

NORDIC NDT CORP.
Box 32 RR2 Site 7
Grande Prairie, AB T8V 2Z9
Phone780-402-0256
FAX780-402-0356
Toll Free1-866-888-0256
Barrhead780-305-3710

NORDIC NDT CORP.

RADIOGRAPHIC EXAMINATION REPORT

3872

PAGE 1 OF 2

Client: BLUESTAR WELDING Date: 3 JAN 30/05
Location: GRANDE PRAIRIE Job/AFE#: 10252-P
Description: 4" x 1.00" CON TUBES P.O.#: _____
Material: CS

Exposure Device # D1464 Acceptance Code
Source # 17840B ☐ ASME B31.3 Normal Serv.
Ir¹⁹² EFSS: .145" ☒ ASME B31.3 Severe Cyclic
☐ ASME Sect. VIII Div.1 UW51
☐ ASME Sect. VIII Div.1 UW52
☐ CSA Z.662 (sweet service)
☐ CSA Z.662 (sour service)
Kodak ☒ AGFA ☐ Class 1 ☐ Other:

Film No.	Size, Location Thickness	Welder Sym.	Tech. No.	SOD Inches	OFD Inches	# of Exp.	Accept	Type and location of inclusions, discontinuities (circle rejectable locations)	Reject
X-1	4" x 1.00"	AP	R-3a			4	✓		
2		BA					✓		
3		AP					✓		
4		BC					✓		
5		BA					✓		
6		AP					✓		
7		BA					✓		
8		AW					✓		
9		AW					✓		
10		AW					✓		
11		BA					✓		
12		AJ					✓		
13		AJ					✓		
14		BA					✓		
15		AP					✓		
16		BC					✓		
17		BA					✓		
18		BA					✓		
19		AJ					✓		
20		AJ					✓		

Legend: AB - Arc Burns IC - Internal Concavity IUC - Internal Undercut
BT - Burn Through IP - Inadequate Penetration EUC - External Undercut
CK - Crack EP - Excessive Penetration POR - Porosity
MA - Misalignment LF - Lack of Fusion SL - Slag
HB - Hollow Bead LC - Low Cover

Techniques: Single Wall Exposure: R-1, -2, -2a, -6, -7
Double Wall Exposure: R-3, -3a, -4, -5, -8
All procedures utilize one film per cassette unless otherwise specified

SOD = source to object distance
OFD = object to film distance
OFD + SOD = source to film dist.

Welds		Film	Summary	
_____ -2" welds	_____ -3.5" x 8.5"	Unit # <u>4</u>	Kilometers: _____	
_____ -3" welds	_____ -3.5" x 17"	In _____	Out _____	Hrs. _____
<u>20</u> -4" welds	_____ -4.5" x 8.5"	In _____	Out _____	Hrs. _____
_____ -6" welds	_____ -4.5" x 17"	Technician: <u>D. Baird</u>		
_____ -8" welds	_____	Assistant: <u>L. Karpisek</u>		
_____ -10 welds	_____	_____		
_____ -12" welds	_____	Cost Estimate: \$ _____ (+ GST)		

Radiograph Interpretation by: D. WATNS BAIAS
SNT-TC-1A II
C.G.S.B. Lev. II
C.G.S.B. No. 3979
(Sign)
Report contents are the interpretation of the technician and do in no way imply a guarantee
I am in full agreement with report contents:
Client Representative: C. J. 34231.200

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NORDIC
NDT *CORP.*

RADIOGRAPHIC EXAMINATION REPORT

5873

PAGE 2 OF 2

Client: BLUESTAR WELWING Date: JAN 30/05
Location: GRAND PRAIRIE Job/AFE#: 10252-P
Description: 4" x 1.00" COIL TUBES P.O.#: _____
Material: CS

Exposure Device # D1464 Acceptance Code
 Source # 17840B ☐ ASME B31.3 Normal Serv.
☒ ASME B31.3 Severe Cyclic
 Ir¹⁹² EFSS: .145" ☐ ASME Sect. VIII Div. 1 UW51
☐ ASME Sect. VIII Div. 1 UW52
 Kodak ☒ AGFA ☐ Class 1 ☐ CSA Z.662 (sweet service)
☐ CSA Z.662 (sour service)
☐ Other:

[illegible]

Techniques: Single Wall Exposure: R-1, -2, -2a, -6, -7
Double Wall Exposure: R-3, -3a, -4, -5, -8
All procedures utilize one film per cassette unless otherwise specified

SOD = source to object distance
OFD = object to film distance
OFD + SOD = source to film dist.

Radiograph Interpretation by:

SNT-TC-1A II

C.G.S.B. Lev.

C.G.S.B. No. 3979

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I am in full agreement with report contents:

Client Representative:

JAN 31. 2000

Welds	Film	Summary	
-2" welds	-3.5" x 8.5"	Unit # <u>4</u>	Kilometers: <u>0</u>
-3" welds	-3.5" x 17"	In <u>0900</u>	Out <u>1400</u> Hrs. <u>5</u>
-4" welds	-4.5" x 8.5"	In _____	Out _____ Hrs. _____
-6" welds	-4.5" x 17"	Technician: <u>D. Baird</u>	
-8" welds		Assistant: <u>L. Karpisek</u>	
-10 welds			
-12" welds		Cost Estimate: \$ <u>601⁰⁰</u> (+ GST)	

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**RADIOGRAPHIC
EXAMINATION
REPORT**

2007

PAGE 1 OF 1

Client: BLUESTAR WELDING Date: FEB 07/05
Location: GRANDE PRAIRIE Job# AFE#: 10252-P
Description: 4" x 1.00" Coil Tubes P.O.#: _____
Material: CS

Exposure Device # D1464 Acceptance Code
Source # 178408 ☐ ASME B31.3 Normal Serv.
Ir¹⁹² EFSS: .145" ☒ ASME B31.3 Severe Cyclic
☐ ASME Sect. VIII Div.1 UW51
☐ ASME Sect. VIII Div.1 UW52
☐ CSA Z.662 (sweet service)
☐ CSA Z.662 (sour service)
Kodak ☒ AGFA ☐ Class 1 ☐ Other:

Film No.	Size, Location Thickness	Welder Sym.	Tech. No.	SOD Inches	OFD Inches	# of Exp.	Accept	Type and location of inclusions, discontinuities (circle rejectable locations)	Reject
X-29	4" x 1.00"	AS	R-3			4	✓		
30		AS					✓		
31		AP					✓		
32		AS					✓		
33		AS					✓		
34		AS					✓		
35		AP					✓		
36		AS					✓		
37		BA					✓		
38		BA					✓		
39		BA					✓		
40		AP					✓		
41		AP					✓		
42		BA					✓		
43		BA					✓		
44		BA					✓		
45		BA					✓		
46		BA					✓		

Legend: AB - Arc Burns IC - Internal Concavity IUC - Internal Undercut
BT - Burn Through IP - Inadequate Penetration EUC - External Undercut
CK - Crack EP - Excessive Penetration POR - Porosity
MA - Misalignment LF - Lack of Fusion SL - Slag
HB - Hollow Bead LC - Low Cover

Techniques: Single Wall Exposure: R-1, -2, -2a, -6, -7
Double Wall Exposure: R-3, -3a, -4, -5, -8
SOD = source to object distance
OFD = object to film distance
OFD + SOD = source to film dist.
All procedures utilize one film per cassette unless otherwise specified

Welds	Film	Summary
_____ -2" welds	_____ -3.5" x 8.5"	Unit # <u>4</u> Kilometers: <u>0</u>
_____ -3" welds	_____ -3.5" x 17"	In <u>1800</u> Out <u>2100</u> Hrs. <u>3</u>
<u>18</u> -4" welds	_____ -4.5" x 8.5"	In <u>1100</u> Out <u>1400</u> Hrs. <u>3</u>
_____ -6" welds	_____ -4.5" x 17"	Technician: <u>D. Baird</u>
_____ -8" welds		Assistant: <u>L. Karpisek</u>
_____ -10 welds		
_____ -12" welds		
		Cost Estimate: \$ <u>681⁰⁰</u> (+ GST)

Radiograph Interpretation by: D. Baird
SNT-TC-1A II
C.G.S.B. Lev. II
C.G.S.B. No. 3979
Report contents are the interpretation of the technician and do in no way imply a guarantee.
I am in full agreement with report contents:
Client Representative: C. Le Feb 9, 2005

NORDIC NDT CORP.

Box 32, R.R.2, Site 7, Grande Prairie AB. T8V 2Z9
Phone: (780) 402-0256 Fax: (780) 402-0356

 Natural Resources Canada / Ressources naturelles Canada

This certifies that / La présente certifie que
Dwayne Merle Baird
has qualified according to the CANCGSB Standard 48.9712-2000 as follows:
est qualifié selon la norme CANCGSB 48.9712-2000 comme suit:

METHOD MÉTHODE	LEVEL NIVEAU	SECTOR SECTEUR	CERT DATE DATE CERT	RECENT DATE DATE RÉCENT	EXPIRATION ÉPIRATION
RT	2	ENC	09/12/01		05/12/31
PT	2	ENC	91/10/11		05/12/31
WT	2	ENC	90/05/22		05/12/31

REG NO. / NO MATRICULE: 3979
ISSUE DATE / DATE D'ÉMISSION: 03/01/23
MANAGER, CERTIFYING AGENCY / GESTIONNAIRE, ORGANISME DE CERTIFICATION: Richard V. Murphy

 Natural Resources Canada / Ressources naturelles Canada

Your certification card is only valid when presented with this identity card
Votre certificat de poche est valide seulement s'il est présenté avec cette carte d'identité



Name / Nom: Dwayne Merle Baird
Reg. No. / No. matricule: 3979
Issue Date / Date d'émission: 2002/02/14
Expiry Date / Expiration: 2005/12/31

 Atomic Energy Control Board / Commission de contrôle de l'énergie atomique

Qualified Operator / Opérateur qualifié
Dwayne Baird
NAME / NOM: Dwayne Baird
1986.04.18
ISSUE DATE / DATE D'ÉMISSION: 1986.04.18

Canada

Qualified Operator / Opérateur qualifié
pursuant to Section 18 of the Atomic Energy Control Regulations, for the purpose of operating an exposure device containing a prescribed substance.
en vertu de l'article 18 du Règlement sur le contrôle de l'énergie atomique afin d'utiliser un dispositif d'exposition contenant une substance prescrite.

Issuing Officer's Signature / Signature de l'agent responsable: [Signature]
Card Number / No de la carte: 000863

Dwayne Baird
CGSB# 3979



HEAT TREATMENT INSTRUCTIONS

JOB NO.: 10252-P CUSTOMER: Pure Energy

DESCRIPTION: Lineheater Coil

DATE: February 18, 2005

COMPONENT DESCRIPTION:

DWG. NO. AND LINE NO.	DIAMETER	THICKNESS	MATERIAL	LENGHT	WEIGHT
1931-06	4 1/2" O.D.	1.031"	AISI 4130	10'	

TYPE OF HEAT TREATMENT: STRESS RELIEVE

Temperature to raised from 800°F (426°C) to 1150°F (621°C) at maximum rate of 400°F
(°C) per hour. NOTE: MUST NOT EXCEED 400°F (222°C) PER HOUR.

(Calculated rate=400°F/h. Divided by governing metal thickness)

Temperature to be held at 1150°F (621°C) plus or minus 25°F (14°C) for
240minutes.

Temperature to be lowered from 1150°F (621°C) to 800°F (426°C) at a maximum rate of 400°F
(°C) per hour. NOTE: MUST NOT EXCEED 500°F (278°C) PER HOUR.

(Calculated rate=500°F/h. Divided by governing metal thickness)

Additional requirements:

- Job number and description required on heat treatment charts along with operator signature & date.
- Verification of furnace thermocouple calibration 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, center and top of the furnace charge in accordance with the ASME Code.
- No welding shall be performed on vessels or parts.

Furnace Heat Number: 11608

Furnace Operator Signature: D. Muller

Date: Feb 18, 05

Q.C. Inspector Signature: C. J. L.

Date: February 18, 2005

JOB # 10252 BLUESTAR

QCI DATE 2-18-05

T8V 6K6
Ph. (780) 539-5525

Chart # 11608

Feb 18, 05

Smulley

10252-P

02/19/05

CM

4 hr 5 min Soak
@ 1150 + 25-

JOB # 0252 **BLUESTAR**

QCI

DATE

QCM *11/11/05*

DATE *Feb 28/05*

Feb. 18. 05

14:00

01 642°F

02 642°F

3

01CH

50000/h

— Start of Cycle

CHART NO. 19064N1

1999

YORK-AN-CA

1999

CHART NO. 19064N1

Feb. 18. 05
13:00
01 844°F
02 844°F
50mm/h

01 -- End of Cycle

0 200 400 600 800 1000 1200 1400 1600 1800 2000

Feb. 18. 05
13:00
01 844°F
02 844°F
50mm/h

20

01

02

Feb. 18. 05
13:00
01 2008°F
02 1148°F
50mm/h

400 600 800 1000 1200 1400 1600 1800 2000

Norweld Stress Ltd.

11434 91st Ave.

Grande Prairie, AB

T8V 6K6

Ph. (780) 539-5525

Chart # 11608

Feb 18, 05

02

01



PRESSURE TEST EXAMINATION GUIDE		
PRESSURE TEST PREPARATION		Q.C. INSP.
1.	All punch list items corrected.	✓
2.	Test blinds are of correct thickness.	✓
3.	All items which could be damaged by test isolated or removed (control valves, safety valves, instruments, expansion joints, etc.)	✓
4.	Equipment with internals (i.e. filters) that could be damaged isolated as required.	✓
5.	Vents and drains correctly installed.	✓
6.	Open and Closed position of all valves verified.	✓
7.	Shipping bars in place - bellows.	✓
8.	Hanger stops in place.	✓
JOB # 10152 BLUESTAR QCI _____ DATE _____ QCM <i>[Signature]</i> DATE Feb 28/05		
PRESSURE TEST COMPLETION		Q.C. INSP.
1.	All temporary blinds (blanks) removed.	✓
2.	Temporary gaskets changed for correct gaskets.	✓
3.	Temporary supports removed.	✓
4.	Shipping bars removed from bellows.	✓
5.	Spring hanger stops removed - cold setting checked.	✓
6.	Safety valves - "UV" or "V" symbol and correct set pressure and capacity installed.	✓
7.	Safety valve vents are correct size - adequately supported - drain holes and or weather hoods installed.	✓
8.	Screens for pumps and compressors installed (initial start-up and permanent screens).	✓
Q. C. Inspector Signature: <i>[Signature]</i>		Date: Feb 24, 05



Hydrostatic Test Report

Date: FEB. 24. 2005

Job Number: 10252-P

Customer: PURE ENERGY

Product Used For Test: H₂O

Test Conducted By: DALER PRESSURE TEST

Test Pressure: 15,000 PSI

Holding Time @ Test Pressure: 1 HOUR

Results: NO LEAKS

Authorized Inspector Witnessing Test: HARVEY WOODY

Comments: _____

JOB # <u>10252</u> BLUESTAR	
QCI _____	DATE _____
QCM <u>[Signature]</u>	DATE <u>FEB 28 / 05</u>

[Signature]
Quality Control Manager



EQUIPMENT CALIBRATION LOG			
EQUIPMENT DESCRIPTION: <i>WGI 20,000 PSI PRESSURE GAUGE</i>			
IDENTIFICATION NO.: <i>BSPG 20000 1</i>		CALIBRATION INTERVAL:	
Calibration Date	Calibration Record Verified	Date of First Use	Calibration Expiry Date
<i>FEB 18, 2005</i>	<i># 43237</i>	<i>FEB 24, 2005</i>	<i>AUG 2005</i>
Calibration requirements and Instructions:			

EQUIPMENT CALIBRATION LOG			
EQUIPMENT DESCRIPTION: <i>WGI 20000 PSI PRESSURE GAUGE</i>			
IDENTIFICATION NO.: <i>BSPG 20000 2</i>		CALIBRATION INTERVAL:	
Calibration Date	Calibration Record Verified	Date of First Use	Calibration Expiry Date
<i>FEB 18, 2005</i>	<i># 43237</i>	<i>FEB 24, 2005</i>	<i>AUG 2005</i>
Calibration requirements and Instructions:			

JOB # <i>0252</i> BLUESTAR	
QCI	DATE
<i>QCM</i>	<i>Feb 28/05</i>



CERTIFICATE OF CALIBRATION
#43237

BSPG 20000 1

ORDER NO. 102414
SERIAL NUMBER JW050217-5
DIAL SIZE 4" WGI
PRESSURE RANGE 0-20,000 PSI
SUB DIVISIONS 2000 PSI
CONNECTION 1/2" NPT
INSPECTOR G.J.P. WOWK

AMBIENT TEMPERATURE 20C
DEADWEIGHT SN# 8604
TEST MEDIUM OIL
MAXIMUM ERROR +140 PSI
DATE February 18, 2005
LOCATION TESTED 9535 - 42 AVE
EDMONTON, ALBERTA, T6E 5R2

TESTED GAUGE

DEADWEIGHT

UPSCALE ERROR

0

0

0

2000	PSI	2000	PSI	0	PSI
4000	PSI	4000	PSI	0	PSI
6000	PSI	6000	PSI	0	PSI
8000	PSI	8000	PSI	0	PSI
10,000	PSI	10,000	PSI	0	PSI
12,000	PSI	12,000	PSI	0	PSI
14,000	PSI	14,000	PSI	0	PSI
16,000	PSI	16,000	PSI	0	PSI
18,000	PSI	17,970	PSI	+30	PSI
20,000	PSI	19,860	PSI	+140	PSI

TECHNICIAN:

Michael Kowalski

Q.C. Manager:

Lynn Wowk

Invoice: PCL-50227

****ALL TEST EQUIPMENT IS TRACEABLE TO N.I.S.T. STANDARDS.**

****CUSTOMER STANDARD DOCUMENT CS-004.**



CERTIFICATE OF CALIBRATION
#43238

BSPG 20000 2

ORDER NO.	102414	AMBIENT TEMPERATURE	20C
SERIAL NUMBER	JW050217-6	DEADWEIGHT	SN# 8604
DIAL SIZE	4" WGI	TEST MEDIUM	OIL
PRESSURE RANGE	0-20,000 PSI	MAXIMUM ERROR	-100 PSI
SUB DIVISIONS	2000 PSI	DATE	February 18, 2005
CONNECTION	1/2" NPT	LOCATION TESTED	9535 - 42 AVE
INSPECTOR	G.J.P. WOWK	EDMONTON, ALBERTA, T6E 5R2	

TESTED GAUGE

DEADWEIGHT

UPSCALE ERROR

0		0		0	
2000	PSI	2100	PSI	-100	PSI
4000	PSI	4030	PSI	-30	PSI
6000	PSI	6000	PSI	0	PSI
8000	PSI	8000	PSI	0	PSI
10,000	PSI	10,000	PSI	0	PSI
12,000	PSI	12,000	PSI	0	PSI
14,000	PSI	14,000	PSI	0	PSI
16,000	PSI	16,000	PSI	0	PSI
18,000	PSI	18,000	PSI	0	PSI
20,000	PSI	20,000	PSI	0	PSI

TECHNICIAN: Michael Kowalski Q.C. Manager: Lynn Wowk

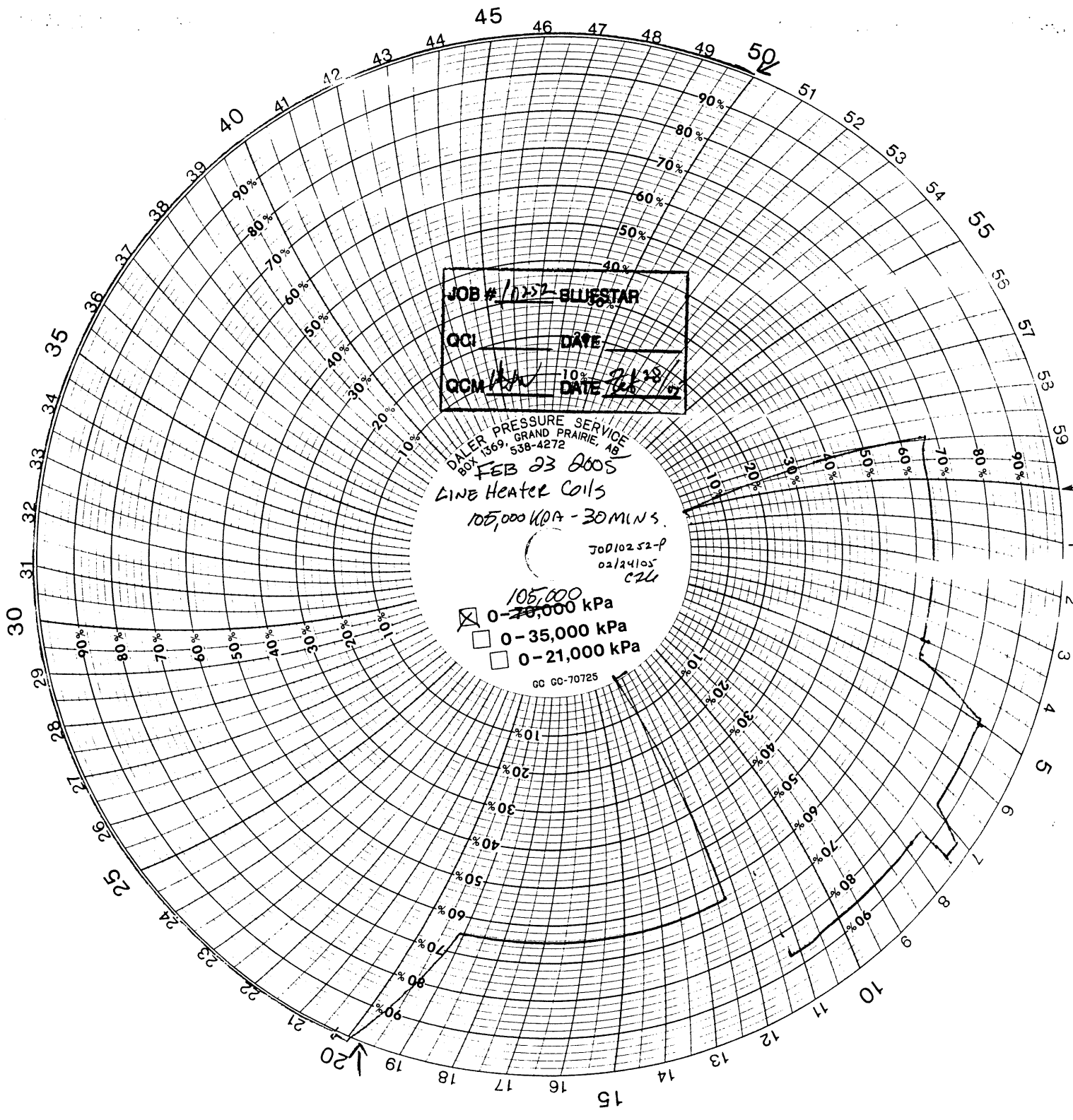
Invoice: PCL-50227

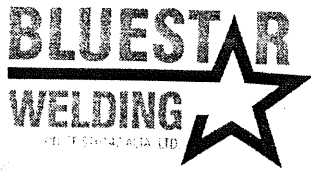
**ALL TEST EQUIPMENT IS TRACEABLE TO N.I.S.T. STANDARDS.

**CUSTOMER STANDARD DOCUMENT CS-004.

JOB # 11222 - BLUESTAR
QCI _____ DATE _____
QCM 11/1 10% 21/18
DATE 1/21/05

DAUER PRESSURE SERVICE
BOX 1369, GRAND PRAIRIE, AB
538-4272
FEB 23 2005
LINE HEATER COILS
105,000 kPa - 30 MINS.
70010252-P
02/24/05
C24
105,000
☒ 0-20,000 kPa
☐ 0-35,000 kPa
☐ 0-21,000 kPa
GC GC-70725





NCR #

NONCONFORMITY REPORT

JOB NUMBER:

DESCRIPTION OF NONCONFORMANCE:

N/A

SIGNATURE OF ORIGINATOR:

DATE:

PROPOSED DISPOSITION, REPAIRS OR METHOD OF IDENTIFICATION:

QCM APPROVAL:

DATE:

AUTHORIZATION INSPECTORS ACCEPTANCE:

DATE:

NONCONFORMANCE RECTIFIED:

QCM VERIFICATION:

DATE:

AUTHORIZED INSPECTORS ACCEPTANCE:

DATE: