

Issuing Authority: Marvin J. (Ty) DeBelser

Date of Issue: March 13, 2008



Qu Control

QCFOFinalInspectionReleaseCertificateR00

FINAL INSPECTION RELEASE CERTIFICATE

CUSTOMER: Murphy Oil Co HZ Projects

SALES ORDER# R61102576

PRODUCT: 1.5 mm btu/hr Sour Service Pre-Heater Pkg. 48"x16' 3" ANSI
1500# x 3" ANSI 1500# RTJ.

WO#: 06280

DATE: Jan. 28/09

FINAL INSPECTION DOCUMENTATION

REVIEWED BY: [Signature]

ACCEPTED: [Checkmark]

REJECTED:

STANDARD DOCUMENTATION REQUIREMENTS: (SEE DOCUMENT REQUIREMENT LIST)

ADDITIONAL DOCUMENT REQUIREMENTS: (TO BE RECORDED HERE IF APPLICABLE I.E. DOCUMENT PACKAGE

REQUIRED BY CUSTOMER ETC.)

Q.C. FILE CLOSURE BY: [Signature]

DATE: Jan. 28/09

LOOSE COMPONENTS REQUIRED / PREPARED

ITEMS REQUIRED:

NO. OF BOXES OR PKGS. 1

1.5 mm btu/hr Sour Service pre-heater pkg.
3" Ansi 1500# x 3" Ansi 1500# RTJ

ADDITIONAL HARDWARE OR FASTENERS REQUIRED

YES ☐ NO ☒

PREPARATION FOR SHIPMENT / STORAGE

PREPARATION NEEDED / COMPLETED

Ref; Quality Control Manual Sec 15 Rev 6

S/N # NWP-1563

PART # MANFSO

INVENTORY TAGS ATTACHED

YES ☒

NO ☐

SHIPPING INSTRUCTIONS

CUSTOMER P.O. REVIEWED

YES ☒

N/A ☐

CONTACT PERSON AUTHORIZED TO RELEASE PRODUCT: N/A

PHONE:

FAX: 1/A

RELEASED TO INVENTORY:

DATE:

RELEASED TO CUSTOMER: Quanta Refinery

DATE: Jan 28/09



RAE Engineering and Inspection Ltd.

#111, 4808 - 87th Street, Edmonton, Alberta T6E 5W3
Telephone: (780) 469-2401 • Fax: (780) 468-2422

REPORT #

PAGE

OF

JOB #

08 - 09266

DATE

Jan 23/09

CLIENT

MURPHY / 112

Ship Inspection at MURPHY

- (1) Hydro Test 10000 PSI, 4 coils of Line reactor 6280
(a) Test started → 12:30 Temp → 14°C
Test ended → 2:00 PM
(b) SC-PS → MAP 10000-3 EXP 09/29/09
MAP 10000-1 EXP 09/29/09
(c) No leak-offs or distortion was found during the test.
(d) - Two under cuts were found on pipe/weld on
shell/weld creases - clear marked them and
sent instructions to ship foreman to grab them.
- (2) PADD check on line reactor 6279.
- no problems found.
- (3) PADD check on machinery stand 6286 → no problems
found. Electrical fillings/connections have not completed
yet. TARPON connections will be completed in next
week.
- 6286 → Air Thursday / Jan 29/09
6280 → Tuesday / Feb 03/09.
- (4) (a) RT reports reviewed → all.
(b) Pumps checked visually → all.
(c) Air header ID's checked → all.
(d) All other equipment checked → all.

SIGNATURE OF REPRESENTATIVE

[Signature]

PRINT NAME

M 01980

NWP INDUSTRIES INCORPORATED

SKIDDED EQUIPMENT TRAVEL SHEET

APPROVED BY:

Openrock

DATE:

Oct 27 08

SIN NWP-1563

W/O# 06280

 DESCRIPTION: 1.5mm blu/hr Sour Service Preheater Pkg, 48" x 116",
 DRAWING #: NWP-1559 REV 4 NWP-1559-1^{REV 5} 3" ANSI 1500# RTJ x 3" ANSI 1500# RTJ

	REQ.	HOLD	EMPLOYEE INT.	DATE COMPLETE	QC INIT.	DATE
QUOTATION REVIEWED	N/A				N/A	
WORK INSTRUCTIONS ISSUED	✓		X/B	Nov 11 08	DP	Oct 27
WORK INSTRUCTIONS REVIEWED	✓		X/B	Nov 11 08	DP	Oct 27
ABSA NOTIFIED FOR INSTALLATION INSPECTION	N/A				N/A	
MATERIAL & PARTS RELEASED	✓		X/B	Nov 11 08	DP	Jan 19
HYDRO TEST PIPING	N/A				N/A	
INSTRUMENTATION	✓	CRM			DP	Jan 19
PNEUMATIC LEAK TEST	✓		N/A		N/A	
INSTRUMENTATION VALVES / FUNCTION TEST	✓	✓	N/A		N/A	
VISUAL INSPECTION P & ID CHECKED	✓		X/B	Jan 12 09	DP	Jan 19
VISUAL INSPECTION OF BUILDING & RECEIVING OF P.O.	✓		X/B	Jan 12 09	DP	Jan 19
ANY CHANGE ORDERS VERIFIED COMPLETE	N/A				N/A	
PREPARED FOR SHIPMENT & PACKAGE LOOSE ITEMS, TEST, CRATED AND DOCUMENTED	✓		X/B	Jan 12 09	DP	Jan 19
VISUAL INSPECTION AFTER PAINT & RECEIVING OF P.O.	✓		X/B	Jan 12 09	DP	Jan 19
PACKAGING / PRESERVATION REQUIREMENTS COMPLETE	✓		X/B	Jan 12 09	DP	Jan 19
SERVICING REQUIREMENTS DEFINED AND APPROVED	N/A				N/A	
QC INSPECTION AND FINAL RELEASE AND STICKER ATTACHED.	✓	✓		Jan 28 09	DP	Jan 19

ACCEPTED BY CUSTOMER

DATE

NWP INDUSTRIES INCORPORATED

SKID TRAVEL SHEET

APPROVED
BY: Opertysche

SIN NWP-1563

DATE: Oct 27/08

WIO#: 06280

DESCRIPTION: 1.5mm blu/hr Prewater PKg, 48" x 16',
3" ANSI 1500# RTJ x 3" ANSI 1500# RTJ

DRAWING #: NWP-1559-3 REV 0

	REQ.	HOLD	EMPLOYEE INT.	DATE COMPLETE	QC INIT.	DATE
WORK INSTRUCTIONS/ DRAWINGS ISSUED	✓		E		OP	Oct 27
WORK INSTRUCTIONS/ DRAWINGS REVIEWED	✓		E		OP	Oct 27
MATERIAL & PARTS RELEASED	✓		E		OP	Dec 29
WELDING PERSONNEL ASSIGNED	✓		E		OP	Dec 29
VISUAL CHECKS ON WELDS	✓		E		OP	Dec 29
DIMENSIONAL CHECK (FINAL)	✓				OP	Dec 29
SURFACE PREP. / SANDBLAST ETC. & P.O. RECEIVED	N/A				N/A	
PRIMER PAINT	N/A				N/A	
FINAL PAINT & P.O. RECEIVED	N/A				N/A	
QC INSPECTION & FINAL RELEASE	✓					Dec 29

ACCEPTED BY CUSTOMER _____ DATE _____

NWP Industries Inc.

INDIRECT FIRED HEATER COIL EXAMINATION AND INSPECTION REPORT

DO NOT START CONSTRUCTION WITHOUT AI REVIEW

EXAMINATION AND INSPECTION REPORT

REVISION NO.:

AI REVIEW: 

REVIEW DATE: Oct. 20, 2008

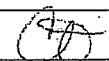


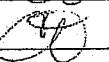


















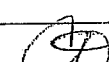






SERIAL NO.: NWP-1563 JOB NO.: 06280

COIL TYPE: 48" 116', 3" ANSI 1500# RTJ x 3" ANSI 1500# RTJ

DRAWING NO.: NWP-1559-2 DWG. REVISION NO.: 0

EXAMINATION AND INSPECTION REPORT

INITIATION BY:

Seq.	Item	Comments	Q.C.I.	Date	A.I. Hold Points	A.I.	Date	Owner	Date
1.	Calculations in File			<u>Oct 21/08</u>			<u>10.20.08</u>		
2.	Release of App'd Dwg.			<u>Oct 21/08</u>			<u>10.20.08</u>		
3.	Heat Numbers Recorded		<u>DP</u>	<u>Jan 2</u>			<u>1.5.09</u>		
4.	MTRs Checked	<u>HOLD</u>	<u>DP</u>	<u>Jan 2</u>			<u>1.5.09</u>		
5.	Materials Checked Against Drawings and Specs	<u>HOLD</u>	<u>DP</u>	<u>Jan 2</u>					
6.	W.P.S. Checked		<u>DP</u>	<u>Jan 2</u>					
7.	Welders Qualified			<u>Oct 21/08</u>					
8.	Thicknesses Recorded								
9.	Fit-up Examination(s)		<u>DP</u>	<u>Jan 2</u>					
10.	Impact Tests	<u>NA</u>							
11.	Welds Examined		<u>DP</u>	<u>Jan 2</u>					
12.	Welder I.D. Checked		<u>DP</u>	<u>Jan 2</u>					
13.	Final External Inspection						<u>1.5.09</u>		
14.	Radiography <u>100%</u>	<u>HOLD</u>		<u>Dec 22/08</u>			<u>1.5.09</u>		
15.	Other N.D.E.	<u>NA</u>							
16.	Final Ext. Prior to P.W.H.T.	<u>HOLD</u>	<u>DP</u>	<u>Jan 2</u>			<u>12.17.08</u>		
17.	PWHT Chart Checked	<u>HOLD</u>	<u>DP</u>	<u>Jan 2</u>			<u>1.5.09</u>		
18.	Hydrostatic Test	<div>Coil No. 1 Gauge #</div> <div><u>HOLD</u></div> <div>Coil No. 2 Gauge #</div>					<u>1.5.09</u>		
19.	CRNDrawing	<u>PRN# 09407.213</u>		<u>Oct 21/08</u>			<u>10.20.08</u>		
20.	N.C.R. #								
21.	Nameplate Stamping		<u>DP</u>	<u>Jan 2</u>			<u>1.5.09</u>		
22.	Data Report (AB-28) completed		<u>DP</u>	<u>Jan 2</u>			<u>1.5.09</u>		
23.	Nameplate Installation								

The Authorized Inspector shall be presented with the Examination and Inspection Report prior to construction so that he can designate additional inspection points and/or Hold Points. Any revisions shall be marked with a delta symbol with revision number and described at the bottom of this page.

an A.I. Inspection Point ** Denotes an A.I. Hold Point

Issuing Authority: Marvin J. (Ty) DeBelser / Dale
rg

Date of Issue: November 30, 2007

Rev Status: 1.0



Manufacturing

FORM-LHTS-001

Line Heater Travel Sheet

(Shell, Skid & Firetube Assembly)

By:

Date:

W.O. # 06280

Description: 1.5mm btu/hr Preheater Pkg 48" x 16'
3" ANSI 1500# RTJ x 3" ANSI 1500# RTJ

Drawing # NWP-1559-4 REV 0

SIN NWP-1563	Req.	Hold	Employee Initial	Date Complete	QC Initial	Date
Work Instructions/Drawings Issued					DP	Oct 27/08
Work Instructions/Drawings Reviewed					DP	Oct 27/08
Material & Parts Released					DP	Dec 16/08
Welding Personnel Assigned			JB		DP	Dec 16/08
Visual Dimension Inspection - Firetube/Stack			JB		DP	Dec 5/08
Visual Dimension Inspection - Skid					DP	Dec 16/08
Visual Dimension Inspection - Expansion Tank			JB		DP	Dec 16/08
Visual Dimension Inspection - Preheat Line					DP	Dec 16/08
Visual Dimension Inspection - Shell Assy.			JB		DP	Dec 16/08
Pneumatic Test - Firetube					DP	Dec 16/08
Hydro Test - Preheat Line					DP	Dec 16/08
Pneumatic Test - Shell Assy.					DP	Jan 5
Installation of All Welded Components Complete					DP	Jan 5
Final Inspection Release					DP	Jan 5
					DP	Jan 5

Accepted By Customer:

Date:

Welded piping for 1.5mm blv/hr Sour Service Preheater Pkg,
 48" x 16', 3" ANSI 1500# RTJ x 3" ANSI 1500# RTJ.

S/N NWP-1562

PRESSURE PIPING EXAMINATION CHECKLIST

DRWG# NWP-1559-41 REV 0

JOB NUMBER: 06280

NO.	FUNCTION	SIGNATURE OR INITIAL AND DATE	
		Q.C. INSPECTOR	OWNERS INSPECTOR
1	DRAWINGS: ABSA registration over 0.5 Cu.M. Approved by Owner. Approved for Construction (signed & dated).	N/A	
2	Owner's Inspector notified.	Op Dec 17	
3	Registered Welding Procedure Specifications, Q.C. Manual and Forms available at site, Job File started.	Op Dec 17	
4	Welders qualified for WPS's and have valid Performance Qualification cards. Welders Log completed. WPS reviewed with Welders.	Op Dec 17	
5	Material checked against P.O., drawings, and specifications. Identification confirmed. Colour coding applied.	Op Dec 17	
6	Sample of each Welder's work examined, including root spacing, alignment, cleaning, joint preparation, preheat and electrode control.	Op Dec 17	
7	Nondestructive Examination completed. Reports and radiographs reviewed, signed by Level II or III, Radiograph I.D. detailed on drawings.	N/A	
8	Visual Examination of all completed welds. Welders I.D. stamped and recorded on drawings. <i>weld + X-ray mapping completed by Et</i>	Op Dec 17	
9	Heat Treatment verified and recorded on drawings.	N/A	
10	Each system checked against specifications and drawings before test.	Op Dec 17	
11	All deficiencies recorded and signed off by Q.C.I. and Owner's Inspector before test.	Op Dec 17	
12	Pressure Test checked. Gauge calibration verified, gauge #'s recorded.	Op Dec 17	
13	System checked after test. Deficiencies recorded and corrected.	Op Dec 17	
14	Construction data reports (AB-83) prepared and signed by Q.C.I. and Owner's Inspector.	Op Dec 17	
15	Declaration form (AB-81) submitted to ABSA	N/A	
16	As built drawings accepted by Owner.	N/A	



CONSTRUCTION DATA REPORT FOR PIPING SYSTEMS

In accordance with the provisions of the Safety Codes Act

Shop Construction ☒; Field Construction ☐; Final Data Report ☒

Partial Data Report ☐ (from one ABSA-authorized Contractor to another ABSA- authorized Contractor).

Complete both sides of this Form

1. Constructed By: NWP Industries Inc Owner's Job No: 06280
 (Name of ABSA authorized primary contractor or subcontractor)
4017 60th Ave Innisfail, AB T4G 1S9
 (Address)

Alberta Quality Program No. AQP-1253

2. Constructed For: HZ Projects
(Name of primary contractor if different from above)

#700,400-5th Ave SW, Calgary, AB T2P0L6
(Address)

Alberta Quality Program No. AQP- NA Expiry Date: NA
(Required when the primary contractor undertakes some/all of the quality functions, e.g., Mat'l supply, NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)

3. Owner: Murphy Oil Company Ltd
(Name and address)
TupperH-2000-67009 b-43-B/93-P-9
(Location of installation)

Alberta Quality Program No. AQP- NA (Location of installation) NA Expiry Date: NA
(Required when the owner undertakes some/all of the quality functions e.g., Mat'l supply, NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)

4. Piping Design Alberta Registration No.: PP- NA
(Required if aggregate piping volume is over 0.5m³)

5. WP No.: WP-1604.2 ; Company: NWP Industries Inc. ; Owner's WP No. (If used): WP-NA
(Alberta Registration No.) (Alberta Registration No.)
WPS No(s). used: NWP-1 ; Owner's WPS No(s). (If used): NA

6. Code: ASME B31.1 Non Boiler External Piping ☐; ASME B31.1 Boiler External Piping ☐
; ASME B31.3 ☒ - Service category: Normal ☒, D ☐, M ☐, High Pressure ☐; B31.5 ☐;
B31.9 ☐.

[illegible]

Partial Data Reports, properly identified and certified by ABSA-authorized contractors, as listed below are attached to and form part of this Data Report ☐

No.	Line No.	Spool No.	Drg. No. (with Rev. No.)	Contractor (Name)	AQP No.	Expiry date

Remarks: Provide additional comments including noting any code work that was not performed by the ABSA- authorized contractor(s) supplying this document as a Partial Data Report but which must be completed by another ABSA-authorized contractor who assumes overall responsibility for conformance with the Safety Codes Act & Regulations and applicable ASME Codes, and who assures that all required code work is completed prior to putting the piping system into service.

Endorse certificate 'A' or 'B'

A. CERTIFICATE OF COMPLIANCE

Signed by the subcontractor when supplying this certificate as a
Partial Data Report

We certify that the statements in this Data Report are correct and that materials, construction and workmanship of the piping fabrication conform to the registered quality system and the applicable Piping code(s).

Date: _____

Subcontractor

Print Authorized Representative's Name

Signature

**This certificate is not valid unless it forms part of a
Final Data Report signed by Primary Contractor**

B. CERTIFICATE OF COMPLIANCE

Signed by the primary contractor when supplying this certificate as a
Final Data Report

We certify that the statements in this Data Report are correct and that piping job no. 06280 7 described in this Data Report was constructed in accordance with the Province of Alberta Safety Codes Act and Regulations, and applicable ASME Piping Code(s).

Date: Dec 15, 2008

NWP Industries Inc

Primary Contractor

Dustin Peitzsche

Print Authorized Representative's Name

Signature

CERTIFICATE OF INSPECTION

I, the undersigned, employed by Rae Engineering have inspected the piping

job no. 06280 described in this Construction Data Report and state that, to the best of my knowledge and belief, the Contractor has constructed this piping in accordance with the applicable Sections of the ASME Piping Codes and Province of Alberta Safety Codes Act and Regulations.

Date: Dec 15, 2008

Demuni Jayasinghe

Print Owner's Inspector's Name

Owner's Inspector's Signature

Date: _____

Name: _____

Sign.: _____

ABSA Safety Codes Officer
(BOILER EXTERNAL PIPING ONLY)

Partial Data Reports, properly identified and certified by ABSA-authorized contractors, as listed below are attached to and form part of this Data Report ☐

No.	Line No.	Spool No.	Drg. No. (with Rev. No.)	Contractor (Name)	AQP No.	Expiry date

Remarks: Provide additional comments including noting any code work that was not performed by the ABSA- authorized contractor(s) supplying this document as a Partial Data Report but which must be completed by another ABSA-authorized contractor who assumes overall responsibility for conformance with the Safety Codes Act & Regulations and applicable ASME Codes, and who assures that all required code work is completed prior to putting the piping system into service.

Endorse certificate 'A' or 'B'

A. CERTIFICATE OF COMPLIANCE

Signed by the subcontractor when supplying this certificate as a
Partial Data Report

We certify that the statements in this Data Report are correct and that materials, construction and workmanship of the piping fabrication conform to the registered quality system and the applicable Piping code(s).

Date: _____

Subcontractor

Print Authorized Representative's Name

Signature

**This certificate is not valid unless it forms part of a
Final Data Report signed by Primary Contractor**

B. CERTIFICATE OF COMPLIANCE

Signed by the primary contractor when supplying this certificate as a
Final Data Report

We certify that the statements in this Data Report are correct and that piping job no. 06280 7 described in this Data Report was constructed in accordance with the Province of Alberta Safety Codes Act and Regulations, and applicable ASME Piping Code(s).

Date: Dec 15, 2008 NWP Industries Inc

Primary Contractor

Dustin Peitzsche

Print Authorized Representative's Name

Signature

CERTIFICATE OF INSPECTION

I, the undersigned, employed by Rae Engineering have inspected the piping

job no. 06280 described in this Construction Data Report and state that, to the best of my knowledge and belief, the Contractor has constructed this piping in accordance with the applicable Sections of the ASME Piping Codes and Province of Alberta Safety Codes Act and Regulations.

Date: Dec 15, 2008

Demuni Jayasinghe


Print Owner's Inspector's Name Owner's Inspector's Signature

Date: _____

Name: _____

Sign.: _____

ABSA Safety Codes Officer
(BOILER EXTERNAL PIPING ONLY)

Issuing Authority: Marvin J. (Ty) DeBelser / Dale Karg Date of Issue: November 30, 2007 Rev Status: 1.0		 NWP INDUSTRIES INC.		ABSA FORM-NDE-001 N.D.E. Requirements	
CLIENT:				W.O. # <u>06280</u>	
PROJECT: <u>1500.000 BTU line Heater coil</u>				DATE: <u>DEC 16/08</u>	
PIPING: <input checked="" type="checkbox"/>		PRESSURE VESSEL: <input checked="" type="checkbox"/>		TANK:	
OTHER:					
<input type="checkbox"/> X-RAY <input checked="" type="checkbox"/> GAMMA RAY <input type="checkbox"/> ULTRASONICS <input type="checkbox"/> LIQUID PENETRANT <input type="checkbox"/> MAGNETIC PARTICLE <input type="checkbox"/> ACCOUSTIC EMISSION		<input checked="" type="checkbox"/> 100% <input type="checkbox"/> FULL <input type="checkbox"/> 25% <input type="checkbox"/> 10% <input type="checkbox"/> OTHER (DEFINE)		<input checked="" type="checkbox"/> ASME SECTION VIII-UW-51 <input type="checkbox"/> ASME SECTION VIII-UW-52 <input type="checkbox"/> ASME B31.1 <input checked="" type="checkbox"/> ASME B31.3 NFS <input type="checkbox"/> OTHER (SPECIFY)	
GENERAL INSTRUCTIONS:					
		Vessel s/n <u>NWP-1563</u>			
P1 Material					
Welder ID <u>3+L</u>					
Shell-T=					
Pipe-T= <u>3" Sch 160</u>					
Total Welds <u>36</u>					
Please use wire type IQI					
Please note all indications on films on reports					
Please include O.F.D - S.O.D S.F.D on reports					
SPECIAL REQUIREMENTS:					
P.O# <u>61-50048</u>					
PREPARED BY:					DATE:

Issuing Authority: Marvin J. (Ty)
DeBelser / Dale Karg
Date of Issue: November 30, 2007
Rev Status: 1.0



ABSA
FORM-NDE-001
N.D.E. Requirements

CLIENT: Murphy Oil W.O. # 06279106280
DATE: Jan-22/09

PROJECT: 32 shots welded piping

PIPING:

PRESSURE VESSEL: ☒

TANK:

OTHER:

☐ X-RAY

☒ GAMMA RAY

☐ ULTRASONICS

☐ LIQUID PENETRANT

☐ MAGNETIC PARTICLE

☐ ACOUSTIC EMISSION

☒ 100%

☐ FULL

☐ 25%

☐ 10%

☐ OTHER (DEFINE)

☒ ASME SECTION VIII-UW-51

☐ ASME SECTION VIII-UW-52

☐ ASME B31.1

☐ ASME B31.3 NFS

☐ OTHER (SPECIFY)

GENERAL INSTRUCTIONS:

Vessel s/n

nwp-1562 / nwp-1563

P1 Material

SA-106-B

Welder ID

3+L

Shell-T=

Pipe-T=

3" Sch 160

Total Welds

Please use wire type iQi

Please note all indications on films on reports

Please include O.F.D - S.O.D S.F.D on reports

SPECIAL REQUIREMENTS:

P.O#

61-50048

PREPARED BY:

Care Steen

DATE:

Jan-22/09

RADIOGRAPHIC INSPECTION REPORT

DATE: 16-DEC-08 PAGE 1 OF 2
 JOB #: 4043 P.O. # 61-50048

CLIENT: NWP Industries Inc. CODE: 5304 WO# 06280
 LOCATION: Innisfail, 1500.000 BTU Lineheater Coil

DEFECT LEGEND				CODE LEGEND				TECHNIQUES			
IF - INCOMPLETE FUSION	P - POROSITY	C - CRACK		1. ASME B31.3 NORMAL	5. ASME B31.1			1. SINGLE WALL EXPOSURE	3. SINGLE WALL VIEWING		
IP - INCOMPLETE PENETRATION	HL - HIGH / LOW	AC - ARC BURNS		2. ASME B31.3 SEVERE	6. CSA Z 662			2. DOUBLE WALL EXPOSURE	4. DOUBLE WALL VIEWING		
UC - UNDERCUTTING	IC - INTERNAL CONCAVITY	EP - EXCESSIVE PENETRATION		3. ASME VIII DIV 1 UW 51	7. API 650						
S - SLAG	LC - LOW COVER	SH - SHRINKAGE		4. ASME VIII DIV UW 52	8. OTHER						
BT - BURN THROUGH	HB - HOLLOW BEAD	1 - SLIGHT, 2 - MEDIUM, 3 - SEVERE									

FILM #	LOCATION	THK	DIA.	WLD R SYM	IF	IP	UC	S	BT	P	IC	LC	TECH #	CODE #	ACC.	REMARKS	REJECT
1	X-1	NWP-1563	4.38"	3"	L								2/3	1	<input checked="" type="checkbox"/>	1	
2	-2				3										<input checked="" type="checkbox"/>	2	
3	-3				3										<input checked="" type="checkbox"/>	3	
4	-4				L										<input checked="" type="checkbox"/>	4	
5	-5				L			1							<input checked="" type="checkbox"/>	5	Se56
6	-6				3										<input checked="" type="checkbox"/>	6	
7	-7				3										<input checked="" type="checkbox"/>	7	
8	-8				L										<input checked="" type="checkbox"/>	8	
9	-9				L	1									<input checked="" type="checkbox"/>	9	Pe24cm
10	-10				3			1							<input checked="" type="checkbox"/>	10	Se17cm
11	-11				3										<input checked="" type="checkbox"/>	11	
12	-12				L										<input checked="" type="checkbox"/>	12	
13	-13				3					1					<input checked="" type="checkbox"/>	13	Pe11cm
14	-14				↓										<input checked="" type="checkbox"/>	14	↑
15	-15				↓			1							<input checked="" type="checkbox"/>	15	Se1cm
16	-16				L										<input checked="" type="checkbox"/>	16	EPe2cm
17	-17				3						1				<input checked="" type="checkbox"/>	17	ICe14
18	-18				↓			1							<input checked="" type="checkbox"/>	18	Se23cm
19	-19				↓										<input checked="" type="checkbox"/>	19	
20	-20				L										<input checked="" type="checkbox"/>	20	
21	-21				3										<input checked="" type="checkbox"/>	21	
22	-22				↓					1					<input checked="" type="checkbox"/>	22	Pe2,6cm
23	-23				↓										<input checked="" type="checkbox"/>	23	
24	-24				↓			1		1					<input checked="" type="checkbox"/>	24	Se5cm, Pe7cm, 21cm
25															<input type="checkbox"/>	25	

No. of Exp.	Film Brand & Design	Screen Type & Thickness	No. of Film per Cassette	Type of Energy	Physical Size	Activity or K.V.	Maximum Source to Object Distance	Minimum Source to Object Distance	Material	Thickness			IQI		Exp. Time (mAs)
										Base	Weld	R.F.	Type	Size	
4/per	AGFA Pb	Pb	1	1F.192	0.150"	30Ci	5.63"	2.937"	C/S	.438"	.125"	.563"	ASTM	B	
	D4	.005"(F) .010"(B)													

This Certificate or Report is valid only for that work which was specifically requested. The Company is not responsible for any views or opinions expressed by employees performing this work which fall outside the contract terms or reference. All Certificates and / or reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the Company will not be responsible for deviation within the normal limits of accuracy in accordance with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.

A.M.		P.M.		TOTAL HOURS	KILOMETERS	SUBSISTENCE		FILM	
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T.		MANDAY	OT / MEALS		
				8.0 hrs.				96x(2 3/4" x 5.5") D4	
				O.T.					

Film Interpretation is done in accordance with the specified code to the best of my professional ability.
 Radiographer: Charles Hallett SNT/CGSB Level: II, RT Reg. No.: 11295 Assistant: Craig Olsen
 The above interpretation is a professional opinion, final film interpretation is the responsibility of the client.
 I am in full agreement with the contents of this report and accept receipt of the associated film. Client Representative: Opatysche

RADIOGRAPHIC INSPECTION REPORT

DATE: 16-DEC-08 PAGE 2 OF 2
JOB #: 4043 P.O. # 61-50048
CLIENT: NWP Industries Inc. CODE: 5304 Wb# 06280

LOCATION: Innisfail, 1500.000 BTU Lineheater Coil

DEFECT LEGEND

IF - INCOMPLETE FUSION
IP - INCOMPLETE PENETRATION
UC - UNDERCUTTING
S - SLAG
BT - BURN THROUGH
P - POROSITY
HL - HIGH / LOW
IC - INTERNAL CONCAVITY
LC - LOW COVER
HB - HOLLOW BEAD
C - CRACK
AC - ARC BURNS
EP - EXCESSIVE PENETRATION
SH - SHRINKAGE
1 - SLIGHT, 2 - MEDIUM, 3 - SEVERE

CODE LEGEND

1. ASME B31.3 NORMAL
2. ASME B31.3 SEVERE
3. ASME VIII DIV 1 UW 51
4. ASME VIII DIV UW 52
5. ASME B31.1
6. CSA Z 662
7. API 650
8. OTHER

TECHNIQUES

1. SINGLE WALL EXPOSURE
2. DOUBLE WALL EXPOSURE
3. SINGLE WALL VIEWING
4. DOUBLE WALL VIEWING

FILM #	LOCATION	THK	DIA.	WLD SYM	IF	IP	UC	S	BT	P	IC	LC	TECH #	CODE #	ACC.	REMARKS	REJECT
1 X-25	NWP-1563	438	3"	L									2/3	1	<input checked="" type="checkbox"/>		
2 -26															<input checked="" type="checkbox"/>		
3 -27															<input checked="" type="checkbox"/>		
4 -28															<input checked="" type="checkbox"/>		
5 -29															<input checked="" type="checkbox"/>		
6 -30				3											<input checked="" type="checkbox"/>		
7 -31				3				1		1					<input checked="" type="checkbox"/>	Self 3cm, Pet 5cm	
8 -32				L											<input checked="" type="checkbox"/>		
9 -33				3				1							<input checked="" type="checkbox"/>	500, 10cm	
10 -34				L											<input checked="" type="checkbox"/>		
11 -35															<input checked="" type="checkbox"/>		
12 -36															<input checked="" type="checkbox"/>		
13															<input type="checkbox"/>		
14															<input type="checkbox"/>		
15															<input type="checkbox"/>		
16															<input type="checkbox"/>		
17															<input type="checkbox"/>		
18															<input type="checkbox"/>		
19															<input type="checkbox"/>		
20															<input type="checkbox"/>		
21															<input type="checkbox"/>		
22															<input type="checkbox"/>		
23															<input type="checkbox"/>		
24															<input type="checkbox"/>		
25															<input type="checkbox"/>		

No. of Exp.	Film Brand & Design	Screen Type & Thickness	No. of Film per Cassette	Type of Energy	Physical Size	Activity or K.V.	Maximum Source Side Object To Film Distance	Minimum Source to Object Distance	Material	Thickness	IQI	Exp. Time C/min (mAs)
4/per	AGFA	Pb	1	1.192	0.150"	30Ci	563"	2.937"	C/S	.438"	.125" .563"	ASTM B
	DH	.005"(F) .010"(B)										

This Certificate or Report is valid only for that work which was specifically requested. The Company is not responsible for any views or opinions expressed by employees performing this work which fall outside the contract terms or reference. All Certificates and / or reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the Company will not be responsible for deviation within the normal limits of accuracy in accordance with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.

A.M.		P.M.		TOTAL HOURS	KILOMETERS	SUBSISTENCE		FILM
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T.	O.T.	MANDAY	OT / MEALS	SIZE
				PG.1 hrs.				48 x (2 3/4" x 5.5") DH

Film Interpretation is done in accordance with the specified code, to the best of my professional ability.
Radiographer: Charles Hallett SNT/CGSB Level: II, RT Reg. No.: 11295 Assistant: Craig Olsen
The above interpretation is a professional opinion, final film interpretation is the responsibility of the client.
I am in full agreement with the contents of this report and accept receipt of the associated film. Client Representative: Opetzsch
WHITE / GOLDENROD - CUSTOMER YELLOW - OFFICE PINK - INVOICE

IR-177 °F TCS-2 *W/L*

A & N Stress Relieving

Client: NWP Industries

Date: Dec 8/08 Job #: _____

AFE: _____

Operator: Kyle Klassen

123°F 2: 1137°F 3: BURN°F 4: BURN°F 5: BURN°F 6: BURN°F 7: BURN°F 8: BURN°F 9: BURN°F 10: BURN°F 11: BURN°F 12: BURN°F

50MM/H

Chart S.P. 50mm/hr

Description: _____

- End Soak
- 1 Hour

- Start Soak

- (1) Coil s/n: NWP 1563. Job # 06280 PO # 61-49289
- (23) SPOOLS Job # 06288. PO # 61-49400
- BF 32-08-679

OK DP Dec 30 08

PO# 61-49289



HEAT TREATMENT REQUIREMENTS

JOB NO.: 06280

CUSTOMER:

DATE: Dec 18/08

COMPONENT DESCRIPTION

DWG. NO. AND LINE NO.	DIAMETER	THICKNESS	MATERIAL	LENGTH	WEIGHT
"Line Header Coil"	3"	Sch 160	SA-106	211"	4383 lbs
SN NWP1563					

TYPE OF HEAT TREATMENT:

PRESSURE VESSEL STRESS RELIEVE P-NO. 1

HEATING

Temperature to be raised from 800°F (427°C) to 1100°F (594°C) at a maximum rate of 400 °F

(°C) per hour. NOTE: THIS VALUE MUST NEVER EXCEED 400°F (222°C) PER HOUR.

[Calculated rate = 400 degrees F/hr. (222 degrees C/hr) Divided by the maximum metal thickness of the shell or head plate in inches]

HOLDING

Temperature to be held at a minimum of 1100°F (594°C) for 60 minutes.

[Holding time to be determined by Table UCS-56 for Nominal Thickness as specified in UW-40(f)]

COOLING

Temperature to be lowered from 1100°F (594°C) to 800°F (427°C) at a maximum rate of 500 °F

(°C) per hour. NOTE: THIS VALUE MUST NEVER EXCEED 500°F (278°C) PER HOUR.

[Calculated rate = 500 degrees F/hr. (278 degrees C/hr.) Divided by the maximum metal thickness of the shell or head plate in inches]

From 800°F (427°C) items may be cooled in still air.

Additional Requirements:

- ☐ Job number and description required on heat treatment charts along with the operator's signature & date.
- ☐ Reporting of thermocouple attachment method and location, and verification of furnace thermocouple calibration is required.
- ☐ A sufficient number of thermocouples shall be located to control and maintain uniform distribution of temperature on all vessels and parts. Thermocouples shall be directly attached to the item or provision shall be made for thermocouple placement at bottom, centre and top of the furnace charge in accordance with the ASME Code.
- ☐ During the heating period, there shall not be a greater variation in temperature throughout the portion of the vessel being heated than 250° F (139° C) within any 15 ft. (4.6 m) interval of length. An adequate number of thermocouples must be used to ensure this Code requirement is met.
- ☐ During the holding period, there shall not be a greater difference than 150° F (83° C) between the highest and lowest temperature throughout the portion of the vessel being heat treated, except where the range is further limited by these instructions.
- ☐ If Capacitor Discharge welding is used to attach thermocouples an ASME Code Section IX Welding Procedure Specification is required (WPS qualification is not required), and the energy output must be limited to 125 Watt-Seconds.
- ☐ No other welding is permitted on vessels or parts. [0.5 x Capacitance in farads X Voltage ² = W-Sec.]
- ☐ The method of thermocouple removal shall not damage the heat treated item.

Q.C. Inspector Signature

Date:

Thermocouple Attachment Method: capacitor discharge

Location (s)

Furnace Heat Number BF32-08-679

Furnace Operator Signature [Signature]

Date: Dec 29/08



HEAT TREATMENT REQUIREMENTS

JOB NO.: 06280

CUSTOMER:

DATE: Dec 18/08

COMPONENT DESCRIPTION

DWG. NO. AND LINE NO.	DIAMETER	THICKNESS	MATERIAL	LENGTH	WEIGHT
NWP-1539-2 "Line Heater Coil"	3"	Sch 160	SA-106	211"	4383 lbs

TYPE OF HEAT TREATMENT: PRESSURE VESSEL STRESS RELIEVE P-NO. 1

HEATING

Temperature to be raised from 800°F (427°C) to 1100°F (594°C) at a maximum rate of 400 °F

() °C per hour. NOTE: THIS VALUE MUST NEVER EXCEED 400°F (222°C) PER HOUR.

[Calculated rate = 400 degrees F/hr. (222 degrees C/hr) Divided by the maximum metal thickness of the shell or head plate in inches]

HOLDING

Temperature to be held at a minimum of 1100°F (594°C) for 60 minutes.

[Holding time to be determined by Table UCS-56 for Nominal Thickness as specified in UW-40(f)]

COOLING

Temperature to be lowered from 1100°F (594°C) to 800°F (427°C) at a maximum rate of 500 °F

() °C per hour. NOTE: THIS VALUE MUST NEVER EXCEED 500°F (278°C) PER HOUR.

[Calculated rate = 500 degrees F/hr. (278 degrees C/hr.) Divided by the maximum metal thickness of the shell or head plate in inches]

From 800°F (427°C) items may be cooled in still air.

Additional Requirements:

- ☐ Job number and description required on heat treatment charts along with the operator's signature & date.
- ☐ Reporting of thermocouple attachment method and location, and verification of furnace thermocouple calibration is required.
- ☐ A sufficient number of thermocouples shall be located to control and maintain uniform distribution of temperature on all vessels and parts. Thermocouples shall be directly attached to the item or provision shall be made for thermocouple placement at bottom, centre and top of the furnace charge in accordance with the ASME Code.
- ☐ During the heating period, there shall not be a greater variation in temperature throughout the portion of the vessel being heated than 250° F (139° C) within any 15 ft. (4.6 m) interval of length. An adequate number of thermocouples must be used to ensure this Code requirement is met.
- ☐ During the holding period, there shall not be a greater difference than 150° F (83° C) between the highest and lowest temperature throughout the portion of the vessel being heat treated, except where the range is further limited by these instructions.
- ☐ If Capacitor Discharge welding is used to attach thermocouples an ASME Code Section IX Welding Procedure Specification is required (WPS qualification is not required), and the energy output must be limited to 125 Watt-Seconds.
- ☐ No other welding is permitted on vessels or parts. [$0.5 \times \text{Capacitance in farads} \times \text{Voltage}^2 = \text{W-Sec.}$]
- ☐ The method of thermocouple removal shall not damage the heat treated item.

Q.C. Inspector Signature

Date:

Thermocouple Attachment Method:

Location (s)

Furnace Heat Number

Furnace Operator Signature

Date:



R & R Stress Relieving Service Ltd.

Nisku: 2103 - 6th Street, T9E 7X8 Tel: (780) 955-7559 Fax: (780) 955-2903

Blackfalds: #13 Burbank Industrial Park Tel: (403) 885-2280 Fax: (403) 885-0177

Calgary: (403) 236-8980 Toll Free: 1-800-499-HEAT (+328)

CERTIFICATE OF CONFORMANCE OF RECORDING INSTRUMENTS

CERTIFIED BY: R & R Stress Relieving Service Ltd.
TEST NUMBER: RR0508
DATE: November 4, 2008
DATE DUE: May 4, 2009
INSTRUMENT MFG: Chino
MODEL NUMBER: AH-3725 N00
SERIAL NUMBER: AH-057C040
RECORDER NUMBER: IR-177

This instrument has been calibrated and it is within the manufacturers specifications.

REFERENCE STANDARDS

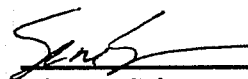
DIGI MITE 311600 S/N48430-5522

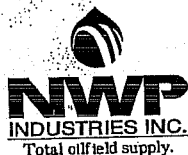
CERT DATE Nov 28/07

DIG. INDICATOR/CALIR. 028-8427113

CERT DATE Nov 28/07

The calibration of all standards and measuring instruments used in the calibration are traceable to the National Research Council of Canada in Ottawa or to the National Bureau of Standards in Washington, D.C.


Shane Stimson



HYDROSTATIC TEST AFFIDAVIT

CUSTOMER:

W.O. #

PROJECT:

PROJECT #

TEST PRESSURE:

HOLD TIME:

CODE REQUIREMENTS:

DATE:

ALL PERSONNEL ADVISED OF TEST

ALL SIGNS & FLAGGING POSTED

PRIOR TO FILLING: FITTINGS/HOSES & COMPONENT MEET REQUIRED TEST PRESSURE

SIGN OFF

SUPERVISOR

TESTER

PRODUCT DESCRIPTION

50% TEST PRESSURE LEAK / SYSTEMS CHECK COMPLETED

50% test pressure - 217.5 psig

EQUIPMENT DRAINED & FLUSHED TO PREVENT FREEZING - YES ☐ NO ☒

START TIME:

FINISH TIME:

TEST GAUGE IDENT:

PRESSURE RANGE

CALIBRATION DATE

NWP-1000-4
NWP-1000-5
NWP-1500-1
NWP-600

Dec 4.09
Dec 4.09
Oct 24.09
Dec 3.09

TEST BY:

DATE:

APPROVED BY:

DATE:



HYDROSTATIC TEST AFFIDAVIT

Sin# NWP - 1563.

CUSTOMER:	W.O. # 06280.
PROJECT:	PROJECT #
TEST PRESSURE: 4688 psig	HOLD TIME: 15min
CODE REQUIREMENTS: ANSI/ASME B31.3 N.F.S 2006 Edition	DATE: Dec. 30/08.
ALL PERSONNEL ADVISED OF TEST <input type="checkbox"/>	
ALL SIGNS & FLAGGING POSTED <input type="checkbox"/>	
PRIOR TO FILLING - FITTINGS / HOSES & COMPONENT MEET REQUIRED TEST PRESSURE	
SIGN OFF	SUPERVISOR
	TESTER

PRODUCT DESCRIPTION

50% TEST PRESSURE LEAK / SYSTEMS CHECK COMPLETED ☐

50% pressure - 2344 psi.

EQUIPMENT DRAINED & FLUSHED TO PREVENT FREEZING YES ☐ NO ☐

START TIME:

FINISH TIME:

TEST GAUGE IDENT.	PRESSURE RANGE	CALIBRATION DATE
HNPA 5000-9	WKA 0-5000 psig	March 12/09
NWPA 5000-8	WKA 0-5000 psig	August 07/09
NWPA 10000-3	0-10000 psig	Oct. 24/2009
NWPA 10000-1	0-1000 psig	Apr-04/2009
TEST BY:		DATE:
APPROVED BY:		DATE:

PNEUMATIC TEST AFFIDAVIT

CUSTOMER:		W.O. #:	06279/06280
OBJECT:	Firetubes	PROJECT #:	NA
TEST PRESSURE:	116 oz (1 psi)	HOLD TIME:	As req
TEST REQUIREMENTS:	Non-Code	DATE:	Dec 5, 2008

PRODUCT DESCRIPTION:

W.O. SER. # NWP-1502 DWG. # _____ REV. # _____
NWP-1503

1- All weldments

2- All weldments

3- All weldments

4- All weldments

5- All weldments

6- All weldments

REPAIRS AND COMMENTS

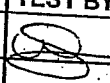
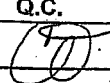
REPAIR PROCEDURE (BRIEF EXPLANATION)

PROCEDURE APPROVED BY: _____

COMPLETED REPAIR CHECKED BY: _____

ADDITIONAL COMMENTS

Finish Time: _____

TEST BY:	Q.C.	DATE	TEST GAUGE ID.	RANGE	CALIBRATION DUE:
		Dec 5, 08	NWP-32 NWP-32	0.5 psi	May 12, 08
			same as above		

APPROVED BY: Lustia Petryche DATE: _____



PNEUMATIC TEST AFFIDAVIT

CUSTOMER:		W.O. #:	06280 \$ 06281
PROJECT:	fire tubes	PROJECT #:	
TEST PRESSURE:	16 on 3 (1 psi)	HOLD TIME:	As per Reg.
CODE REQUIREMENTS:	NONE code	DATE:	Dec 12/00 08

PRODUCT DESCRIPTION:

TANK SER. # NWP-1563 DWG. # NWP-1559-2 REV. # 0

TEST -

#1. fire tube (NWP-1563)

#2 Fire tube (NWP-1564)

REPAIRS AND COMMENTS

REPAIR PROCEDURE (BRIEF EXPLANATION)

PROCEDURE APPROVED BY QC

COMPLETED REPAIR CHECKED BY QC

ADDITIONAL COMMENTS

Start Time: _____ Finish Time: _____

TEST #	TEST BY:	Q.C.	DATE	TEST GAUGE ID.	RANGE	CALIBRATION DUE:
1	Chris	CP	Dec 12/08	NWpg 27	0-5 psi	May 14 2009
2	Chris	CP	Dec 12/08	NWpg 28	0-5 psi	May 14 2009

TEST (S) APPROVED BY: Austin Reutgen DATE: Dec 12/08

PNEUMATIC TEST AFFIDAVIT

CUSTOMER:

PROJECT: Lineheater Shell

W.O. #: 06280

TEST PRESSURE: 16 oz (1 psi)

PROJECT #: NA

CODE REQUIREMENTS: Non-Code

HOLD TIME: As Req

DATE: Jan 06/ 2/09

PRODUCT DESCRIPTION:

TANK SER. # NWP-1563

DWG. # NWP-1559-2

REV. # 0

TEST:

#1 - All weldments, bolts, plugs

REPAIRS AND COMMENTS

REPAIR PROCEDURE (BRIEF EXPLANATION)

PROCEDURE APPROVED BY QC

COMPLETED REPAIR CHECKED BY QC

ADDITIONAL COMMENTS

Start Time: _____

Finish Time: _____

TEST #	TEST BY:	Q.C.	DATE	TEST GAUGE ID.	RANGE	CALIBRATION DUE:
1	Shelly	OP	Jan 06/09	nwpg-27	0-5 psig	May 27/09
2	Shelly	OP	Jan 06/09	nwpg-28	0-5 psig	May 27/09

TEST(S) APPROVED BY:

Justin Reitzsche

DATE:

Jan 6

PARTIAL ☐ A# 588813

Manufactured By: NWP Industries Inc 4017 60th Ave Innisfail, AB T4G 1S9

Manufactured For: HZ Projects #700,400-5thAve SW Calgary, AB T2P0L6

Ultimate Owner: Murphy Oil Company Ltd

Location of Installation: D-11-B/93-P-9

Manufacturer's Serial No.	Construction Drawing No.	CODE: ASME B31.3			Year Built
NWP-1563	NWP-1559-2Rev0	Edition	2006	Addenda	2008

CONSTRUCTION

	Coil ID/Purpose	Design Pressure	Design Temp	Design Minimum Temp	Corrosion Allowance	Registered Drawing No.	CRN
a	CoilA	3125psig	200F	-20F	0.125"	BDD-300Rev10	P9407.213
b	CoilB	3125psig	200F	-20F	0.125"	BDD-300Rev10	P9407.213
c	CoilC	3125psig	200F	-20F	0.125"	BDD-300Rev10	P9407.213
d	CoilD	3125psig	200F	-20F	0.125"	BDD_300Rev10	P9407.213
e							

COIL

COIL

Tubes			End Closures				Openings		
			Return Bend		Flanges				
Mat'l Spec.	Diameter	Thickness	Mat'l Spec.	Thickness	Mat'l Spec.	Rating	Mat'l Spec.	Size/Type	Rating
a SA106B	3"NPS	0.438"	SA234WPB	0.438"	SA105N	CL1500	NA		
b SA106B	3"NPS	0.438"	SA234WPB	0.438"	SA105N	CL1500	NA		
c SA106B	3"NPS	0.438"	SA234WPB	0.438"	SA105N	CL1500	NA		
d SA106B	3"NPS	0.438"	SA234WPB	0.438"	SA105N	CL1500	NA		
e									

HEADERS/MANIFOLDS

Purpose	Size	Shell	Ends				Openings		
		Mat'l Spec.	Thickness	Mat'l Spec.	Thickness	No	Mat'l Spec	Size/Type	Rating
f NA									
g NA									

TEST PRESSURE, NDE, POSTWELD HEAT TREATMENT AND SIZE

	Hydrostatic Test Pressure	Radiography (100% or % Random)	Other NDE (MT) (PT) (UT)	Postweld Heat Treatment		Overall Length	Heating Surface	Volume
				Temp.	Time			
a	4688psig	100%	NA	1125F	60mins	210.75"	56.79Ft2	2.46Ft3
b	4688psig	100%	NA	1125F	60mins	198.25"	55.25Ft2	2.36Ft3
c	4688psig	100%	NA	1125F	60mins	210.75"	56.79Ft2	2.46Ft3
d	4688psig	100%	NA	1125F	60mins	198.25"	55.25Ft2	2.36Ft3
e								
f								
g								

IMPACT TESTING: Exempt as per Table 323.2.2 ColumnA

REMARKS : Weight 4383 lbs WO#06279 PO#61-50137

CERTIFICATE OF COMPLIANCE

We certify that the statements in this report are correct and that all details of design, material, construction, and workmanship of this coil bundle are in accordance with the above Provincial Registered Design.

Date Jan-5/09 Signed [Signature] For NWP Industries Inc
(Representative) (Manufacturer)



CERTIFICATE OF SHOP INSPECTION



I, the undersigned, a duly authorized Safety Codes Officer employed by ABSA has inspected the above Heater Coils and state that, to the best of my knowledge and belief, the construction is in accordance with the Alberta Safety Codes Act and Regulations.

Jan 5, 2009

Joe Towarek

w/o
6280

W RT-1002 11T	CERTIFIED BY  NWP INDUSTRIES INC. MADE IN CANADA
3" CL 1500 4 PAGE COIL C	
MAWP 312.5	PSI AT 200 °F
MAEWP	PSI AT °F
MDMT 20 °F	AT 312.5 PSI
SERIAL NO. NWP-1563	YEAR BUILT 2008
CRN P-3407213	

W RT-1002 11T	CERTIFIED BY  NWP INDUSTRIES INC. MADE IN CANADA
3" CL 1500 4 PAGE COIL D	
MAWP 312.5	PSI AT 200 °F
MAEWP	PSI AT °F
MDMT 20 °F	AT 312.5 PSI
SERIAL NO. NWP-1563	YEAR BUILT 2008
CRN P-3407213	

CERTIFIED BY



NWP
INDUSTRIES INC.

MADE IN CANADA

RT 200%

HT

3" CL 1500 4 PASS COIL "B"

MAWSP 3125 PSIAT 200 °F

MAEWP PSIAT °F

MDMT 20 °F AT 3125 PSI

SERIAL NO. NWP-1563 YEAR BUILT 2008

CRN 9/10/2011

(A)

CERTIFIED BY



NWP
INDUSTRIES INC.

MADE IN CANADA

W

RT 100%

HT

3" CL 1500 4 PASS COIL "A"

MAWSP 3125 PSIAT 200 °F

MAEWP PSIAT °F

MDMT 20 °F AT 3125 PSI

BLASTING AND PRIMING REPORT "A"

Job Number: 6280 Unit #: NWP 1563 Description: Lincheater
 Customer: NWP Customer Inspector: Colleen Tusoe
 Job Foreman: Steve Customer Phone #: _____
 Painter: Gregory Jensen Date: Jan, 16 / 09

SANDBLAST: Time blasting began: 9:15 AM Time blasting complete: 10:27 AM

CONDITIONS: (Record Every 4 Hrs.)
 1st Reading 2nd Reading 3rd Reading 4th Reading
 Time: 9:00 AM 10:30 AM _____
 Temperature: 43° 43° _____
 Relative Humidity: 40% 40% _____
 Dew Point: N/A N/A _____

☐ Field Work
☒ Shop Work

Surface Preparation Method: SANDBLAST

Sandblast Specification Required: ☐ SSPC 1 ☐ SSPC 2 ☐ SSPC 3 ☐ SSPC 4 ☐ SSPC 5
☒ SSPC 6 ☐ SSPC 7 ☐ SSPC 8 ☐ SSPC 9 ☐ SSPC 10 ☐ SSPC 11

Anchor profile depth, sharpness and density acceptable as required by paint manufacturer? ☒ Yes ☐ No
 (Attach sample of TESTEX Surface Profile Tape.)

Abrasive being used: SILICA 47 mix

Compressor air clean / dry / oil-free? (Attach blotting paper sample.) Acceptable? ☒ Yes ☐ No

Comments: _____

SANDBLASTING ACCEPTABLE TO SPECIFICATION:

Sub-Contractor's Inspector: <u>Larry Plaff</u> (Print, Sign and Date)	Inspector: _____ (Print, Sign and Date)	Customer's Inspector: _____ (Print, Sign and Date)
---	---	--

PRIME COAT: Time priming began: 10:50 AM (Must be within 8 hrs of sandblasting) Time complete: 11:45 AM

CONDITIONS (Record Every 4 Hrs.)
 1st Reading 2nd Reading 3rd Reading 4th Reading
 Time: 10:45 AM 12:00 pm _____
 Temperature: 46° 48° _____
 Relative Humidity: 39% 40% _____
 Dew Point: N/A N/A _____
 Surface Temp: 41° 42° _____

☐ Field Work
☒ Shop Work

(Surface temperature must NOT be less than 5°F (2°C) above Dew Point.)

Spray gun used: Graco Fluid Tip: 5-15 Air Cap: _____

Was all sandblasting grit and slag removed prior to painting? ☒ Yes ☐ No

Were all laminations removed after first blast? ☐ Yes ☐ No

Any defects noted in the steel? ☐ Yes ☒ No

Primer Used: Manufacturer: Cloverdale Type: Epoxy Batch #: _____

Mils of primer specified: 2-3

Mils of primer measured, average Wet Mils: 3.1-5.6 Dry Mils: 2.7-4.9

Were all areas of low film thickness re-coated satisfactorily? ☒ Yes ☐ No

Did any dirt or abrasive particles get imbedded in the paint film? ☐ Yes ☒ No

If so, note areas: _____

Time priming complete: 11:45 AM

Any difficulties with job? No Explain: _____

Remarks: _____

PRIME COAT ACCEPTABLE

Inspector:
Gregory Jensen
(Print, Sign and Date)

Customer's Inspector:

(Print, Sign and Date)

OVERCOATING REPORT "B"

Job Number: 6280 Unit #: NWP/563 Description: Lineheater
 Customer: NWP Customer Inspector: Colleen Tysoe
 Job Foreman: Steve Customer Phone #:
 Painter: Betsy Jensen Date: Jan 6/09

☒ **FIRST COAT** Time Painting Began: 4:20 pm Time Painting Complete: 5:15 pm

CONDITIONS Record Every 4 Hrs.	1 st Reading	2 nd Reading	3 rd Reading	4 th Reading	
Time:	<u>4:10 pm</u>	<u>5:30 pm</u>			
Temperature:	<u>50°</u>	<u>50°</u>			<input type="checkbox"/> Field Work
Relative Humidity:	<u>41%</u>	<u>41%</u>			<input checked="" type="checkbox"/> Shop Work
Dew Point:	<u>N/A</u>	<u>N/A</u>			
Surface Temp.	<u>48°</u>	<u>48°</u>			

(Surface temperature must be NOT less than 5°F (2°C) above dew point.)

Dry time of primer before applying overcoat? 4 1/2 hours

Time painting began: 4:20 pm

Spray gun used: Ciraco

Fluid Tip: 5-15

Air Cap:

Thinning ratio: 10%

Paint Used - Manufacturer: Cloverdale

Type: Epoxy

Batch #:

Mils of overcoat specified: 2-3

Type Overcoat:

Mils of overcoat measured, average

WET:

DRY:

Were all areas of low film build re-coated satisfactorily?

☒ Yes

☐ No

Did any abrasive particles get imbedded in paint film?

☐ Yes

☒ No

If so, note areas:

Inspect for defects: Runs, sags, embedded debris, voids, overspray, mud cracking, inadequate cure, lack of adhesion.

☒ Acceptable

☐ Requires re-work. Give details:

Difficulties with job? ☐ Yes ☒ No Explain:

Remarks:

☒ **SECOND COAT** Time Painting Began: Time Painting Complete:

CONDITIONS Record Every 4 Hrs.	1 st Reading	2 nd Reading	3 rd Reading	4 th Reading	
Time:					
Temperature:					<input type="checkbox"/> Field Work
Relative Humidity:					<input type="checkbox"/> Shop Work
Dew Point:					
Surface Temp.					

(Surface temperature must be NOT less than 5°F (2°C) above dew point.)

Dry time of first coat before applying second coat:

Spray gun used:

Fluid Tip:

Air Cap:

Thinning ratio:

Paint Used - Manufacturer:

Type:

Batch #:

Mils of overcoat specified:

Type Overcoat:

Mils of overcoat measured, average

WET:

DRY:

Were all areas of low film build re-coated satisfactorily?

☐ Yes

☐ No

Did any abrasive particles get imbedded in paint film?

☐ Yes

☐ No

If so, note areas:

Inspect for defects: Runs, sags, embedded debris, voids, overspray, mud cracking, inadequate cure, lack of adhesion.

☐ Acceptable

☐ Requires re-work. Give details:

Difficulties with job? ☐ Yes ☐ No Explain:

Remarks:

INSPECTION SIGNOFF

Inspector

Customer's Inspector