

U

W  
111  
111

(A) 539491

11227-21

1350 PSI

198F

201

1350 PSI

2006

130012

AMINI  
CONTACTOR

0.125"


1.375"

5A516 70N

C-300

1.3125"

5A516 70N

05-08-04 

CERTIFIED BY:		
<b>Presson</b> ENERFLEX NISKU, ALBERTA, CANADA		
W RTI H7		SERIAL NO. B7227-21
MAWP	DESIGN TEMP.	MDMT
1350 PSI	196 °F	-20°F @ 1350 PSI
YEAR BUILT	CRN	DESCRIPTION
2005	T3001.2	AMINE CONTACTOR
CORR. ALLOWANCE	SHELL THK.	SHELL MATERIAL
0.125"	1.375"	SA516-70N
TAG NO.	HEAD THK.	HEAD MATERIAL
C-300	1.3125"	SA516-70N

**FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS** **A 539491**  
 (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 ENERFLEX SYSTEMS LTD. Production and Processing 2103 - 8ST., Nisku, AB, CANADA T9E 7Z1  
 (Name and address of manufacturer)

2. Manufactured for FORT ENERGY CORPORATION 1300, 401-9 AVENUE S.W., CALGARY, ALBERTA T2P 0X8  
 (Name and address of purchaser)

3. Location of installation SANDHILLS GAS PLANT LSD 07-25-62-06 W5M  
 (Name and address)

4. Type VERTICAL B7227-21 T3001.2 B7201-261 Rev. 0 --- 2006  
 (Horiz. or vert. tank) (Mfg'r'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  
 to --- --- ---  
 Addenda (Date) Code Case Nos. Special Service per UG-120 (d) Year

6. Shell: SA516-70N 1.3750" 0.125" 36" OD 50'-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 1150 1.38 TYPE 1 FULL 5  
 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, Eff. (%) or Full] No. of Courses

8. Heads: (a) Mat'l. SA516-70N (b) Mat'l. SA516-70N  
 (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	1.3125"	0.125"	---	---	2:1	---	---	---	CONCAVE
(b)	BOTTOM	1.3125"	0.125"	---	---	2:1	---	---	---	CONCAVE

If removable, bolts used (describe other fastenings) --- (Mat'l., Spec. No., Gr., Size, No.)

9. MAWP 1350 --- psi at max. temp. 196 --- °F  
 (internal) (external) (internal) (external)  
 Min. design metal temp. -20 °F at 1350 psi. Hydro., Pneu., or Comb. test pressure HYDRO 1755 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	6" CL 600	RFWN	SA106B	SCH XXH	SA516-70N	UW16.1(c)	SHELL
GAS OUTLET	1	6" CL 600	RFWN	SA106B	SCH XXH	SA516-70N	UW16.1(c)	HEAD
AMINE INLET	4	3" CL 600	RFWN	SA106B	SCH XXH	SA516-70N	UW16.1(c)	SHELL
DRAIN	1	2" CL 600	RFWN	SA106B	SCH 160	---	UW16.1(c)	HEAD
AMINE OUTLET	1	4" CL 600	RFWN	SA106B	SCH XXH	SA516-70N	UW16.1(c)	SHELL
LG	2	2" CL 600	RFWN	SA106B	SCH 160	---	UW16.1(c)	SHELL
PI	1	2" CL 600	RFWN	SA106B	SCH 160	---	UW16.1(c)	SHELL
TI	1	2" CL 600	RFWN	SA106B	SCH 160	---	UW16.1(c)	SHELL
MANWAY	2	18" CL 600	RFHB	SA105N	2.60"	---	UW16.1(c)	SHELL

11. Supports: Skirt YES Lugs --- Legs --- Other --- Attached HEAD, WELDED  
 (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: ---

AMINE CONTACTOR (C-300) CONSTRUCTION DWG B7227-261 Rev. 0  
 (Name of part, item number, Mfg'r's. name and identifying stamp)

NO: EXEMPT PER UG-20(f), UCS-66(a)(b)(c)  
VOLUME = 9.2 cu.m. 325 cu.ft. VESSEL OVER-PRESSURE PROTECTION TO BE PROVIDED IN PIPING

**CERTIFICATE OF SHOP/FIELD COMPLIANCE**

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the SAME Code for Pressure Vessels, Section VIII, Division 1. "U" Certificate of Authorization No. 16081  
 expires SEPTEMBER 26, 2007  
 Date 2006 JUN 20 Co. Name ENERFLEX SYSTEMS LTD. Signed [Signature]  
 (Manufacturer) (Representative)

**CERTIFICATE OF SHOP/FIELD INSPECTION**

Vessel constructed by ENERFLEX SYSTEMS LTD. PRODUCTION AND PROCESSING at NISKU, ALBERTA, 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 have inspected the component described in this Manufacturer's Data Report on JAN 20 / 06, 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 JAN 20 2006 Signed [Signature] Commissions AB95A  
 (Authorized Inspector) (Nat'l. Board (Incl. endorsements, State, Prov. and No.))

## VESSEL TRAVEL SHEET

TYPE CONTACTOR SIZE 36" X 50' 0"

A NO. 539491

SERIAL NO. B7227-21 CUSTOMER FORT ENERGY

ITEM	CHECKLIST	HOLD POINT	REMARKS	INSPECTORS: INITIAL AND DATE		
				AUTHORIZED INSPECTOR	Q.C. INSPECTOR	CUSTOMER INSPECTOR
1	Inspection Points Established	H		<del>H</del> AUG 11 2005	05-08-07	<del>H</del>
2	Approved Drawings	R	CRN. T3001-2		05-08-04	<del>H</del>
3	MTR / Partial Data Report	R		<del>H</del> DEC 16 2005	05/12/16	<del>H</del>
4	Heat Numbers	R		<del>H</del> DEC 16 2005	05/12/16	<del>H</del>
5	Color Coding	R			05/12/16	<del>H</del>
6	Material Report Completed	R			05/12/16	<del>H</del>
7	Vessel Layout	H			05/09/29	<del>H</del>
8	Long Seams Fitup LS1-5	I			05/09/27	<del>H</del>
9	Circ Seam Fitup - CS1	I			05/09/21	<del>H</del>
	- CS2				05/09/26	<del>H</del>
	- CS3				05/12/13	<del>H</del>
	- CS4				05/10/03	<del>H</del>
	- CS5				05/10/14	<del>H</del>
	- CS6				05/10/14	<del>H</del>
10	Connections Fitup -	I			05/10/14	<del>H</del>
	-					
11						
12						
13						
14	Internal Inspection	H		<del>H</del> DEC 16 2005	05/12/16	<del>H</del> 16-12-05
15	NDE Records (UT, MT, PT)	R	NA			
16	Radiography	R	100%	<del>H</del> DEC 16 2005	05/12/16	<del>H</del> 16-12-05
17	Weld Sizes	I			05/12/16	<del>H</del> 16-12-05
18	Welders Stamps	I			05/12/16	<del>H</del> 16-12-05
19	Orientation and Rating	I			05/12/16	<del>H</del>
20	External Inspection	I		<del>H</del> DEC 16 2005	05/12/16	<del>H</del> 16-12-05
21	PWHT-Instructions and Chart	R	YES	<del>H</del>	05/12/28	<del>H</del>
22	Internal Cleaning	H			06/01/20	
23	Hydrostatic Test c/w Test Chart 4 HR HOLD	H	Pressure: 1755 psi Gauge No.: 2F/2D	<del>H</del> DEC 16 2005	06/01/20	<del>H</del> 06/01/20
24	Nameplate	R		<del>H</del> JAN 20 2006	06/01/20	<del>H</del>
25	Manufacturers Data Report	R		<del>H</del> JAN 20 2006	06/01/20	<del>H</del>

H - Hold

R - Review

I - Inspect

W - Witness

VESSEL MATERIAL REPORT

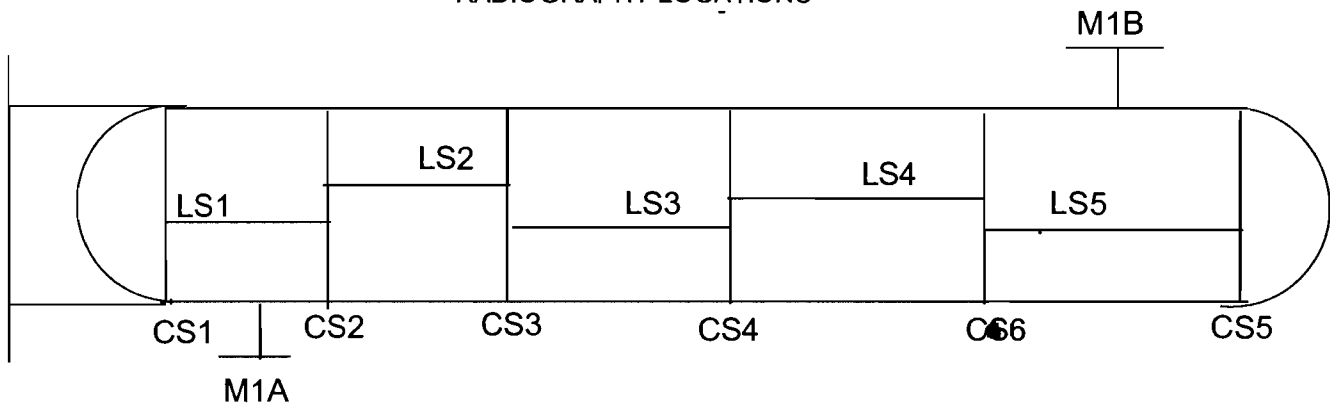
SERIAL NUMBER B7227-21

CUSTOMER

FORT ENERGY

	MATERIAL SPECIFICATIONS	HEAT NUMBER	MINIMUM THICKNESS
SHELLS			
1	SA516-70N	47089-44901	1.3750"
2	SA516-70N	47089-44901	1.3750"
3	SA516-70N	47089-44901	1.3750"
4	SA516-70N	47089-44901	1.3750"
5	SA516-70N	47089-44904	1.3750"
HEADS			
1	SA516-70N	8987C-15167	1.3125"
2	SA516-70N	8987C-15173	1.3125"
REPADS			
ROLLED	SA516-70N	58601-51961	0.7500"
DISHED	SA516-70N	0082D-21503	0.7500"
SKIRT	SA516-70N	16459-449585	0.5000"

RADIOGRAPHY LOCATIONS



<i>Attachment and/or Nozzle Material Thickness Verification and Identification</i>					<i>Welder Symbols</i>			
Mark	Description	Thickness	Material Spec	Heat Number	Attach.	Cat. C	Cat. D	Pad. OD
N1	6" 600# RFWN	SCH XH	SA-105N	34A5		A1		
	6" NOZZLE	SCH XXH	SA-106B	U80206			A1	
	REPAD	3/4"	SA 516-70N					A1
N2	6" 600# RFWN	SCH XH	SA-105N	34A5		A1		
	6" NOZZLE	SCH XXH	SA-106B	U80206			A1	
	REPAD	3/4"	SA 516-70N					A1
N3A	3" 600# RFWN	SCH XXH	SA-105N	35781		S		
	3" NOZZLE	SCH XXH	SA-106B	29234			L	
	REPAD	3/4"	SA 516-70N					L
N3B	3" 600# RFWN	SCH XXH	SA-105N	35781		A1		
	3" NOZZLE	SCH XXH	SA-106B	29234			L	
	REPAD	3/4"	SA 516-70N					F
N3C	3" 600# RFWN	SCH XXH	SA-105N	35781		A1		
	3" NOZZLE	SCH XXH	SA-106B	29281			F	
	REPAD	3/4"	SA 516-70N					F
N3D	3" 600# RFWN	SCH XXH	SA-105N	35781		A1		
	3" NOZZLE	SCH XXH	SA-106B	29281			H	
	REPAD	3/4"	SA 516-70N					H
N4	2" 600# RFWN	SCH 160	SA-105N	12A5		A1		
	2" PIPE	SCH 160	SA-106B	32919			A1	
	2" 90° ELBOW	SCH 160	SA 234-WPB		A1			
	2" NOZZLE	SCH 160	SA-106B	32919			H1	
N5	4" 600# RFWN	SCH XXH	SA-105N	107A5		A1		
	4" PIPE	SCH XXH	SA-333GR6	71468			Z	
	REPAD	3/4"	SA516-70N					Z
	4" 90° ELBOW	SCH XH	SA 234-WPB		Z			
	4" NOZZLE	SCH XH	SA-333GR6	71468	Z			
N6A	2" 600# RFWN	SCH 160	SA-105N	12A5		A1		
	2" NOZZLE	SCH 160	SA-106B	32919			A1	
N6B	2" 600# RFWN	SCH 160	SA-105N	12A5		A1		
	2" NOZZLE	SCH 160	SA-106B	32919			K	
N7	2" 600# RFWN	SCH 160	SA-105N	12A5		A1		
	2" NOZZLE	SCH 160	SA-106B	32919			L	



HYDROTEST PROCEDURE / REPORT

JOB NO: B7227-21

TEST DATE: 2006 JAN 20

DESCRIPTION: AMINE CONTACTOR

DESIGN PRESSURE: 1350 PSI

TEST PRESSURE: 1755 PSI

DESIGN TEMPERATURE: 196 °F

TEST TEMPERATURE: 60 °F

MINIMUM HOLD TIME: 4 HR

RECORDER REQUIRED: YES  NO


PREPARED BY: OS-08-041R

ADDITIONAL INFORMATION:

TEST RESULTS: ACCEPT

GAUGE NO. 2F/2D

APPROVALS:

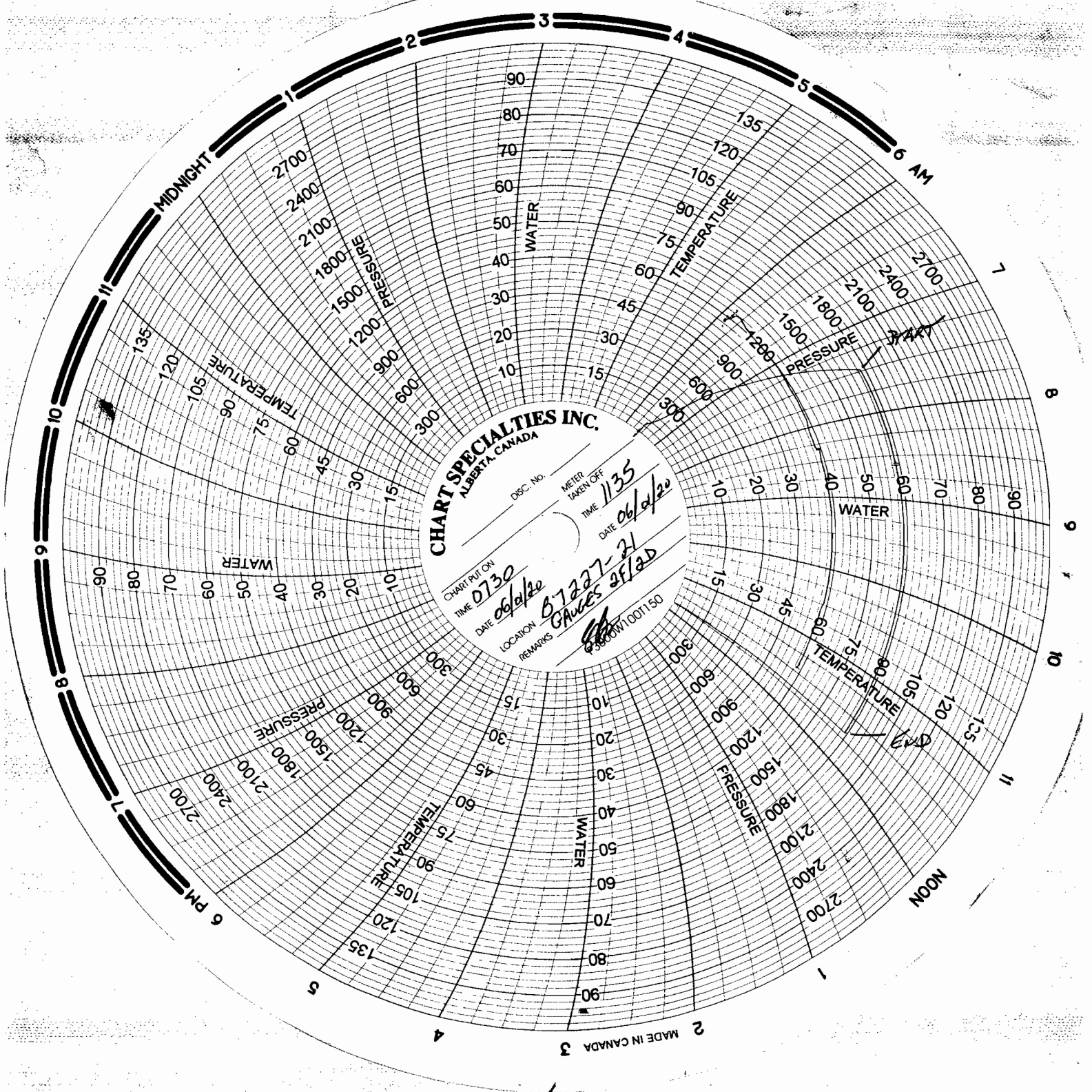
Q.C. INSPECTOR: 

CUSTOMER REPRESENTATIVE: David David BUNNELL JAN 20/05

AUTHORIZED INSPECTOR:  JAN 20/06

COMMENTS:





**CHART SPECIALTIES INC.**  
 ALBERTA, CANADA

CHART PUT ON TIME 0730  
 DATE 06/20/20  
 LOCATION 87227-21  
 REMARKS GAUGES 2f/2b  
 DISC. No. \_\_\_\_\_ METER TAKEN OFF TIME 1135 DATE 06/21/20  
 5000W1001150

MADE IN CANADA

**HEAT TREATMENT FORM**

JOB NO. B7227-21 CUSTOMER FT ENERGY

SPOOL # / VESSEL # DESCRIPTION: CONTACTOR

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\* NOTE: Please record spool/vessel #'s on chart.

COMPONENT DESCRIPTION


DIAMETER 36" 00 LENGTH 50'-0" S/S WEIGHT 34000 LB

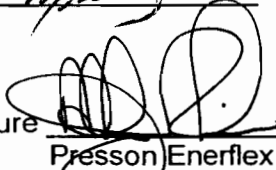
SHELL THICKNESS 1.375" MATERIAL SA51670N

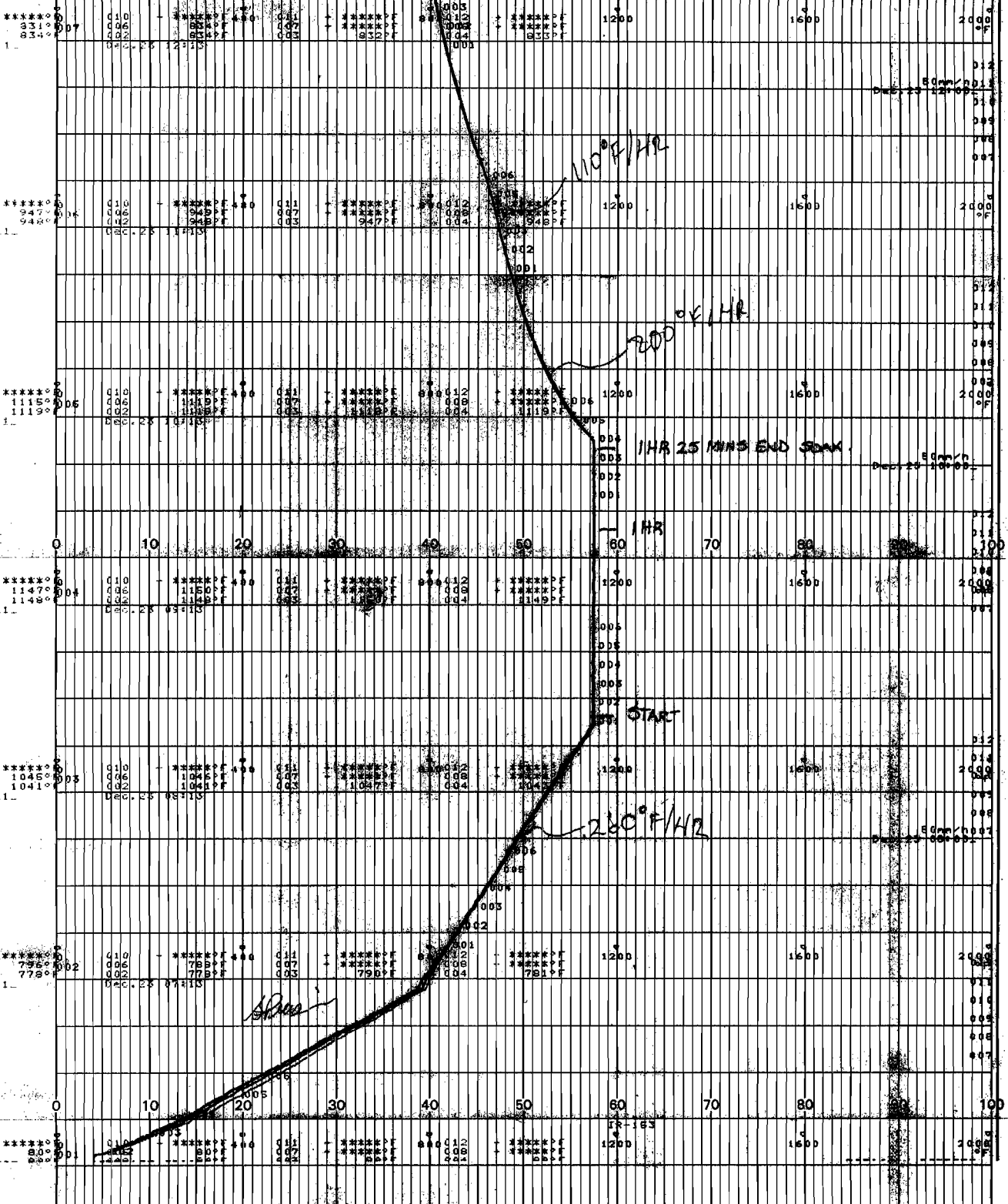
HEAD THICKNESS 1.375" MATERIAL SA51670N

TYPE OF HEAT TREATMENT STRESS RELIEVE – in accordance with ASME Section VIII, Division 1, UW40 and UCS-56

INSTRUCTIONS

1. Temperature to be raised from 800°F (427°C) to 1150°F (621°C) at maximum rate of 290 °F (161 °C) per hour. **NOTE: Must not exceed 400°F (222°C) per hour.**
2. Temperature to be held at 1150°F (621°C) plus or minus 25°F (14°C) for 85 minutes.
3. Temperature to be lowered from 1150°F (621°C) to 800°F (427°C) at a rate of 363 °F (202 °C) per hour. **NOTE: Must not exceed 500°F (278°C) per hour.**
4. Additional requirements: Job Number, Description and Spool #'s required on heat treatment chart.
5. Chart No. F67-052143
6. Operator's Signature:  Date Dec 22/05

Signature   
Presson Enerflex Quality Control



**SR** STRESS RELIEVING SERVICE LTD.

CLIENT: *Resonance Engineering*

DATE: *Dec 23, 05* CHART NO: *SR-052188*

CRAFT SPEED: *Controlled* IN/O: *F*

OPERATOR: *S. Prasad*

REC No: *18-53* LOCATION: *1-10*



Exposure Device #: _____ Source #: _____ Cobalt 60 <input type="checkbox"/> IR 192 <input type="checkbox"/> X-Ray <input checked="" type="checkbox"/> EFSS: <u>118</u> Film Brand: <u>AGFA</u> #Film/cassette: <u>111</u> Code: <u>ASME VIII UW 51</u>	Job / P.O. #: <u>B7227-21</u> IRISNDT #: <u>307053</u> Date: <u>Dec 13/05</u> Client: <u>Presson</u> Location: <u>Nisku</u> Item: <u>C53 (36"00)</u> Material: <u>P1</u>
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Film #	Size, Location, Thickness	Welder ID	IRISNDT Proc.	SOD Inches	OFD Inches	# of Exp.	Work Location	Film Type	Type and Location of Discontinuities (circle rejectable discontinuities)	Accept	Reject
<u>C53</u>	<u>0-15 1 3/8</u>	<u>R1</u>	<u>1</u>	<u>16.625</u>	<u>1.50</u>	<u>1</u>	<u>1</u>	<u>D5</u>			<input checked="" type="checkbox"/>
	<u>15-30</u>										<input checked="" type="checkbox"/>
	<u>30-45</u>										<input checked="" type="checkbox"/>
	<u>45-60</u>										<input checked="" type="checkbox"/>
	<u>60-75</u>										<input checked="" type="checkbox"/>
	<u>75-90</u>										<input checked="" type="checkbox"/>
	<u>90-105</u>										<input checked="" type="checkbox"/>
	<u>105-0</u>										<input checked="" type="checkbox"/>

Number of Radiation Barrier Warning Signs Erected \_\_\_\_\_ Number of Radiation Barrier Warning Signs Returned \_\_\_\_\_

Work Location Legend (insert number): [1] Inside Fab. Shop [2] Yard/Lay-down Area [3] Piping/Modular Fab. Area [4] N/A (Other)

IRIS Procedure: Single Wall Exposure: RT 1, 2, 2A, 6, 7 Double Wall Exposure: RT 3, 3A, 4, 5, 8	S.O.D. = Minimum Source-to-object distance O.F.D. = Distance source side of Object to film at min. S.O.D.	AB - Arc Burns BT - Burn Through CK - Crack EP - Excessive Penetration P - Porosity	EUC - External Undercut IUC - Internal Undercut HB - Hollow Bead IP - Incomplete Penetration S - Slag	IC - Internal Concavity LF - Lack of Fusion LC - Low Cover MA - Misalignment
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Unit # <u>IRISNDT Corp</u> Kilometres: _____ In _____ Out _____ Hrs. _____ In <u>ASNT Level II - RT</u> Out _____ Hrs. _____ Personnel: <u>GC MGT</u>	Film Quantity: <u>8-17x 3 1/2 D5</u>	Interpretation by: <u>Gordon Thomas</u> SNT-TC-1A <u>II</u> (Print) <u>Gordon Thomas</u> C.G.S.B. <u>II</u> (Signature) <u>Gordon Thomas</u> C.G.S.B. # <u>6</u> I am in full agreement with report contents: Client Representative: _____
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Edmonton (780) 437-4747 Calgary (403) 279-6121 Nisku (780) 955-7616 Barrhead (780) 674-3018	Fort McMurray (780) 743-1536 Grande Prairie (780) 532-2283 High Level (780) 841-0470 Lloydminster (780) 875-6455	Cold Lake (780) 594-1114 Red Deer (403) 347-1742 Tulsa, OK (918) 446-8773 Houston, TX (713) 461-4010	Mailing Address 5908 - 96 Street Edmonton, Alberta T6E 3G3
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Exposure Device #: _____ Source #: _____ Cobalt 60 <input type="checkbox"/> IR 192 <input type="checkbox"/> X-Ray <input checked="" type="checkbox"/> EFSS: <u>118</u> Film Brand: <u>AGFA</u> #Film/cassette: <u>1/1</u> Code: <u>ASME VIII UWS1</u>	Job / P.O. #: <u>B7227-21</u> IRISNDT #: <u>301688</u> Date: <u>Oct 14 / 05</u> Client: <u>Presson</u> Location: <u>Nisku</u> Item: <u>CSG + 7 (36" OD)</u> Material: <u>P3</u>
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Film #	Size, Location, Thickness	Welder ID	IRISNDT Proc.	SOD Inches	OFD Inches	# of Exp.	Work Location	Film Type	Type and Location of Discontinuities (circle rejectable discontinuities)	Accept	Reject
C55	0-15 1 3/8	F	1	16.625	1.50	1	1	D57		/	
	15-30									/	
	30-45									/	
	45-60									/	
	60-75									/	
	75-90									/	
	90-105									/	
	105-0									/	
C56	0-15 1 3/8	F	1	16.625	1.50	1	1	D57		/	
	15-30									/	
	30-45									/	
	45-60									/	
	60-75									/	
	75-90									/	
	90-105									/	
	105-0									/	

Number of Radiation Barrier Warning Signs Erected \_\_\_\_\_ Number of Radiation Barrier Warning Signs Returned \_\_\_\_\_

Work Location Legend (insert number): [1] Inside Fab. Shop [2] Yard/Lay-down Area [3] Piping/Modular Fab. Area [4] N/A (Other)

IRIS Procedure: Single Wall Exposure: RT 1, 2, 2A, 6, 7 Double Wall Exposure: RT 3, 3A, 4, 5, 8	S.O.D. = Minimum Source-to-object distance O.F.D. = Distance source side of Object to film at min. S.O.D.	AB - Arc Burns BT - Burn Through CK - Crack EP - Excessive Penetration P - Porosity	EUC - External Undercut IUC - Internal Undercut HB - Hollow Bead IP - Incomplete Penetration S - Slag	IC - Internal Concavity LF - Lack of Fusion LC - Low Cover MA - Misalignment
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Unit # <u>IRISNDT Corp</u> Kilometres: _____ In <u>GORD THOMAS #6</u> Hrs. _____ In <u>CGSB 48.9712 RT II</u> Hrs. _____ In <u>ASNT Level II - RT</u> Hrs. _____ Personnel: <u>GCMSGTR5</u>	Film Quantity: <u>16-17x4 1/2 D7</u>	Interpretation by: <u>GORDON THOMAS</u> SNT-TC-1A <u>II</u> (Print) <u>Gordon Thomas</u> C.G.S.B. <u>II</u> (Signature) C.G.S.B. # <u>6</u> I am in full agreement with report contents: _____ Client Representative: _____
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Edmonton (780) 437-4747 Calgary (403) 279-6121 Nisku (780) 955-7616 Barrhead (780) 674-3018	Fort McMurray (780) 743-1536 Grande Prairie (780) 532-2283 High Level (780) 841-0470 Lloydminster (780) 875-6455	Cold Lake (780) 594-1114 Red Deer (403) 347-1742 Tulsa, OK (918) 446-8773 Houston, TX (713) 461-4010	Mailing Address 5908 - 96 Street Edmonton, Alberta T6E 3G3
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Exposure Device #: \_\_\_\_\_ Source #: \_\_\_\_\_  
 Cobalt 60  IR 192  X-Ray  EFSS: 118  
 Film Brand: AGFA #Film/cassette: 111  
 Code: ASME VIII UWS1

Job / P.O. #: B7227-01 IRISNDT #: 301622 Date: Oct 31 05  
 Client: Presson  
 Location: Nisku  
 Item: C54 (36"00) Material: Pi

Film #	Size, Location, Thickness #	Welder ID	IRISNDT Proc.	SOD Inches	OFD Inches	# of Exp.	Work Location	Film Type	Type and Location of Discontinuities (circle rejectable discontinuities)	Accept	Reject
<u>C54</u>	<u>0-15 1 3/8</u>	<u>F</u>	<u>1</u>	<u>16.625</u>	<u>1.50</u>	<u>1</u>	<u>1</u>	<u>D7</u>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>15-30</u>									<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>30-45</u>									<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>45-60</u>									<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>60-75</u>									<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>75-90</u>									<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>90-105</u>									<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<u>105-0</u>									<input checked="" type="checkbox"/>	<input type="checkbox"/>

Number of Radiation Barrier Warning Signs Erected \_\_\_\_\_ Number of Radiation Barrier Warning Signs Returned \_\_\_\_\_

Work Location Legend (insert number): [1] Inside Fab. Shop [2] Yard/Lay-down Area [3] Piping/Modular Fab. Area [4] N/A (Other)

IRIS Procedure: Single Wall Exposure: RT 1, 2, 2A, 6, 7 Double Wall Exposure: RT 3, 3A, 4, 5, 8	S.O.D. = Minimum Source-to-object distance O.F.D. = Distance source side of Object to film at min. S.O.D.	AB - Arc Burns BT - Burn Through CK - Crack EP - Excessive Penetration P - Porosity	EUC - External Undercut IUC - Internal Undercut HB - Hollow Bead IP - Incomplete Penetration S - Slag	IC - Internal Concavity LF - Lack of Fusion LC - Low Cover MA - Misalignment
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Unit # IRISNDT Corp. Kilometres: \_\_\_\_\_  
GORD THOMAS #5  
 In CGSB 48.971-2 RT II Hrs. \_\_\_\_\_  
 In ASNT LEVEL II - RT Hrs. \_\_\_\_\_  
 Personnel: GC MS GT

Film Quantity: 8-17X46 D7

Interpretation by: GORDON THOMAS SNT-TC-1A II  
 (Print) C.G.S.B. # 6  
 (Signature) (Level)  
 I am in full agreement with report contents:  
 Client Representative: \_\_\_\_\_

Edmonton (780) 437-4747	Fort McMurray (780) 743-1536	Cold Lake (780) 594-1114	Mailing Address
Calgary (403) 279-6121	Grande Prairie (780) 532-2283	Red Deer (403) 347-1742	5908 - 96 Street
Nisku (780) 955-7616	High Level (780) 841-0470	Tulsa, OK (918) 446-8773	Edmonton, Alberta
Barrhead (780) 674-3018	Lloydminster (780) 875-6455	Houston, TX (713) 461-4010	T6E 3G3

Exposure Device #: _____ Source #: _____ Cobalt 60 <input type="checkbox"/> IR 192 <input checked="" type="checkbox"/> X-Ray <input type="checkbox"/> EFSS: <u>118</u> Film Brand: <u>AGFA</u> #Film/cassette: <u>111</u> Code: <u>ASME VIII UWSI</u>	Job / P.O. #: <u>B7227-21</u> IRISNDT #: <u>301586</u> Date: <u>Sept 27/05</u> Client: <u>Presson</u> Location: <u>Nisku</u> Item: <u>LS4 (120") LS5 (120")</u> Material: <u>P1</u>
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Film #	Size, Location, Thickness	Welder ID	IRISNDT Proc.	SOD Inches	OFD Inches	# of Exp.	Work Location	Film Type	Type and Location of Discontinuities (circle rejectable discontinuities)	Accept	Reject
L54	0-12 1 3/8	F/L	2A	23.625	1.50	(10)	1	D7		/	/
	12-24									/	/
	24-36									/	/
	36-48									/	/
	48-60									/	/
	60-72									/	/
	72-84									/	/
	84-96									/	/
	96-108									/	/
	108. End									/	/
L55	0-12 1 3/8	F	2A	23.625	1.50	(10)	1	D7		/	/
	12-24									/	/
	24-36									/	/
	36-48									/	/
	48-60									/	/
	60-72									/	/
	72-84									/	/
	84-96									/	/
	96-108									/	/
	108. End									/	/

Number of Radiation Barrier Warning Signs Erected \_\_\_\_\_ Number of Radiation Barrier Warning Signs Returned \_\_\_\_\_

Work Location Legend (insert number): [1] Inside Fab. Shop [2] Yard/Lay-down Area [3] Piping/Modular Fab. Area [4] N/A (Other)

IRIS Procedure: Single Wall Exposure: RT 1, 2, 2A, 6, 7 Double Wall Exposure: RT 3, 3A, 4, 5, 8	S.O.D. = Minimum Source-to-object distance O.F.D. = Distance source side of Object to film at min. S.O.D.	AB - Arc Burns BT - Burn Through CK - Crack EP - Excessive Penetration P - Porosity	EUC - External Undercut IUC - Internal Undercut HB - Hollow Bead IP - Incomplete Penetration S - Slag	IC - Internal Concavity LF - Lack of Fusion LC - Low Cover MA - Misalignment
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IRISNDT Corp. Unit # <u>GORD THOMAS #6</u> Kilometres: _____ In <u>CGSB 48.9762 RT II</u> Hrs. _____ In <u>ASNT LEVEL II - RT</u> Hrs. _____ Personnel: <u>GCMSGT</u>	Film Quantity: <u>20-12x4 1/2 D7</u>	Interpretation by: <u>GORDON THOMAS</u> SNT-TC-1A <u>II</u> (Print) C.G.S.B. # <u>6</u> (Signature) C.G.S.B. # _____ I am in full agreement with report contents: Client Representative: <u>[Signature]</u>
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Edmonton (780) 437-4747 Calgary (403) 279-6121 Nisku (780) 955-7616 Barrhead (780) 674-3018	Fort McMurray (780) 743-1536 Grande Prairie (780) 532-2283 High Level (780) 841-0470 Lloydminster (780) 875-6455	Cold Lake (780) 594-1114 Red Deer (403) 347-1742 Tulsa, OK (918) 446-8773 Houston, TX (713) 461-4010	Mailing Address 5908 - 96 Street Edmonton, Alberta T6E 3G3
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Exposure Device #: _____ Source #: _____ Cobalt 60 <input type="checkbox"/> IR 192 <input type="checkbox"/> <input checked="" type="checkbox"/> X-Ray <input type="checkbox"/> EFSS: <u>118</u> Film Brand: <u>AGFA</u> #Film/cassette: <u>111</u> Code: <u>ASME VIII UW 51</u>	Job / P.O. #: <u>B7227-21</u> IRISNDT #: <u>301573</u> Date: <u>Sept 26 105</u> Client: <u>Presson</u> Location: <u>Nisku</u> Item: <u>C52 (36"00)</u> Material: <u>P1</u>
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Film #	Size, Location, Thickness	Welder ID	IRISNDT Proc.	SOD Inches	OFD Inches	# of Exp.	Work Location	Film Type	Type and Location of Discontinuities (circle rejectable discontinuities)	Accept	Reject
C52	0-15	178 MF	1	16.625	150	1	1	D7		/	/
	15-30									/	/
	30-45									/	/
	45-60									/	/
	60-75									/	/
	75-90									/	/
	90-105									/	/
	105-0									/	/

Number of Radiation Barrier Warning Signs Erected \_\_\_\_\_ Number of Radiation Barrier Warning Signs Returned \_\_\_\_\_

Work Location Legend (insert number): [1] Inside Fab. Shop [2] Yard/Lay-down Area [3] Piping/Modular Fab. Area [4] N/A (Other)

IRIS Procedure: Single Wall Exposure: RT 1, 2, 2A, 6, 7 Double Wall Exposure: RT 3, 3A, 4, 5, 8	S.O.D. = Minimum Source-to-object distance O.F.D. = Distance source side of Object to film at min. S.O.D.	AB - Arc Burns BT - Burn Through CK - Crack EP - Excessive Penetration P - Porosity	EUC - External Undercut IUC - Internal Undercut HB - Hollow Bead IP - Incomplete Penetration S - Slag	IC - Internal Concavity LF - Lack of Fusion LC - Low Cover MA - Misalignment
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IRISNDT Corp. Unit # <u>GORD THOMAS #6</u> Kilometres: _____ In <u>CGSB 48.9712</u> RT II Hrs. _____ In <u>ASNT LEVEL II - RT</u> Hrs. _____ Personnel: <u>GC M2GT</u>	Film Quantity: <u>8.17x4 1/2 D7</u>	Interpretation by: <u>GORDON THOMAS</u> SNT-TC-1A <u>II</u> (Print) <u>Gordon Thomas</u> C.G.S.B. <u>II</u> (Signature) C.G.S.B. # <u>0</u> I am in full agreement with report contents: Client Representative: _____
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Edmonton (780) 437-4747 Calgary (403) 279-6121 Nisku (780) 955-7616 Barrhead (780) 674-3018	Fort McMurray (780) 743-1536 Grande Prairie (780) 532-2283 High Level (780) 841-0470 Lloydminster (780) 875-6455	Cold Lake (780) 594-1114 Red Deer (403) 347-1742 Tulsa, OK (918) 446-8773 Houston, TX (713) 461-4010	Mailing Address 5908 - 96 Street Edmonton, Alberta T6E 3G3
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Exposure Device #:          Source #:           
 Cobalt 60  IR 192  X-Ray  EFSS: 118  
 Film Brand: AGFA #Film/cassette: 111  
 Code: ASME VIII UWSI

Job / P.O. #: B7227-21 IRISNDT # 301551 Date: Sept 22/05  
 Client: Presson  
 Location: Nisku  
 Item:          Material: P.

Film #	Size, Location, Thickness	Welder ID	IRISNDT Proc.	SOD Inches	OFD Inches	# of Exp.	Work Location	Film Type	Type and Location of Discontinuities (circle rejectable discontinuities)	Accept	Reject
LS2R1	(20-24) 1 3/8" (56-60)	A1	2A	18.625	500	(2)	1	D7		✓	✓

Number of Radiation Barrier Warning Signs Erected \_\_\_\_\_ Number of Radiation Barrier Warning Signs Returned \_\_\_\_\_

Work Location Legend (insert number): [1] Inside Fab. Shop [2] Yard/Lay-down Area [3] Piping/Modular Fab. Area [4] N/A (Other)

IRIS Procedure:  
 Single Wall Exposure:  
 RT 1, 2, 2A, 6, 7  
 Double Wall Exposure:  
 RT 3, 3A, 4, 5, 8

S.O.D. = Minimum Source-to-object distance  
 O.F.D. = Distance source side of Object to film at min. S.O.D.

AB - Arc Burns  
 BT - Burn Through  
 CK - Crack  
 EP - Excessive Penetration  
 P - Porosity

EUC - External Undercut  
 IUC - Internal Undercut  
 HB - Hollow Bead  
 IP - Incomplete Penetration  
 S - Slag

IC - Internal Concavity  
 LF - Lack of Fusion  
 LC - Low Cover  
 MA - Misalignment

Unit # IRISNDT Corp.  
GORD THOMAS #6  
 In CGSB 48.9712 RT II Hrs.  
 In ASNT LEVEL II - RT Hrs.  
 Personnel: MS, GT, PT.

Film Quantity:  
2-3 1/2 x 17-D7

Interpretation by: GORDON THOMAS SNT-TC-1A II  
 Gordon Thomas (Print) C.G.S.B. II  
 (Signature) C.G.S.B. # 6  
 I am in full agreement with report contents:  
 Client Representative: [Signature]

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Calgary (403) 279-6121	Grande Prairie (780) 532-2283	Red Deer (403) 347-1742	5908 - 96 Street
Nisku (780) 955-7616	High Level (780) 841-0470	Tulsa, OK (918) 446-8773	Edmonton, Alberta
Barrhead (780) 674-3018	Lloydminster (780) 875-6455	Houston, TX (713) 461-4010	T6E 3G3

Exposure Device #: _____ Source #: _____ Cobalt 60 <input type="checkbox"/> IR 192 <input checked="" type="checkbox"/> X-Ray <input type="checkbox"/> EFSS: <u>118</u> Film Brand: <u>AGFA</u> #Film/cassette: <u>11</u> Code: <u>ASME VIII UWSI</u>	Job / P.O. #: <u>B7227-21</u> IRISNDT #: <u>301542</u> Date: <u>Sept 21/05</u> Client: <u>Presson</u> Location: <u>Nisku</u> Item: <u>CSI(36"60) L53(120")</u> Material: <u>P.</u>
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Film #	Size, Location, Thickness	Welder ID	IRISNDT Proc.	SOD Inches	OFD Inches	# of Exp.	Work Location	Film Type	Type and Location of Discontinuities (circle rejectable discontinuities)	Accept	Reject
CSI	0-15 1 3/8"	A1/F	1	16.625	1.500	1	1	D5		/	/
	15-30									/	/
	30-45									/	/
	45-60									/	/
	60-75									/	/
	75-90									/	/
	90-105									/	/
	105-0									/	/
L53	0-12 1 3/8"	F 2A	2A	18.625	1.500	(10)	1	D7		/	/
	12-24									/	/
	24-36									/	/
	36-48									/	/
	48-60									/	/
	60-72									/	/
	72-84									/	/
	84-96								<u>PSA</u>	/	/
	96-108									/	/
	108-END									/	/

Number of Radiation Barrier Warning Signs Erected \_\_\_\_\_ Number of Radiation Barrier Warning Signs Returned \_\_\_\_\_

Work Location Legend (insert number): [1] Inside Fab. Shop [2] Yard/Lay-down Area [3] Piping/Modular Fab. Area [4] N/A (Other)

IRIS Procedure: Single Wall Exposure: RT 1, 2, 2A, 6, 7 Double Wall Exposure: RT 3, 3A, 4, 5, 8	S.O.D. = Minimum Source-to-object distance O.F.D. = Distance source side of Object to film at min. S.O.D.	AB - Arc Burns BT - Burn Through CK - Crack EP - Excessive Penetration P - Porosity	EUC - External Undercut IUC - Internal Undercut HB - Hollow Bead IP - Incomplete Penetration S - Slag	IC - Internal Concavity LF - Lack of Fusion LC - Low Cover MA - Misalignment
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Unit # _____ In _____ In _____ Personnel: <u>MS. G.T. PT.</u>	IRISNDT Corp. GORD THOMAS #6 C.C.S.B. 48-9712 RT 11s ASNT LEVEL II - RTs.	Film Quantity: <u>8-17x3 1/2 - D5</u> <u>10-17x3 1/2 - D7</u>	Interpretation by: _____ SNT-TC-1A <u>IT</u> <u>GORDON THOMAS</u> C.G.S.B. <u>IT</u> (Print) (Level) <u>Gordon Thomas</u> C.G.S.B. # <u>6</u> (Signature) I am in full agreement with report contents: Client Representative: _____
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Edmonton (780) 437-4747 Calgary (403) 279-6121 Nisku (780) 955-7616 Barrhead (780) 674-3018	Fort McMurray (780) 743-1536 Grande Prairie (780) 532-2283 High Level (780) 841-0470 Lloydminster (780) 875-6455	Cold Lake (780) 594-1114 Red Deer (403) 347-1742 Tulsa, OK (918) 446-8773 Houston, TX (713) 461-4010	Mailing Address 5908 - 96 Street Edmonton, Alberta T6E 3G3
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Exposure Device #: \_\_\_\_\_ Source #: \_\_\_\_\_  
 Cobalt 60  IR 192  X-Ray  EFSS: 118  
 Film Brand: AGFA #Film/cassette: 11  
 Code: ASME VIII UWS1

Job / P.O. #: B7227-21 IRISNDT #: 301530 Date: Sept 20/05  
 Client: Presson  
 Location: Nisku  
 Item: LS2(120") Material: P.

Film #	Size, Location, Thickness	Welder ID	IRISNDT Proc.	SOD Inches	OFD Inches	# of Exp.	Work Location	Film Type	Type and Location of Discontinuities (circle rejectable discontinuities)	Accept	Reject
LS2	0-12	1 3/8"	F/F	2A	18.625	150	(10)	1	D		✓
	12-24								MIG POK 20-24"		X
	24-36										/
	36-48										/
	48-60								MIG POK 56-60"		X
	60-72										/
	72-84										/
	84-96										/
	96-108										/
	108-END										/

Number of Radiation Barrier Warning Signs Erected \_\_\_\_\_ Number of Radiation Barrier Warning Signs Returned \_\_\_\_\_

Work Location Legend (insert number): [1] Inside Fab. Shop [2] Yard/Lay-down Area [3] Piping/Modular Fab. Area [4] N/A (Other)

IRIS Procedure: Single Wall Exposure: RT 1, 2, 2A, 6, 7 Double Wall Exposure: RT 3, 3A, 4, 5, 8  
 S.O.D. = Minimum Source-to-object distance O.F.D. = Distance source side of Object to film at min. S.O.D.  
 AB - Arc Burns BT - Burn Through CK - Crack EP - Excessive Penetration P - Porosity  
 EUC - External Undercut IUC - Internal Undercut HB - Hollow Bead IP - Incomplete Penetration S - Slag  
 IC - Internal Concavity LF - Lack of Fusion LC - Low Cover MA - Misalignment

IRISNDT Corp  
 Unit # GORD THOMAS # \_\_\_\_\_  
 In CGSB 48,9712 RT II Hrs. \_\_\_\_\_  
 In ASNT LEVEL II - RT Hrs. \_\_\_\_\_  
 Personnel: MSGF PT

Film Quantity: 10-17x3 1/2-DS

Interpretation by: GORDON THOMAS SNT-TC-1A II  
 (Print) C.G.S.B. # 6  
 (Signature)  
 I am in full agreement with report contents:  
 Client Representative: \_\_\_\_\_

Edmonton (780) 437-4747	Fort McMurray (780) 743-1536	Cold Lake (780) 594-1114	Mailing Address
Calgary (403) 279-6121	Grande Prairie (780) 532-2283	Red Deer (403) 347-1742	5908 - 96 Street
Nisku (780) 955-7616	High Level (780) 841-0470	Tulsa, OK (918) 446-8773	Edmonton, Alberta
Barrhead (780) 674-3018	Lloydminster (780) 875-6455	Houston, TX (713) 461-4010	T6E 3G3

Exposure Device #: \_\_\_\_\_ Source #: \_\_\_\_\_  
 Cobalt 60  IR 192  X-Ray  EFSS: .118  
 Film Brand: AGFA #Film/cassette: 1/1  
 Code: ASME VIII UWSI

Job / P.O. #: B7007-21 IRISNDT #: 301480 Date: Sept 13/05  
 Client: Presson  
 Location: Nisku  
 Item: LSI (120") Material: P1

Film #	Size, Location, Thickness	Welder ID	IRISNDT Proc.	SOD Inches	OFD Inches	# of Exp.	Work Location	Film Type	Type and Location of Discontinuities (circle rejectable discontinuities)	Accept	Reject
NLS1	0-12	17 1/2"	A1/F 2A	18.625	1.5	(10)	1	D5		/	
	12-24									/	
	24-36									/	
	36-48									/	
	48-60									/	
	60-72									/	
	72-84									/	
	84-96									/	
	96-108									/	
	108-END									/	
N3A	3" XXH	A1	3A	2.78	.725	4	1	D4	POK.	/	
3B									POK.	/	
3C										/	
N4x1	2" 5/16"			1.91	.469					/	
x2										/	
x3										/	
N5	4" XXH			3.70	.799					/	
N6A	2" 5/16"			1.91	.469					/	
6B										/	
N7										/	
N8										/	

Number of Radiation Barrier Warning Signs Erected \_\_\_\_\_ Number of Radiation Barrier Warning Signs Returned \_\_\_\_\_

Work Location Legend (insert number): [1] Inside Fab. Shop [2] Yard/Lay-down Area [3] Piping/Modular Fab. Area [4] N/A (Other)

IRIS Procedure: Single Wall Exposure: RT 1, 2, 2A, 6, 7 Double Wall Exposure: RT 3, 3A, 4, 5, 8  
 S.O.D. = Minimum Source-to-object distance O.F.D. = Distance source side of Object to film at min. S.O.D.  
 AB - Arc Burns BT - Burn Through CK - Crack EP - Excessive Penetration P - Porosity  
 EUC - External Undercut IUC - Internal Undercut HB - Hollow Bead IP - Incomplete Penetration S - Slag  
 IC - Internal Concavity LF - Lack of Fusion LC - Low Cover MA - Misalignment

Unit # \_\_\_\_\_ IRISNDT Kilometres \_\_\_\_\_  
 In \_\_\_\_\_ Gordon Thomas Hrs. \_\_\_\_\_  
 In \_\_\_\_\_ CCSB 48.9712 PT II Hrs. \_\_\_\_\_  
 Personnel: MS GT PT G

Film Quantity:  
10-12x3 1/2 - D5  
44-5 2/3 x 70 - D4

Interpretation by: Gordon Thomas (Print) SNT-TC-1A #  
Brandon Thomas (Signature) C.G.S.B. # 6  
 I am in full agreement with report contents:  
 Client Representative: \_\_\_\_\_

Edmonton (780) 437-4747	Fort McMurray (780) 743-1536	Cold Lake (780) 594-1114	Mailing Address
Calgary (403) 279-6121	Grande Prairie (780) 532-2283	Red Deer (403) 347-1742	5908 - 96 Street
Nisku (780) 955-7616	High Level (780) 841-0470	Tulsa, OK (918) 446-8773	Edmonton, Alberta
Barrhead (780) 674-3018	Lloydminster (780) 875-6455	Houston, TX (713) 461-4010	T6E 3G3

Exposure Device #: \_\_\_\_\_ Source #: \_\_\_\_\_ Job / P.O. #: B7007-01 IRISNDT #: 301470 Date: Sept 12/05

Cobalt 60  IR 192  X-Ray  EFSS: 118 Client: Presson

Film Brand: AGFA #Film/cassette: 11 Location: Nisku

Code: ASME VIII UWSI Item: \_\_\_\_\_ Material: Pi

Film #	Size, Location, Thickness	Welder ID	IRISNDT Proc.	SOD Inches	OFD Inches	# of Exp.	Work Location	Film Type	Type and Location of Discontinuities (circle rejectable discontinuities)	Accept	Reject
N1	6" 5/80	A1	3	6.07	557	3	1	D5		/	
2	✓	1	✓	✓	✓	✓	✓	✓		/	
3A	3" XXH	S	3A	2.98	1.05	4	✓	D4		/	

Number of Radiation Barrier Warning Signs Erected \_\_\_\_\_ Number of Radiation Barrier Warning Signs Returned \_\_\_\_\_

Work Location Legend (insert number): [1] Inside Fab. Shop [2] Yard/Lay-down Area [3] Piping/Modular Fab. Area [4] N/A (Other)

IRIS Procedure: Single Wall Exposure: RT 1, 2, 2A, 6, 7 Double Wall Exposure: RT 3, 3A, 4, 5, 8	S.O.D. = Minimum Source-to-object distance O.F.D. = Distance source side of Object to film at min. S.O.D.	AB - Arc Burns BT - Burn Through CK - Crack EP - Excessive Penetration P - Porosity	EUC - External Undercut IUC - Internal Undercut HB - Hollow Bead IP - Incomplete Penetration S - Slag	IC - Internal Concavity LF - Lack of Fusion LC - Low Cover MA - Misalignment
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Unit # IRISNDT CORP Kilometres: \_\_\_\_\_ Film Quantity: 6- 8 1/2 x 70 - D5 Interpretation by: GORDON THOMAS SNT-TC-1A II

In GORDON THOMAS Out RT II Hrs. \_\_\_\_\_ (Print) C.G.S.B. II (Level)

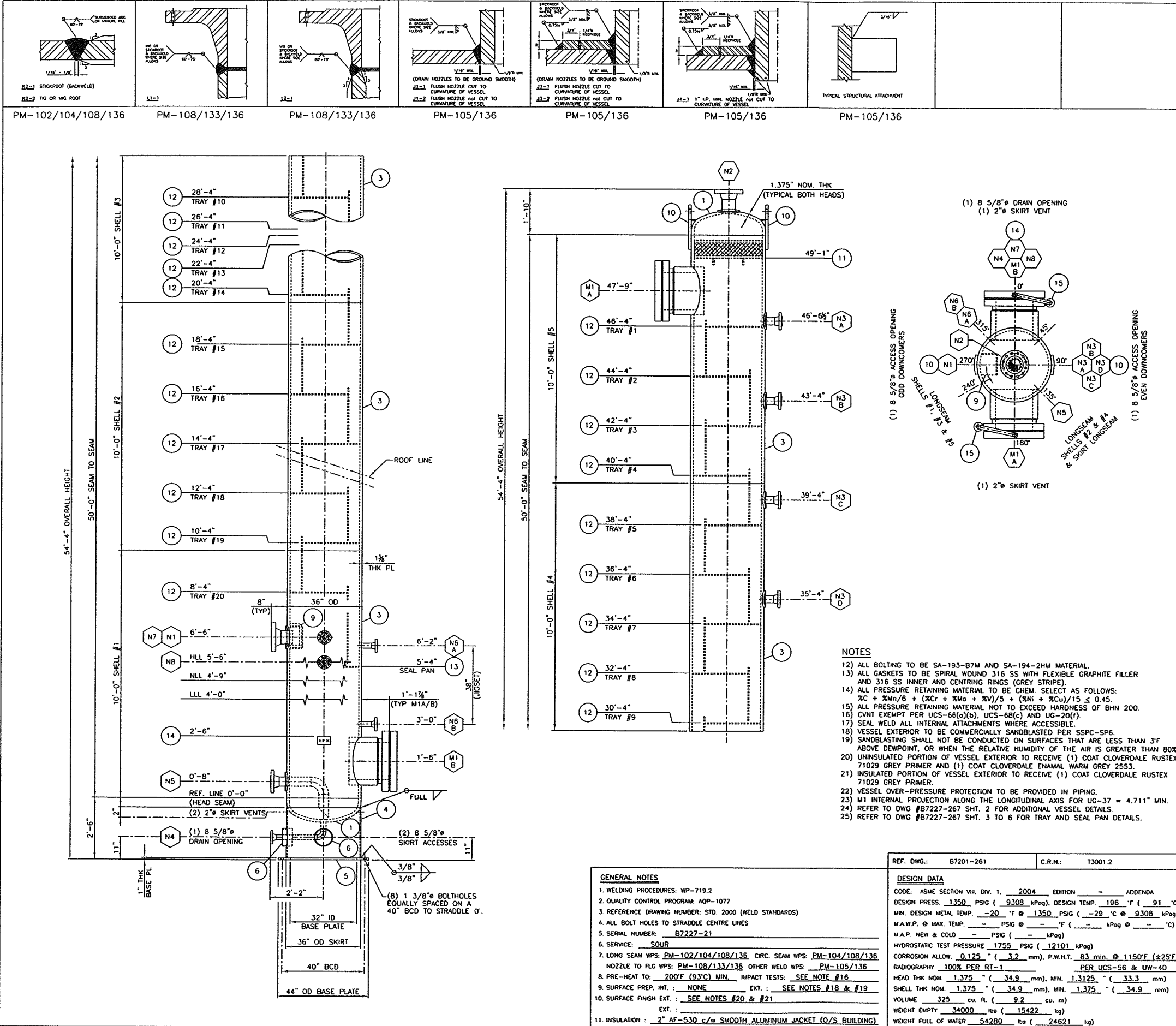
In ASNT LEVEL II - RT Out \_\_\_\_\_ Hrs. \_\_\_\_\_ (Signature) C.G.S.B. # 6

Personnel: MS GT PT I am in full agreement with report contents: \_\_\_\_\_

Client Representative: \_\_\_\_\_

Edmonton (780) 437-4747	Fort McMurray (780) 743-1536	Cold Lake (780) 594-1114	Mailing Address
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Nisku (780) 955-7616	High Level (780) 841-0470	Tulsa, OK (918) 446-8773	Edmonton, Alberta
Barrhead (780) 674-3018	Lloydminster (780) 875-6455	Houston, TX (713) 461-4010	T6E 3G3

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BILL OF MATERIALS					
MARK	PART	DESCRIPTION	QTY	MATERIAL	WELD STY
1	HEADS	36" OD x 1 3/8" NOM. THK 2:1 SE HEAD w/ 2" SF (HOT FORMED)	2	SA-51670N	K2-2
3	SHELLS	36" OD x 1 3/8" PL x 10'-0" LG	5	SA-51670N	K2-1/K2-2
4	SKIRT	36" OD x 1/2" PL x 2'-1" LG	1	SA-51670N	K2-1/K2-2
5	BASE PLATE	44" OD x 1" PL x 32" ID	1	SAG40.2144W	
6	SKIRT REINF.	8" SCH STD SMLS PIPE x 5" LG	3	SA-106B	
7					
8					
9	INLET DEFLECTOR	10" x 10" x 7" x 3/8" PL (FAB BOX, TILT 15° DOWN)	1	SA-51670	
10	LIFT LUGS	REFER TO DWG #B7227-261 SHT. 2			
11	MIST PAD	REFER TO DWG #B7227-261 SHT. 2			
12	TRAYS	REFER TO DWG #B7227-261 SHT. 3 TO 6			
13	SEAL PAN	REFER TO DWG #B7227-261 SHT. 4			
14	NAME PLATE	STANDARD NAME PLATE c/w "I" BRACKET	1	SAG40.2150W	
15	DAVIT	STANDARD DAVIT FOR 18" 600# BLIND FLANGE	2	SA-106B	
N1	INLET	6" 600# SCH XH RFWN FLG 6" SCH XXH SMLS PIPE x 5 7/8" LG	1	SA-105N	L2-1
	REPAD	11" OD x 3/4" PL x 6 3/4" ID (ROLL TO 36" ID)	1	SA-51670N	J4-1
N2	GAS OUTLET	6" 600# SCH XH RFWN FLG 6" SCH XXH SMLS PIPE x 7" LG	1	SA-105N	L2-1
	REPAD	11" OD x 3/4" PL x 6 3/4" ID (FORM TO 36" OD 2:1 SE HEAD)	1	SA-51670N	J3-1
N3	AMINE INLET	3" 600# SCH XXH RFWN FLG 3" SCH XXH SMLS PIPE x 6" LG	4	SA-105N	L1-1
	REPAD	8" OD x 3/4" PL x 3 5/8" ID (ROLL TO 36" ID)	4	SA-51670N	J3-2
N4	DRAIN	2" 600# SCH 160 RFWN FLG 2" SCH 160 SMLS PIPE x 1'-7 7/8" LG	1	SA-106B	L1-1
	REPAD	2" SCH 160 90° LR BW ELL	1	SA-234WPB	L1-1
	IN HEAD	2" SCH 160 SMLS PIPE x 5 3/4" LG	1	SA-106B	J1-1
N5	AMINE OUTLET	4" 600# SCH XXH RFWN FLG 4" SCH XXH SMLS PIPE x 1'-3 3/4" LG	1	SA-105N	L1-1
	REPAD	9" OD x 3/4" PL x 4 5/8" ID (ROLL TO 36" ID)	1	SA-51670N	J4-1
	REPAD	4" SCH XH 90° LR BW ELL	1	SA-234WPB	L2-1
	REPAD	4" SCH XH SMLS PIPE x 11 3/8" LG	1	SA-106B	L1-1
N6	LG-30006	2" 600# SCH 160 RFWN FLG 2" SCH 160 SMLS PIPE x 6 1/4" LG	2	SA-105N	L1-1
	REPAD	2" SCH 160 SMLS PIPE x 6 1/4" LG	2	SA-106B	J1-2
N7	PI-30007	2" 600# SCH 160 RFWN FLG	1	SA-105N	L1-1
	REPAD	2" SCH 160 SMLS PIPE x 6 1/4" LG	1	SA-106B	J1-2
N8	TI-30005	2" 600# SCH 160 RFWN FLG 2" SCH 160 SMLS PIPE x 6 1/4" LG	1	SA-105N	L1-1
	REPAD	2" SCH 160 SMLS PIPE x 6 1/4" LG	1	SA-106B	J1-2
M1	MANWAY	18" 600# FVC RFWN FLG x 1'-8" LG (NOTE #23) 18" 600# RF BLIND FLG 18" 600# RF x 1/8" THK GASKET 1 5/8" x 10 3/4" LG STUDS /w (2) NUTS EACH	2 2 2 40	SA-105N SA-105N NOTE #13 NOTE #12	J1-2

- NOTES**
- ALL BOLTING TO BE SA-193-B7M AND SA-194-2HM MATERIAL.
  - ALL GASKETS TO BE SPIRAL WOUND 316 SS WITH FLEXIBLE GRAPHITE FILLER AND 316 SS INNER AND CENTERING RINGS (GREY STRIPE).
  - ALL PRESSURE RETAINING MATERIAL TO BE CHEM. SELECT AS FOLLOWS:  
%C + %Mn/6 + (%Cr + %Mo + %V)/5 + (%Ni + %Cu)/15 ≤ 0.45.
  - ALL PRESSURE RETAINING MATERIAL NOT TO EXCEED HARDNESS OF BHN 200.
  - CVNT EXEMPT PER UCS-66(a)(b), UCS-68(c) AND UG-20(f).
  - SEAL WELD ALL INTERNAL ATTACHMENTS WHERE ACCESSIBLE.
  - VESSEL EXTERIOR TO BE COMMERCIALY SANDBLASTED PER SSPC-SP6.
  - SANDBLASTING SHALL NOT BE CONDUCTED ON SURFACES THAT ARE LESS THAN 3" ABOVE DEWPOINT, OR WHEN THE RELATIVE HUMIDITY OF THE AIR IS GREATER THAN 80%.
  - UNINSULATED PORTION OF VESSEL EXTERIOR TO RECEIVE (1) COAT CLOVERDALE RUSTEX 71029 GREY PRIMER AND (1) COAT CLOVERDALE ENAMAL WARM GREY 2553.
  - INSULATED PORTION OF VESSEL EXTERIOR TO RECEIVE (1) COAT CLOVERDALE RUSTEX 71029 GREY PRIMER.
  - VESSEL OVER-PRESSURE PROTECTION TO BE PROVIDED IN PIPING.
  - M1 INTERNAL PROJECTION ALONG THE LONGITUDINAL AXIS FOR UG-37 = 4.711" MIN.
  - REFER TO DWG #B7227-267 SHT. 2 FOR ADDITIONAL VESSEL DETAILS.
  - REFER TO DWG #B7227-267 SHT. 3 TO 6 FOR TRAY AND SEAL PAN DETAILS.

**GENERAL NOTES**

- WELDING PROCEDURES: WP-719.2
- QUALITY CONTROL PROGRAM: AQP-1077
- REFERENCE DRAWING NUMBER: STD. 2000 (WELD STANDARDS)
- ALL BOLT HOLES TO STRADDLE CENTRE LINES
- SERIAL NUMBER: B7227-21
- SERVICE: SOUR
- LONG SEAM WPS: PM-102/104/108/136 CIRC. SEAM WPS: PM-104/108/136 NOZZLE TO FLG WPS: PM-108/133/136 OTHER WELD WPS: PM-105/136
- PRE-HEAT TO: 200°F (93°C) MIN. IMPACT TESTS: SEE NOTE #16
- SURFACE PREP. INT.: NONE EXT.: SEE NOTES #18 & #19
- SURFACE FINISH EXT.: SEE NOTES #20 & #21
- INSULATION: 2" AF-530 c/w SMOOTH ALUMINUM JACKET (O/S BUILDING)

REF. DWG.: B7201-261 C.R.N.: T3001.2

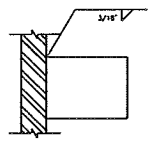
**DESIGN DATA**

CODE: ASME SECTION VIII, DIV. 1, 2004 EDITION - ADDENDA  
 DESIGN PRESS. 1350 PSIG (9308 kPag), DESIGN TEMP. 196 °F (91 °C)  
 MIN. DESIGN METAL TEMP. -20 °F @ 1350 PSIG (-29 °C @ 9308 kPag)  
 M.A.W.P. @ MAX. TEMP. - PSIG @ °F ( - kPag @ °C)  
 M.A.P. NEW & COLD - PSIG ( - kPag)  
 HYDROSTATIC TEST PRESSURE 1755 PSIG (12101 kPag)  
 CORROSION ALLOW. 0.125" (3.2 mm), P.W.H.T. .83 min. @ 1150°F (±25°F)  
 RADIOGRAPHY 100% PER RT-1 PER UCS-56 & UW-40  
 HEAD THK NOM. 1.375" (34.9 mm), MIN. 1.3125" (33.3 mm)  
 SHELL THK NOM. 1.375" (34.9 mm), MIN. 1.375" (34.9 mm)  
 VOLUME 325 cu. ft. (9.2 cu. m)  
 WEIGHT EMPTY 34000 lbs (15422 kg)  
 WEIGHT FULL OF WATER 54280 lbs (24621 kg)

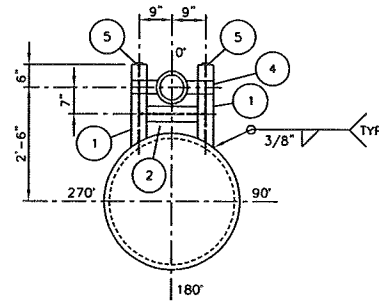
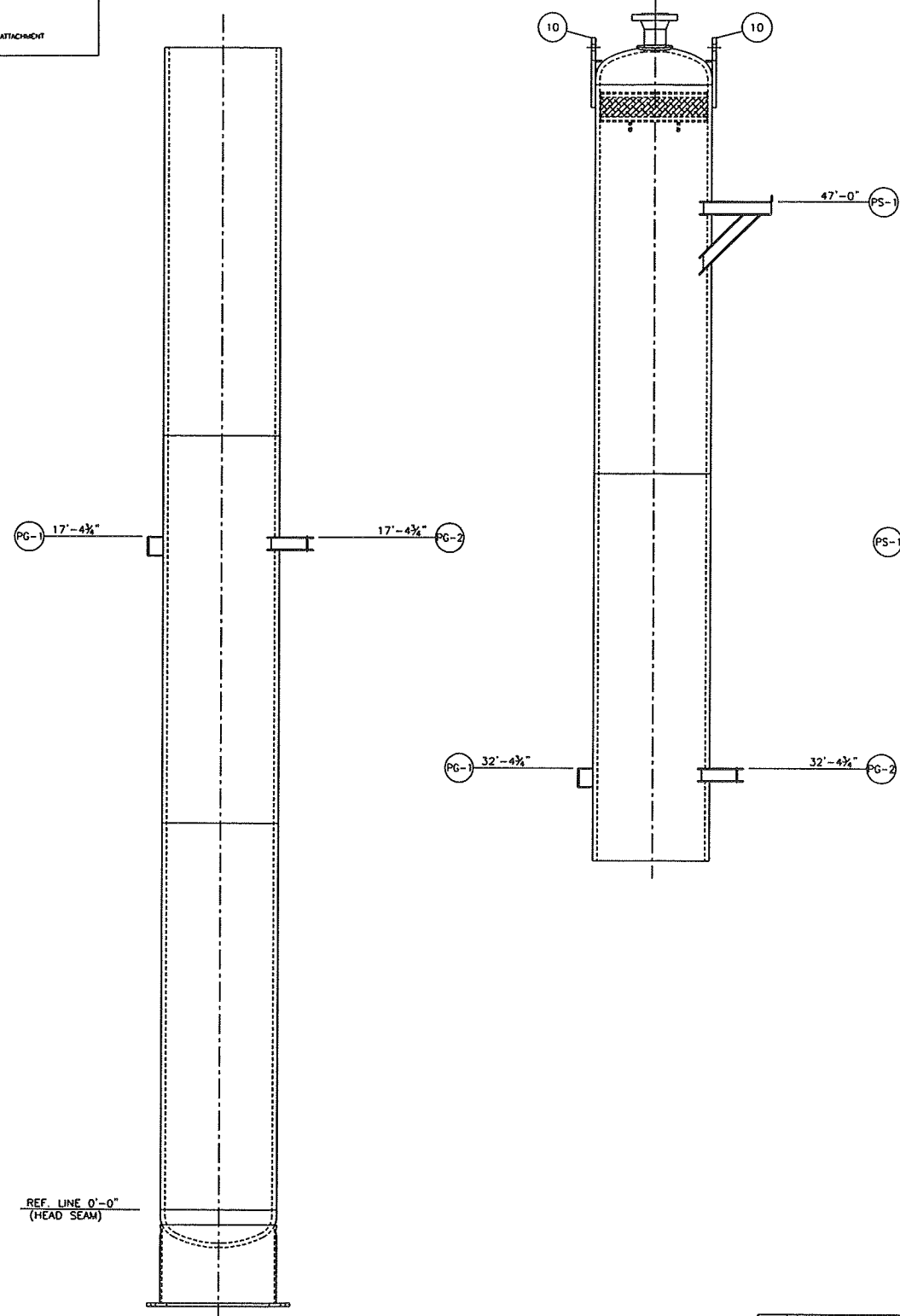
**Presson**  
ENERFLEX

CUSTOMER	FORT ENERGY CORPORATION c/o BDR ENGINEERING		
CUSTOMER REF. NO.	54000-7REV.0	JOB NO.	B7227-21
PROJECT	SANDHILLS GAS PLANT LSD 07-25-62-06 W5M		
TITLE	AMINE CONTACTOR (C-300) 36" OD x 50'-0" S/S x 1350 PSIG @ 196°F 914 mm OD x 15240 mm S/S x 9308 kPag @ 91°C		
DRAWN	BY	CHECKED	APPROVED
KH			
SCALE	1/2" = 1'-0"		DATE
	05/07/15		DRAWING NUMBER
	B7227-261 SHT. 1 OF 6		

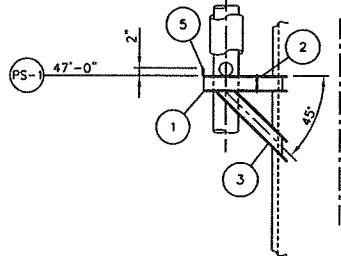
THIS DRAWING IS THE EXCLUSIVE PROPERTY OF PRESSON ENERFLEX AND MAY NOT BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT THE WRITTEN AUTHORIZATION OF PRESSON ENERFLEX.



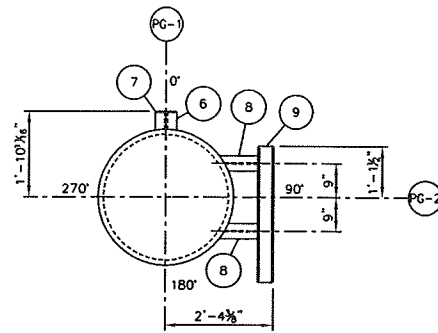
TYPICAL STRUCTURAL ATTACHMENT



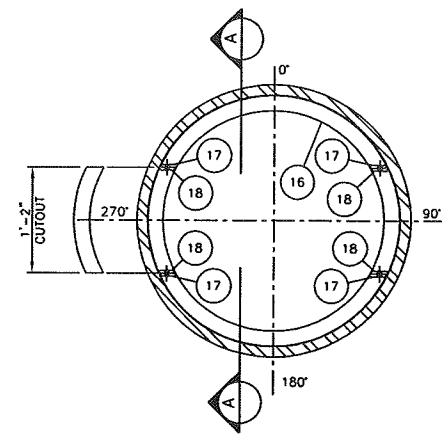
PIPE SUPPORT 1 DETAIL



PIPE GUIDE 1 & 2 DETAIL

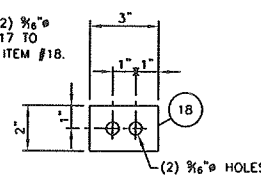


MISTPAD SUPPORT DETAIL

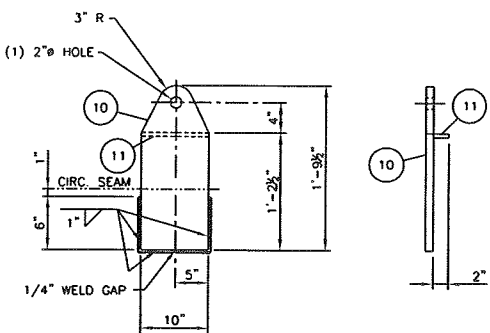


SECTION "A-A"

SHOP NOTE:  
SHOP TO DRILL (2) 3/16" HOLES IN ITEM #17 TO MATCH HOLES IN ITEM #18.



DETAIL #1



LIFT LUG DETAIL

BILL OF MATERIALS				
MARK	PART	DESCRIPTION	QTY.	MATERIAL
1	PIPE SUPPORT 1	W4 x 13# x 1'-9 3/4" LG (SEE DETAIL)	2	SAG40.2150W
2	PIPE SUPPORT 1	W4 x 13# x 1'-5 3/4" LG (SEE DETAIL)	1	SAG40.2150W
3	PIPE SUPPORT 1	W4 x 13# x 2'-2 3/8" LG (SEE DETAIL)	2	SAG40.2150W
4	TRUNNION	REFER TO GAS/GLYCOL EXCHANGER DWG		
5	SUPPORT STOP	2" x 3/8" PL x 2" LG	2	SAG40.2144W
6	PIPE GUIDE 1	W5 x 15# x 4 5/8" LG (SEE DETAIL)	2	SAG40.2150W
7	PIPE GUIDE 2	6" x 3/8" PL x 6" LG	2	SAG40.2144W
8	PIPE GUIDE 2	W4 x 13# x 10" LG (SEE DETAIL)	4	SAG40.2150W
9	PIPE GUIDE 2	W4 x 13# x 3'-0" LG (SEE DETAIL)	2	SAG40.2150W
10	LIFT LUGS	9" x 1 1/4" PL x 1'-9 1/2" LG ROLL WIDTH TO 30" ID	2	SA-51670N
11	LIFT LUG SUPPORT	2" x 1/2" PL x 9" LG (CUT TO SUIT)	2	SA-51670N
12	BOLTING	1/2" x 1 1/2" LG CAPSCREWS c/w (1) NUT EACH	8	GR. 5
13	MIST PAD	33" OD x 6" THK x 9# DENSITY MISTEX (3) PIECE	1	316L SS
		REMOVABLE c/w CS SUPPORT GRIDS		
15	MIST PAD SUPPORT	33 1/8" OD x 3/8" PL x 29 1/8" ID	1	SA-51670
16	MIST PAD SUPPORT	33 1/8" OD x 3/8" PL x 29 1/8" ID (SEE DETAIL)	1	SA-51670
17	SUPPORT CLIPS	2" x 3/8" PL x 3" LG (SEE DETAIL)	4	SA-51670
18	SUPPORT CLIPS	2" x 3/8" PL x 3" LG (SEE DETAIL)	4	SA-51670

NOTES

1) REFER TO DWG #B7227-261 SHT. 1 FOR VESSEL ORIENTATION AND DETAILS.

NO.	REVISION	BY	CHKD.	DATE
0	ISSUED FOR CONSTRUCTION	KH		05/08/02
A	ISSUED FOR APPROVAL	TBB		05/07/25

CUSTOMER REFERENCE	54000-7REV.0	CUSTOMER	FORT ENERGY CORPORATION c/o BDR ENGINEERING	JOB NO.	B7227-21
		PROJECT:	SANDHILLS GAS PLANT LSD 07-25-62-06 W5M		
		TITLE:	AMINE CONTACTOR (C-300) ADDITIONAL DETAILS		
DRWNG	TBB	CHECKED	APPROVED	SCALE	DATE
				1"=1'-0"	05/07/25
DRAWING NUMBER		B7227-261 SHT. 2 OF 6			

## INSULATION INSPECTION REPORT

CUSTOMER: FORT ENERGY TAG # \_\_\_\_\_

PRESSON JOB # B-7227-21 DATE: Jan 30 106

<p>PRE-INSULATION INSPECTION</p>	<p>Contractor Verification</p> <p><input checked="" type="checkbox"/></p>	<p>- Insulation surfaces are dry, free of dirt, dust, grease, frost, moisture, and imperfection and are coated.</p>
<p>INSULATION APPLICATION</p>	<p><input checked="" type="checkbox"/></p>	<p>- Review construction specifications and/or equipment and instrument list for insulation requirements &amp; specifications.</p>
<p>INSULATION MATERIALS</p>	<p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	<p>- Mineral Fiber Preformed Pipe Insulation (ASTM C547)</p> <p>- Mineral Fiber Block &amp; Board Thermal Insulation (ASTM C612)</p> <p>- Metal Jacketing (Pipe &amp; Vessels)</p>
<p>INSULATION THICKNESS</p>	<p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	<p>- Contractor shall confirm insulation thickness with the specific insulation material supplier and ensure conformity based on requirements in the equipment and instrument list.</p> <p>- The thickness of the basic insulation on equipment heads shall be the same as the thickness on the cylindrical section of the vessel.</p> <p>- Contractor verified that the fit-up of insulation and overall workmanship is of acceptable quality.</p>
<p>METALLIC JACKET INSTALLATION</p>	<p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	<p>- The metal jacket shall be applied with minimum longitudinal over laps of 50mm and minimum circumferential overlaps of 75mm.</p> <p>- Metal jacketing is of the minimum (.016) for elbows and (.020) for pipe and vessel coverage. 1/2" &amp; 3/4" stainless steel banding and stainless steel screws to be used in the applications.</p> <p>- Contractor verified that the fit-up of the jacketing and overall workmanship is of acceptable quality.</p>

CONTRACTOR SIGNATURE: 