NO. 69647

CRN U3572.2

JOB NO. 69647

YEAR BUILT 2008

206C-104 PROCESS CONDENSATE SEPARATOR

P.O. No. 30056H0006

M.T.I.

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MILL TEST REPORTS/CERTIFICATIONS



Certificate of Conformance



Quality Management System Approved

Customer	Customer P.O.
Axton Incorporated Annacis Business Park 441 Derwent Place Delta, BC V3M 5Y9 Canada	602615
	DMC Job Number
	14161

Applicable Specification

ASME SA-264, DMC 100, Technip / Suncor Spec 30056 JSS 0810 001

Qty	Serial Number	Size	Description
1	DMC 14161/3-100	1.688" x 96.00" x 345.00"	Flattened Gas Trimmed Clad Plate.

Component	Material Specification	Heat Number	Starting Thickness	Minimum Thickness	Seam Welded
Clad A	SA 240-304L	471021 004	0.188 in.	0.125 in.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Clad B	SA 240-304L	471021 004	0.188 in.	0.125 in.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Clad C	SA 240-304L	471021 004	0.188 in.	0.125 in.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Clad D	SA 240-304L	471021 004	0.188 in.	0.125 in.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Clad E	SA 240-304L	471021 004	0.188 in.	0.125 in.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Filler	ER308L	E39702	0.045 in.	N/A	

Base	SA 516-70	2B151-302-1	1.500 in.	1.375 in.
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Specification	Results	Attachments
Dimensions	ASME SA-264, DMC 100	Accept
Flatness	ASME SA-264, DMC 100	Accept
Ductility Bend Test	---	---
Shear Test	ASME SA-264, DMC 100	45,092 psi.
Tensile	---	---
Yield	---	---
Elongation	---	---
Surface Finish	ASME SA-264, DMC 100	Accept
Hardness	Backer: 200 BHN Max per Suncor Spec 0601 Para 7.6	170BHN
Ferroxyl	---	---
Heat Treat	---	---

WE CERTIFY THAT THIS MATERIAL CONFORMS TO SPECIFICATION

ASME: ~~SA 516-70~~ SA 240-304L

ASTM: _____

INITIAL: DATE 10/30/07

AXTON INCORPORATED

Specification	Results	Avg	Unit	Min	Max	Val	Unit	Min	Max
Charpy Impact	---	0	0	0	0	0	Ft/lbs	0	0

Remarks

Clad Metal Requirements: Cladding metal seam welded (5 panels, 4 seams); Cladding is for corrosion allowance only;

Base Metal Requirements: Normalized

Base Metal Chemistry: 0.23% Max C, 0.44% max Ceq per SA-20

Base Metal UT: ASME SA-578, Level A, S1

Base Metal LCVN @ -50 Deg. F, 15 Ft.lbs. min per SA-370

CP12118-1

Certificate of Conformance

Dynamic Materials Corporation certifies that this material has been manufactured and tested in accordance with the referenced specifications and that the information is true and correct.

Patricia Bandish
Quality Assurance

Date:

Patricia Bandish 10/30/07

Certificate of Conformance



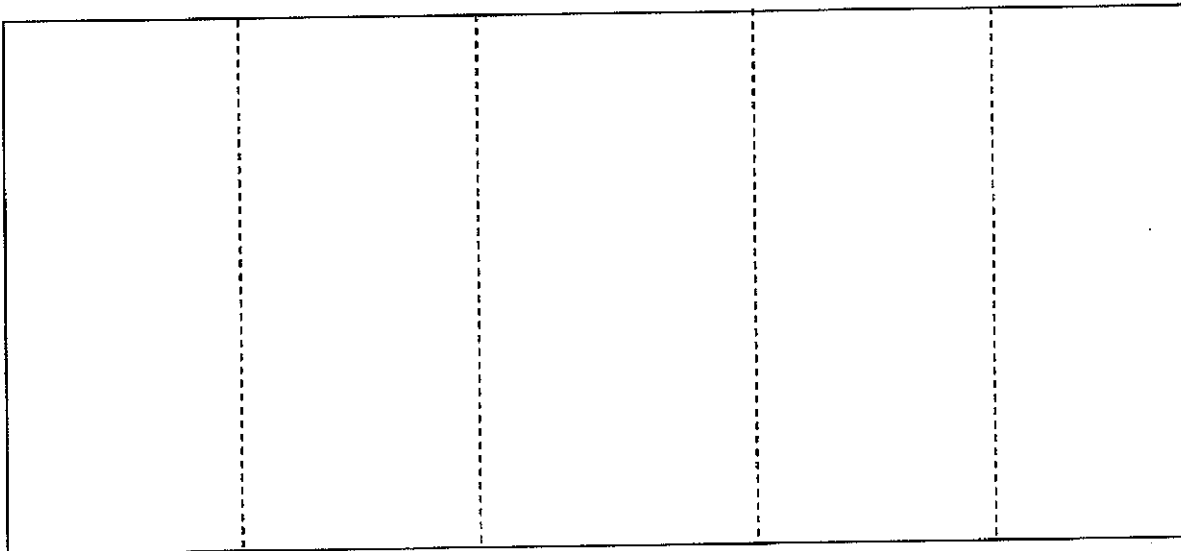
Quality Management System Approved

Ultrasonic Report	
Procedure:	DMC 22012, Rev H
Acceptance:	ASME SA-578, Level A, S1, S7
Apparatus:	KB USN-52
Transducer:	Aerotech 1.0", 2.25 MHz
Couplant:	Water
Surface:	As Clad
Scan:	100%
Operator:	Mark Peck Level: II
Date:	10/29/2007
Results:	No recordable indications, Accept

Dye Penetration Report	
Procedure:	DMC 22010, Rev. F
Acceptance:	ASME Sec. VIII Div. 1, Appendix 8
Method:	Visible, Water Washable
Test Temp:	68° F
Penetrant:	Bio-Pen PQR
Cleaner:	Water
Developer:	Bio-Pen NQ1
Operator:	R. William Level: II
Date:	10/9/2007
Results:	Accept

Serial Number:	DMC 14161/3-100
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Panels A - E
Ht #471021 004



CP12118-2

Certificate of Conformance	
Dynamic Materials Corporation certifies that this material has been manufactured and tested in accordance with the referenced specifications and that the information is true and correct.	
Patricia Bandish Quality Assurance	Date: 10/30/07



ANALYTICAL
SERVICES, INC.

724/228-2155
FAX 724/228-9874
P.O. Box 534
Washington, PA 15301

RADIOGRAPHIC EXAMINATION REPORT

ITEM IDENTIFICATION												REMARKS
	ACCEPT	REJECT	INC. PENETRATION	INC. FUSION	BURN-THROUGH	ROOT CONCAVITY	ROOT CONVEXITY	SLAG INCLUSION	CRACK	TUNGSTEN INCLUSION	POROSITY	
14161/3.1-1												
A-B 0-1												
B-E 0-1												
C-D 0-1												
E-C 0-1												
14161/4.1-1												
A-B 0-1												
B-E 0-1												
E-C 0-1												
C-D 0-1												
CP12118-3												

Interpretation of radiographs represent good faith opinions only and in no way guarantee the quality, usability or classification of welds or other items inspected.

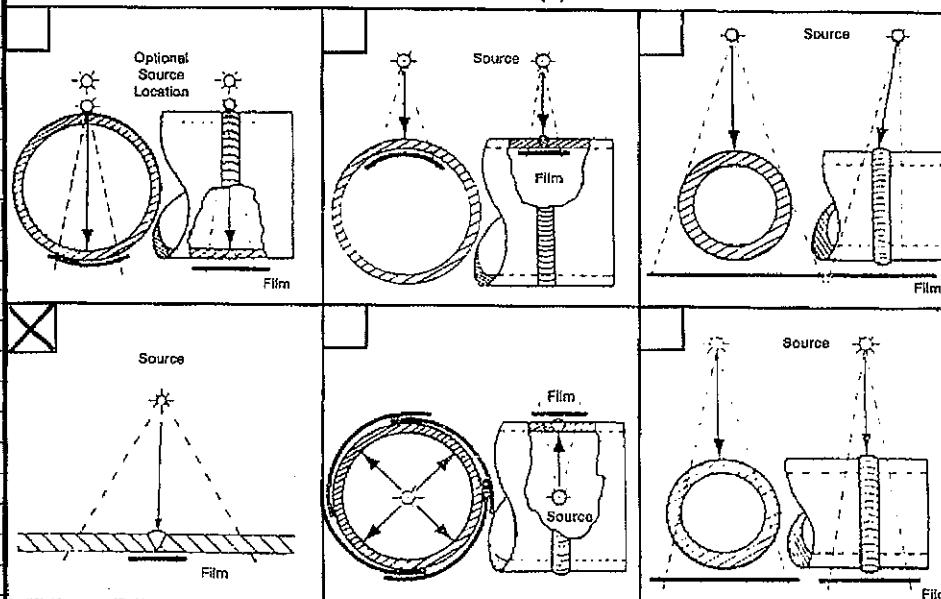
Customer DMC Date 9 / 5 / 07
Job Location Mt. Braddock, PA Travel Mileage _____ Film Used _____
Hours Traveled _____
Customer No. 14161 Hours Worked _____ Size 4 1/2 x 10" No. 8
TEI Project No. DTR# 46053 Total Hours _____
Report No. _____

CODES / PROCEDURES / INTERPRETATION REQUIREMENTS

Code ASME Year 2004 Section VIII Div. I
Part UW Para UW 52 Addenda 7/05
Procedure No. PT-06 Rev. 7

MATERIAL TYPE Stainless Steel NOMINAL WALL .188"
REINFORCEMENT N/A WELD THICKNESS .188"
ISOTOPE TYPE Ir 192 EFF. SIZE .200 CURIES 49
X-RAY MODEL N/A MA _____ KV _____ EFF. SIZE _____
FILM MFG'R AGFA TYPE D4 SINGLE ☒ DOUBLE ☐
SCREEN TYPE AND THICKNESS: FRONT Pb .010" BACK Pb .010"
PENETRATOR SIZE: SOURCE SIDE 12 FILM SIDE N/A
QUALITY LEVEL: T% 2 Required Thole 2
SHIM THICKNESS N/A SFD 16.188"
SOD 16" OFD .188" Ug 2.050"
VIEWING: SINGLE WALL ☒ DOUBLE WALL ☐ EXPOSURE TIME 2.5 Min

IDENTIFY TECHNIQUE(S) USED



TEI Radiographer Jared Stroh Level II
TEI Assistant Jared Stroh Customer Rep. _____