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MANUFACTURED &
CERTIFIED BY:

BLUESTAR
WELDING



GRANDE PRAIRIE, AB., CANADA 
1-780-532-1160

A-NUMBER

0514078

SERIAL No.

BS1032MM-05A

JOB No.

10252-P

DESIGN PRESSURE

10000 PSI

M.A.W.P.

10000 PSI

DESIGN TEMP. MINIMUM

-40°F

CORROSION ALLOWANCE

0.125 IN.

DESIGN TEMP. MAXIMUM

180°F

CRN No.

ALD-05-001

YEAR BUILT

2005

STEAM COIL M.A.W.P.

@ °F

RTI
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MANUFACTURED &
CERTIFIED BY:

BLUESTAR
WELDING



GRANDE PRAIRIE, AB., CANADA 
1-780-532-1160

A-NUMBER

⑤ 514079

SERIAL No.

BS10K4MM-05 B

JOB No.

10252-P

DESIGN PRESSURE

10000 PSI

M.A.W.P.

10000 PSI

DESIGN TEMP. MINIMUM

-40°F

CORROSION ALLOWANCE

0.125 IN.

DESIGN TEMP. MAXIMUM

180°F

CRN No.

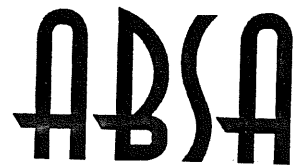
ALD-05-001

YEAR BUILT

2005

STEAM COIL M.A.W.P.

@ °F



MANUFACTURER'S DATA REPORT FOR INDIRECT FIRED HEATER COILS

(A) No. 514078

Manufactured by Bluestar Welding Ltd. RR2, Site 7, Box 20, Grande Prairie AB T8V 2Z9Manufactured for Pure Energy Services Ltd. 300, 1010-1st SW. Calgary AB T2R 1K4Ultimate Owner Pure Energy Services Ltd 300, 1010-1st SW. Calgary AB T2R 1K4Location of Installation Portable EquipmentMfr. Serial No. PS10K4MM.05 A Code: ASME B31.3, Edition 2002 Addenda Drawing Number 1931-6Rev.2 Year Built 2005 Intended Service CORROSIVE HYDROCARBONSa. Material Specifications ASTMA519Gr4130 4130-API Class L
Coil Ends (Flanges/N.P.T.) Ratingb. Material Specifications Elbows 90 Machined Gr.4130
Coil Ends (Flanges/N.P.T.) Ratinga. Diameter 4 1/2" Nom. Thickness 1.0" O/A Length 151"-184" C.A. 0.125b. Diameter Nom. Thickness O/A Length C.A. a. Maximum Working Pressure 10,000 Psi kPa at Maximum Temperature 180 F °Cb. Maximum Working Pressure kPa at Maximum Temperature °Ca. Hydrostatic Test Pressure 15,000 Psi kPa C.R.N. ALD-05-001b. Hydrostatic Test Pressure kPa C.R.N. Heating Surface 129 Sq.Ft. Radiography 100 % (Random, % or Full)Volume 14.83 Cubic Ft P.W.H.T. 1150 F / 4Hrs.Remarks

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 Registered Design No.

Date March 4, 2005 Signed C76 For Bluestar Welding
(Representative) (Manufacturer)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, a duly authorized Safety Codes Officer employed by The Alberta Boilers Safety Association have 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.

Date March 4, 2005 Signed Harvey A. Waddy AB-1834



MANUFACTURER'S DATA REPORT FOR INDIRECT FIRED HEATER COILS

(A) No. 514079

Manufactured by Bluestar Welding Ltd. RR2, Site 7, Box 20, Grande Prairie AB T8V 2T9Manufactured for Pure Energy Services Ltd. 300, 1010-1st SW. Calgary AB T2R 1K4Ultimate Owner Pure Energy Services Ltd. 300, 1010-1st SW. Calgary AB T2R 1K4Location of Installation Portable EquipmentMfg. Serial No. BS10K4 Code: ASME B31.3, Edition 2002 Addenda _____Drawing Number 1931-0000 Year Built 2005 Intended Service CORROSIVE HYDROCARBONSa. Material Specifications ASTMA519Gr4130 4130-API Class I
Coil *Ends (Flanges/N.P.T.)* *Rating*b. Material Specifications Elbows 90 Machined Gr.4130
Coil *Ends (Flanges/N.P.T.)* *Rating*a. Diameter 4 1/2" Nom. Thickness 1.0" O/A Length 151"-184" C.A. 0.125"

b. Diameter _____ Nom. Thickness _____ O/A Length _____ C.A. _____

a. Maximum Working Pressure 10,000 Psi kPa at Maximum Temperature 180 F °C

b. Maximum Working Pressure _____ kPa at Maximum Temperature _____ °C

a. Hydrostatic Test Pressure 15,000 Psi kPa C.R.N. ALD-05-001

b. Hydrostatic Test Pressure _____ kPa C.R.N. _____

Heating Surface 129 Sq.Ft. Radiography 100 % (Random, % or Full)Volume 14.83 Cubic Ft P.W.H.T. 1150 F / 4Hrs.

Remarks _____

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 Registered Design No. _____.

Date March 4, 2005 Signed  For Bluestar Welding
(Representative) *(Manufacturer)*

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, a duly authorized Safety Codes Officer employed by The Alberta Boilers Safety Association have 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.

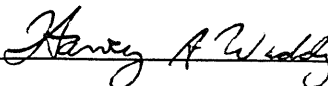
Date March 4, 2005 Signed  AB-1234

EXHIBIT 9.4 TRAVEL SHEET (FRONT)

DO NOT START CONSTRUCTION WITHOUT AI REVIEW									
AI REVIEW: <i>Harvey K. Haddy</i>		REVIEW DATE: <i>Feb 10/05</i>							
SERIAL NO: BS10K4MM-058		JOB NO: 10252-P		VESSEL TYPE: Heater Coil					
DRAWING NO: 1931-06		REVISION NO: 1							
Seq	Item	Comments	Q.C.	Date	A.I. Hold Points	A.I.	Date	Owner	Date
1.	Calculations in File		C-7	02/10/05		<i>HKH</i>	<i>March 04/05</i>		
3.	Heat Numbers Recorder		C-7	02/10/05					
4.	MTRs Checked		C-7	02/10/05					
5.	W.P.S. Checked		C-7	02/10/05					
6.	Welders Quality		C-7	02/27/05					
7.	Thicknesses Recorded		C-7	02/10/05					
8.	Shell & Head Fitted								
9.	Nozzles & Fittings Fitted		C-7	02/28/05					
10.	Nozzle Orientation		C-7	02/29/05					
11.	Nozzle & Flange Rating Checked		C-7	02/10/05		<i>HKH</i>	<i>March 04/05</i>		
12.	Impact Tests								
13.	Internals Checked								
14.	Final Internal Inspection	Shell side Tube side							
15.	Weld Size Checked		C-7	02/29/05		<i>HKH</i>	<i>March 04/05</i>		
16.	Welder I.D. Checked		C-7	02/29/05		<i>HKH</i>	<i>March 04/05</i>		
17.	Final External Inspection								
18.	Radiography		C-7	03/02/05		<i>HKH</i>	<i>March 04/05</i>		
19.	Other N.D.E.								
20.	Final Ext. Prior to P.W.H.T.		C-7	03/02/05	Xx	<i>HKH</i>	<i>March 04/05</i>		
21.	PWHT Chart Checked		C-7	02/03/05		<i>HKH</i>	<i>March 04/05</i>		
22.	Hydrostatic Test	Shell side Gauge # Tube side Gauge #	C-7	03/04/05	Xx	<i>HKH</i>	<i>March 04/05</i>		
23.	CRN Drawing	CRN# <i>AJD-05-001</i>	C-7	02/16/05					
24.	N.C.R. #								
25.	Nameplate Stamping		C-7	03/04/05	Xx	<i>HKH</i>	<i>March 04/05</i>		
26.	Mfg Data Report		C-7	03/04/05	Xx	<i>HKH</i>	<i>March 04/05</i>		
27.	Nameplate Installation		C-7	03/21/05					

The Authorized Inspector shall be presented with the travel sheet prior to construction so that he can designate additional inspection points and/or Hold Points.

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

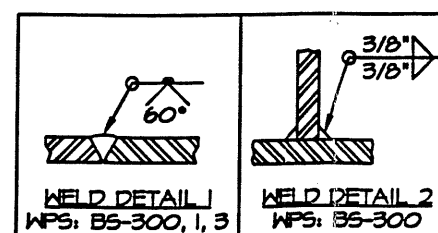
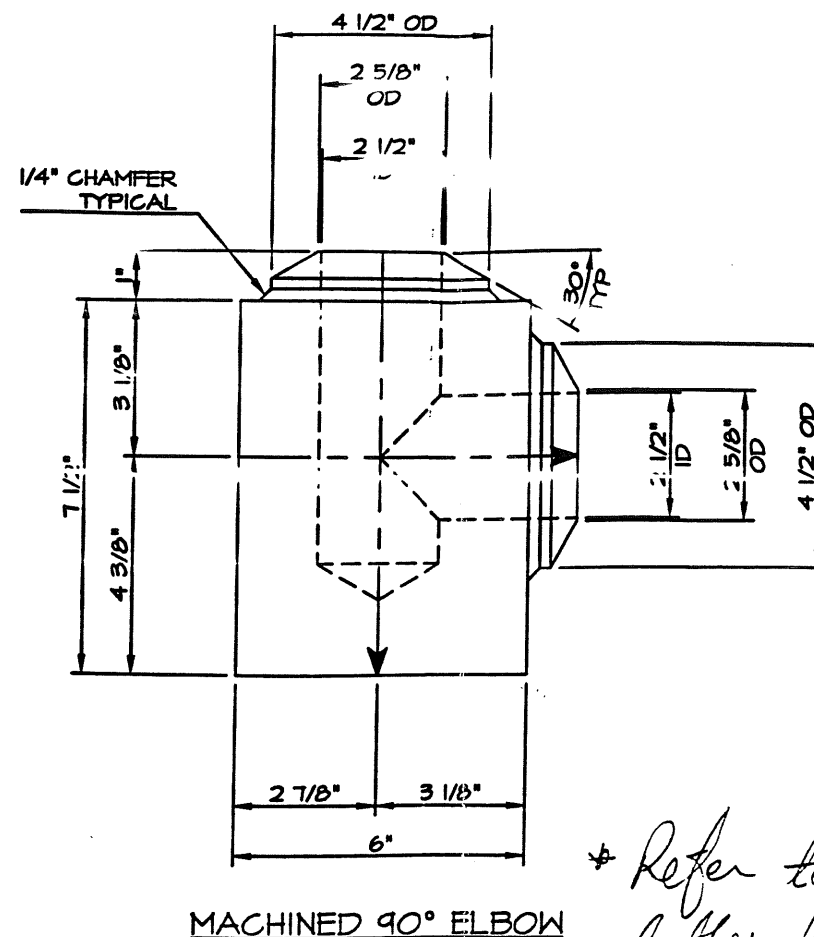
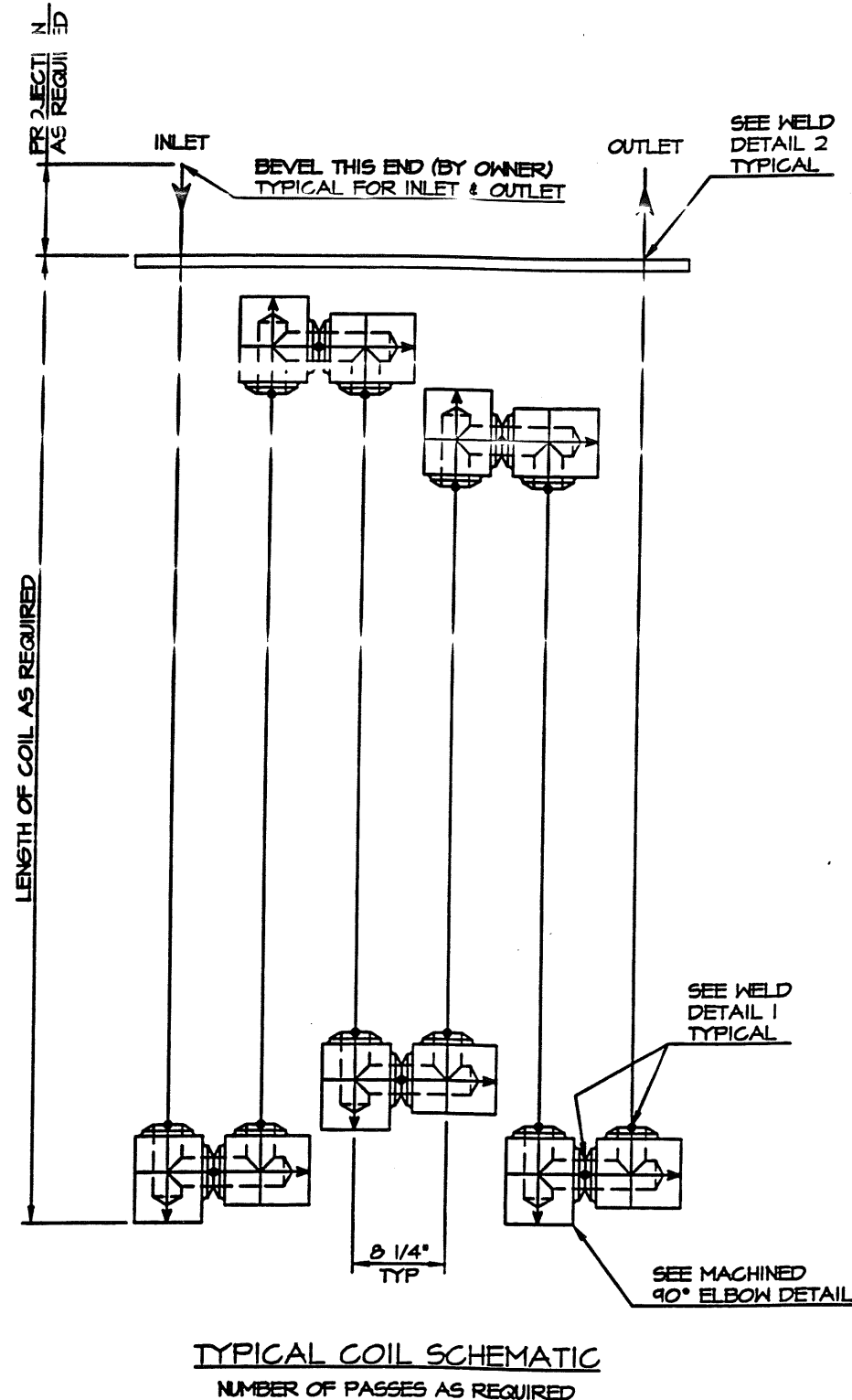
EXHIBIT 9.4 TRAVEL SHEET (FRONT)

DO NOT START CONSTRUCTION WITHOUT AI REVIEW										
AI REVIEW: <i>Harvey B. Waddy</i>			REVIEW DATE: <i>Feb 10/05</i>							
SERIAL NO: BS10K4MM-05A			JOB NO: 10252-P			VESSEL TYPE: Heater Coil				
DRAWING NO: 1931-06			REVISION NO: 1							
Seq	Item	Comments	Q.C.	Date	A.I. Hold Points	A.I.	Date	Owner	Date	
1.	Calculations in File		C-7	Feb 10, 05						
2.	Release of App'd						<i>March 04/05</i>			
3.	Test Numbers									
4.	Reorder MTRs Checked		C-7	02, 10, 05						
5.	W.P.S. Checked		C-7	02, 10, 05						
6.	Welders Quality		C-7	02, 10, 05						
7.	Thicknesses Recorded		C-7	02, 22, 05						
8.	Shell & Head Fitted		C-7	02/10/05						
9.	Nozzles & Fittings Fitted									
10.	Nozzle Orientation		C-7	02/12/05						
11.	Nozzle & Flange Rating Checked		C-2	02/12/05						
12.	Impact Tests		C-7	02/10/05		<i>HFW</i>	<i>March 04/05</i>			
13.	Internals Checked									
14.	Final Internal Inspection	Shell side Tube side								
15.	Weld Size Checked									
16.	Welder I.D. Checked		C-7	02/20/05		<i>HFW</i>	<i>March 02/05</i>			
17.	Final External Inspection		C-7	02/20/05		<i>HFW</i>	<i>March 02/05</i>			
18.	Radiography									
19.	Other N.D.E.		C-7	02/02/05		<i>HFW</i>	<i>March 02/05</i>			
20.	Final Ext. Prior to P.W.H.T.		C-7	03/02/05	<i>X</i>	<i>HFW</i>	<i>March 02/05</i>			
21.	PWHT Chart Checked		C-7	03/03/05	<i>22</i>					
22.	Hydrostatic Test	Shell side Tube side	Gauge # Gauge #	C-7 C-7	03/03/05 03/04/05	<i>X</i> <i>X</i>	<i>HFW</i>	<i>March 04/05</i>		
23.	CRN Drawing	CRN#								
24.	N.C.R. #	<i>ALD-05-001</i>	C-7	02/10/05						
25.	Nameplate Stamping									
26.	Mfg Data Report		C-7	03/04/05	<i>X</i>	<i>HFW</i>	<i>March 04/05</i>			
27.	Nameplate Installation		C-7	03/04/05	<i>X</i>	<i>HFW</i>	<i>March 04/05</i>			

The Authorized Inspector shall be presented with the travel sheet prior to construction so that he can designate additional inspection points and/or Hold Points.

* Denotes an A.I. Inspection Point

** Denotes an A.I. Hold Point



STANDARD TOLERANCES	
FABRICATION:	
GENERAL DEVIATION	± 1/8"
OVERALL LENGTH	± 1/4"
ANGULAR	± 1°
WELD PREPARATION:	
LAND (ROOT FACE)	1/16" ± 1/32"
ROOT GAP	1/8" ± 1/16"
ANGULAR	± 5°
MACHINING:	
O.XX	± 0.015"
O.XXX	± 0.005"
EXCEPT AS NOTED	

* Refer to the acceptance letter for the conditions of registration.

△
SERIAL NUMBERS FOR 4 UNITS

BS-10K-2MM-03A
BS-10K-2MM-03B

BS-10K-2MM-04A
BS-10K-2MM-04B

BS-10K-4MM-05A
BS-10K-4MM-05B

BS-10K-2MM-06A
BS-10K-2MM-06B

COIL DESIGN NOTES

DESIGN & FABRICATE TO: ASME B31.3, 2002 EDITION
MAXIMUM ALLOWABLE WORKING PRESSURE (MAWP): 10,000 PSIG
DESIGN TEMPERATURE: 180° F
MINIMUM DESIGN METAL TEMPERATURE (MDMT): -40° F AT 10,000 PSIG
IMPACT TESTS: EXEMPT
RADIOGRAPHY: 100%
PWHT: OPTIONAL, USE WELDING PROCEDURE BSW-4130.
TEMPERATURE AND TIME: 1150° F FOR 4 HOURS.
HYDROSTATIC TEST PRESSURE: 15,000 PSIG
CORROSION ALLOWANCE: 1/8"

GENERAL NOTES

1. QUALITY CONTROL PROGRAM NUMBER: AGP-1336
2. WELDING PROCEDURE REGISTRATION NUMBER: WP-IT79.2
3. SERVICE: CORROSIVE HYDROCARBONS
4. SURFACE PREPARATION: HAND TOOL CLEAN (MIN)
5. PRIME AND PAINT: AS PER CLIENT SPECIFICATIONS
6. ALL BOLT HOLES TO STRADDLE CENTERLINES.
7. CLEAN AND COVER ALL OPENINGS FOR SHIPMENT.
8. MATERIAL INFORMATION:
TUBING: ASTM A-519 GRADE 4130 - 4 1/2" OD x 1" THK
90° ELBOW: 4130 - L6060 (ROCKWELL 18-22 MAXIMUM)
9. WELDING INFORMATION:
PREHEAT TEMPERATURE: 450° F
INTERPASS TEMPERATURE: 600° F
WELDING ROD: 10018-D2

ALBERTA BOILERS SAFETY ASSOCIATION PROVINCE OF ALBERTA SAFETY CODES ACT			
REQ. No.	ALD-05-001		
DWG. No.	1931-06, Rev. 2		
	MAWP kPa	Design Temp. °C	
	68948	40/82	
ACCEPTED As Noted			
FEB 10 2005	Signed	Desai	
Date	B.C. DESAI, P. ENG. DESIGN SURVEY ENGINEER		

CANADIAN REGISTRATION NUMBER

NO.	DATE	REVISION	BY	APP
2	05-02-10	DESIGN TEMP WAS 200° F, ADD S/N	PJD...	WB
1	05-01-11	ISSUED FOR REGISTRATION	PJD...	WB
0	05-01-05	ISSUED FOR APPROVAL	PJD...	WB

BLUESTAR WELDING LTD.

RR 2, SITE 7, BOX 20
GRANDE PRAIRIE, AB T8V 2Z9
TELEPHONE: (780) 532-1160 FAX: (780) 532-1148

CLIENT:		HEATER COIL 4 1/2" OD c/w MACHINED 90° ELBOWS
DATE:	05-01-05	
BDD NO.:	1931 / 1943	
CUST. NO.:		
SCALE:	NTS	
DRAWN BY:	PJD...	
CHECKED BY:	WB	
DWG NO.:		
REV.		

APPROVED: _____

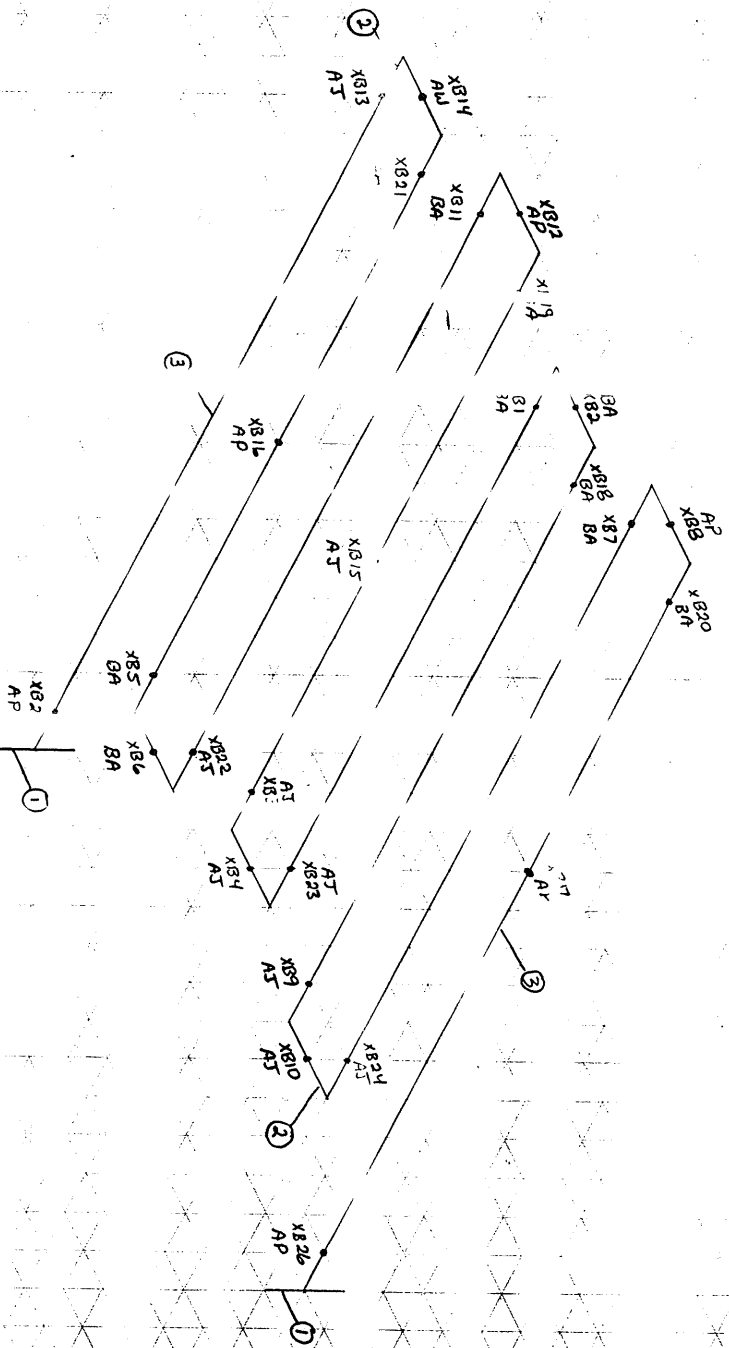
DATE: _____



BS10K4mm-05B



INM QTY	HEAT NUMBER	PC. 2
1 2 Y ¹ 100 I ¹ W ¹ RTDM APTEC. 95-4730	14133	
2 14 Y ¹ WELO ELI ¹ W ¹ AL	21794	
3 Y ¹ 00 I ¹ W ¹ AL STANES FIVE	23331	



NOTE: ALL WELLS HAS SAME HT[#] & MATE VS ③
 ∴ ALL PIPE SAME HT[#] & MATERIAL ③

RT	ΔF
MP	BHN
LP	PWHT
WELD PROCEDURES	

DRO	AREA CODE
S. PRESS.	LINE SPEC.
S. TEMP.	FAB. CODE

	ISULN.	DRAWN
1	AGING	DATE
1	ANT SPEC.	CHK.
FREE DWG.		

	DIA - INS
	WEIGHT

JOB #	CONTROL #	
CLIENT	P.O. #	
PROJECT		
SPOOL #		REV 

REV 

