

8

February 27, 2007

07C6525-CO-L-001
REV 0

Waterflood Service & Sales Ltd.
130 Perkins St, Estevan, Saskatchewan, S4A 0C3

Attention: Carmon R. Lindquist

Dear Carmon:

Re: Fugitive Emission Study – Flooded Screw Compressor Skid (1220)

As per your request Colt Engineering has completed a Fugitive Emission Study for the Screw Compressor Skid Module. The following is the detailed description for the method used, an explanation of the area classification and our recommendations regarding this particular Compressor Skid Module.

The purpose of this study, is to classify the interior of the enclosed Compressor Skid Module to a Class 1, Zone 2 classified location as per the Canadian Electrical Code and API Recommended Practice 505. This is accomplished by determining the minimum ventilation requirements ensuring that the concentration of vapor or gas is maintained below 25% of the lower flammable limit within the building interior. This is based on a reasonable estimate of normal fugitive emissions from hydrocarbon handling equipment, flanges, valves, threaded connection points, etc. within the building and determining the necessary ventilation louvers required for ventilation by "Natural Means".

For the purpose of this study all connections have been assumed as threaded connections to provide the worst case scenario.

As shown on the Area Classification Drawing (Dwg. D-1220-E-101), we have employed the Zone System of area classification for new installations, as outlined in Section 18 of the 2006 Canadian Electrical Code (Part 1). Due to the size of the building and the number of flanges, connections and doors along the outside wall; we have shown a 3 meter envelope around the building as a Class 1, Zone 2 classified area. All electrical equipment within this area must be CSA Approved and suitable for the Class 1, Zone 2 area classification.

To cover the ventilation required with the Compressor Skid, the following is required:

- Three (3) 14"X18" low wall louvers, maintaining a 50% minimum opening at all times when the compressor is running.
- One ridge vent 185"x 5", maintaining a 50% minimum opening at all times when the compressor is running.

- When the compressor is shutdown and the blow down valve has released the system gas pressure, and only after gas detection has been performed, louvers and ridge vent can be maintained minimum 10% open to allow the building to heat up. **Before starting the compressor, ridge vent and louvers must be opened to a minimum of 50%.**
- Gas detector to alarm on high LEL is normally recommended. As a minimum, Owner procedures must cover minimum requirements for personnel safety when at site.
- Procedures for detecting gas accumulation, building entry, operation and re-start of the unit are the main responsibility of the Owner and must be in place to assure personnel safety and prompt response in case of abnormal conditions.

This Fugitive Emissions Study is valid for Natural Gas Only with minimum 85% Methane, maximum 6% Ethane, maximum 6% Propane, No H₂S, No H₂, and the rest inert gases. Gas Composition to be verified by Owner before commissioning, in case of deviation from the parameters indicated above a review of the Fugitive Emission Study is required.

As indicated on the Area Classification Drawing and the attached document, we also recommend the following:

- Supply and installation of lamacoids at each of the ventilation louvers and ridge vent control locations. Labels shall be made as per the attached documents.
- All the electrical equipment and components inside the building and within the three meters Zone 2 envelope should be CSA Approved and suitable for the Class 1, Zone 2, Group IIA, Temp Code T1 area classification.

Please contact me at (403) 640-5997 if there are any questions or details required.

Yours truly,

COLT ENGINEERING CORPORATION



Assaad Sawma

CALCULATION COVER SHEET

CUSTOMER: WATERFLOOD SERVICE AND SALES JOB NO.: 07C6525
PROJECT: SCREW COMPRESSOR PKG PROJECT FILE NO.: E-08-01
TYPE OF CALCULATION: FUGITIVE EMISSION CALCULATION 07C6525-CALC-E-01 REV. NO.: 0

PURPOSE/DESCRIPTION:

CALCULATE THE FUGITIVE EMISSIONS FOR THE COMPRESSOR BUILDING G3304NA-SSHBG PKG AND
CALCULATE THE REQUIRED NATURAL VENTILATION TO CLASSIFY THE BUILDING AS CLASS 1, ZONE 2

THIS CALCULATION IS BASED ON THE FOLLOWING INFORMATION

WATERFLOOD SERVICE P&ID PRINT, Dwg. 1220P&ID-1-1, REV 0 (Sept.20, 2006)
WATERFLOOD SERVICE OVERVIEW PRINT, Dwg. 1220OVERVIEW-1-1, REV 0 (Sept.20, 2006)
WATERFLOOD BUILDING PRINT, Dwg. 1220BUILDING-1-1, REV 0 (Sept. 20, 2006)

THE FOLLOWING INFORMATION TAKEN FROM PREVIOUS FUGITIVE EMISSION STUDIES DONE FOR WATER FLOOD

PRODUCT = NATURAL GAS, AVE MOLECULAR WT=16, MAX AMBIENT TEMP=104 F AND %LEL=5
THIS CALCULATION IS VALID FOR COMPRESSOR SKID 1220 ONLY
THIS FUGITIVE EMISSIONS STUDY IS VALID FOR SWEET NATURAL GAS ONLY WITH MINIMUM 85% METHANE
MAXIMUM 6% ETHANE, MAXIMUM 6% PROPANE, NO H2S AND THE REST INERT GASES.
GAS COMPOSITION TO BE VERIFIED BEFORE COMMISSIONING, IN CASE OF DEVIATION FROM THE
PARAMETERS INDICATED ABOVE A REVIEW OF THIS FUGITIVE EMISSIONS STUDY IS REQUIRED.



COMPUTER PROGRAMS AND/OR DESIGN MANUALS USED:

SEE SPREADSHEET ATTACHED

THIS REVISION HAS BEEN SUPERSEDED BY REVISION: ☐

REVISION NOTES:

colt engineering corporation
engineers/constructors

THIS REVISION PREPARED BY: Assaad Sawma  DATE: Feb. 27, 2007
THIS REVISION CHECKED BY: Sujit Das  DATE: Feb. 27, 2007
PRELIMINARY OR FINAL? FINAL

Fugitive Emission Calculation

(Per API #4615 (JANUARY 1995), Emission Factors for Oil and Gas Production Operations)

TABLE 8, API No.4615 1995, AVERAGE EMISSION FACTORS

| TABLE 8, API No.4615 1995, AVERAGE EMISSION FACTORS | | | | |
|---|-------------|------|-----------------------------|---------------------------|
| FACILITY TYPE | STYLE | QTY. | PREDICTION FACTOR (LBS/DAY) | TOTAL EMISSIONS (LBS/DAY) |
| 1. ONSHORE LIGHT CRUDE | CONNECTIONS | | 0.00866 | |
| | FLANGES | | 0.00407 | |
| | OPEN-ENDED | | 0.0638 | |
| | PUMPS | | 0.0168 | |
| | VALVES | | 0.07 | |
| | OTHERS | | 0.397 | |
| SUBTOTAL 1= | | | | 0 |
| 2. ONSHORE HEAVY CRUDE | CONNECTIONS | | 0.000422 | |
| | FLANGES | | 0.00116 | |
| | OPEN-ENDED | | 0.00818 | |
| | PUMPS | | 0.0168 | |
| | VALVES | | 0.000686 | |
| | OTHERS | | 0.0037 | |
| SUBTOTAL 2 = | | | | 0 |
| 3. ONSHORE GAS PRODUCTION | CONNECTIONS | 285 | 0.017 | 4.845 |
| | FLANGES | 69 | 0.00623 | 0.42987 |
| | OPEN-ENDED | 0 | 0.0363 | 0 |
| | PUMPS | 2 | 0.0103 | 0.0206 |
| | VALVES | 40 | 0.139 | 5.56 |
| | OTHERS | 9 | 0.486 | 4.374 |
| SUBTOTAL 3 = | | | | 15.22947 |
| 4. GAS PLANTS | CONNECTIONS | | 0.0145 | |
| | FLANGES | | 0.0232 | |
| | OPEN-ENDED | | 0.0546 | |
| | PUMPS | | 0.609 | |
| | VALVES | | 0.204 | |
| | OTHERS | | 0.257 | |
| SUBTOTAL 4 = | | | | 0 |
| 5. OFFSHORE OIL & GAS | CONNECTIONS | | 0.0057 | |
| | FLANGES | | 0.0104 | |
| | OPEN-ENDED | | 0.0537 | |
| | PUMPS | | 0.0103 | |
| | VALVES | | 0.0272 | |
| | OTHERS | | 0.367 | |
| SUBTOTAL 5 = | | | | 0 |
| ADDITION OF ABOVE SUBTOTALS 1,2,3,4, 5 = | | | | 15.2295 |
| E = | | | | 0.6346 |

Client: WATERFLOOD SERVICE
 Location: ALBERTA
 Project: FUGITIVE EMISSIONS STUDY
 Building: FLOOD SCREW COMPRESSOR
 Ref. P&ID: DWG. #1220-P&ID SHT 1 OF 1, REV 0

Job No.: 07C6525
 Original Date: _____
 Today's Date: 5-Mar-07 15:30
 By: A. Sawma
 Notes: _____

Building Dimensions:

Dimensions (ft.), L = 15.4
 W = 11
 Eave H = 8
 Peaked Roof Slope = 4 : 12
 VOL = 1,510 CU FT

Required Ventilation Calculations Per API RP 500 & RP 505:

Product: Natural Gas
 Average Molecular Wt.: 16
 Max. Ambient Temp.(F): 104
 %LEL: 5

Volume (temp. corrected), $V = 359 * (460 + T_a) / (460 + 32) = 411.5$ CU FT.

Leak Rate, $G = (E * V) / (60 * \text{Ave. mW}) = 0.2720$

Ventilation Rate, $Q_r = G / (25 \%LEL * \text{MIN } \%LEL) = 21.8$ CU FT.

Safety factor of 4, RATE $Q = 4 * Q_r = 87.0$ CFM.

Air Changes/ Hr:

$N_{acph} = Q * 60 / \text{BLDG VOLUME} = 3.458$ ACPH

Notes:

1. * "OTHERS" includes: some instruments, loading arms, pressure relief valves, stuffing boxes, compressor seals, dump lever arms, and vents.

E-08-01

Building Ventilation Area Calculation

Location: ALBERTA

Job No.: 07C6525

Building: FLOOD SCREW COMPRESSOR

Today's Date: 05-Mar-07

Air changes per hour:

- wind effect (2 kph, 0.55 m/s), through lower louver

- stack effect (Tab: Vent. - Stack Effect).

Calculated wind plus stack effect **Total Ventilation Provided:**Fugitive emission calculation - **Required Ventilation:****CAN classify building Zone 2**

For reference: Average time to reach 100% LEL with no ventilation: 9.25 Hrs

ACPH

Bldg. Vol.

1,510 ft³

4.74

4.74

9.48

3.46

Inputs for stack effect:

Ave. Vert. Upper-Lower Sep., H: 9

Inside Temp., T_i: 20Outside Temp., T_o: 18**Lower Openings:****Low Wall Louvers:**

Length (in.) 18

Width (in.) 14

Quantity 3

Area (sq. in.) 756

% Min. Open 50 (3 louvers, all 50% open)

Min. Area (in²) 378**Low Exhaust Fan**

Diameter (in.)

Quantity

Area (sq. in.) 0

Windows Type 1:

Length (in.) 36

Width (in.) 36

Quantity 1

Area (sq. in.) 1296

% Area Open 0

Min. Area (in²) 0**Windows Type 2:**

Length (in.)

Width (in.)

Quantity 0

Area (sq. in.) 0

% Area Open 0

Min. Area (in²) 0**Man Door Gaps:**

Length (in.) 85.5

Width (in.) 76

Gap (in.) 0.05

Quantity 1

Area (sq. in.) 16.15

Equipment Door Gaps:

Length (in.)

Width (in.)

Gap (in.) 0.025

Quantity

Area (sq. in.) 0

Other Low Opening Gaps:

Length (in.) 0

Opening Gap (in.) 0

Quantity 0

Area (sq. in.) 0

(used for wind ventilation calculation)

Lower Total: 394**Upper Openings:****High Wall Louvers or Windows:**

Length (in.) 0

Width (in.) 0

Quantity 0

Area (sq. in.) 0

% Min. Open 50

Min. Area (in²) 0**High Exhaust Fan**

Diameter (in.)

Quantity

Area (sq. in.) 0

Ridge Vent

Length (in.) 169

Opening Width (in.) 5

Quantity 1

Area (sq. in.) 845

% Min. Open 50 (50% open)

Min. Area (in²) 422.5**Circular Roof Louvers:**

Diameter (in.)

Quantity

Area (sq. in.) 0

Other High Opening Gaps (upper door):

Length (in.)

Opening Gap (in.)

Quantity

Area (sq. in.) 0

Upper Total: 423

E-08-01

Natural Ventilation Calculation for Buildings

Based on Stack Effect

Reference: API RP 500 1997, Section 6.3.2 and Appendix A (Div.) and
API RP 505 1997, Section 6.6 and Appendix A (Zones)

Client: WATERFLOOD SERVICE
Location: ALBERTA
Project: FUGITIVE EMISSIONS STUDY
Building: FLOOD SCREW COMPRESSOR
P&ID No.: DWG. #1220-P&ID SHT 1 OF 1, REV 0

Job No.: 07C6525
Date: 00-Jan-00
Rev: Mar/5/07 15:47
By: A. Sawma
Notes: 0
0

Building Dimensions:

(Inputs from "Fug. Emission" and "Vent. Area Calcs." tabs.)

| | | | |
|--------------|----------------------|---------------------------|----------------------|
| Length: | 15.4 ft. | Upper Opening, A2: | 423 in. ² |
| Width: | 11 ft. | Lower Opening, A1: | 394 in. ² |
| Eave Height: | 8 ft. | Ave. Vert. Separation, H: | 9 ft. |
| Roof Slope: | 4 : 12 | | |
| Volume, V: | 1510 ft ³ | Inside Temp., Ti: | 20 C |
| Volume: | 43 m ³ | Outside Temp., To: | 18 C |

Calculations:

(Based on Stack-Effect)

| | |
|--|---------------------------|
| Actual Air Flow =(smallest vent x louver ratio coeff. / A) x 12: | 4.74 air changes per hour |
| Minimum air flow from fugitive emission calculation: | 3.46 air changes per hour |

CAN be classified Zone 2 based on stack-effect only.

$$h = \frac{H}{1 + ((T_i + 273) / (T_o + 273))} = 4.48 \text{ ft.}$$

(*omitted A1²/A2² term)

$$A = \frac{V}{1200 \times \sqrt{h \times (T_i - T_o) / (T_i + 273)}} \times 144 = 1036 \text{ in.}^2 \quad \text{For inlet and required for outlet.}$$

Definitions:

h = height above lower vent of equal air pressure on walls.

A = minimum size of the smallest louver to provide 12 air changes per hour, as per API RP 500 for adequate natural ventilation, without the need to provide a fugitive emission calculation.

E-08-01

Recommendations
To Provide Adequate Ventilation
To Classify Building to Class I, Zone 2

Client: WATERFLOOD SERVICE
Location: ALBERTA
Project: FUGITIVE EMISSIONS STUDY
Building: FLOOD SCREW COMPRESSOR
P&ID No.: DWG. #1220-P&ID SHT 1 OF 1, REV 0

Job No.: 07C6525
Date: 00-Jan-00
Rev: 05-Mar-07
By: A. Sawma
Notes: _____

Recommendations and Comments:

Building is classified as Class 1 Zone 2 based upon three (3) low wall louvers 14" x 18" and a Ridge vent 5" x 169".

Louvers must be a minimum of 50% open at all times when the compressor is running.
Ridge Vent must be a minimum of 50% open at all times when the compressor is running.

When the compressor is shutdown and the blowdown valve has released the system gas pressure, and only after gas detection has been performed, louvers and ridge vent can be maintained minimum 10% open to allow the building to heat up. **Before starting the compressor, ridge vent and louvers must be opened to a minimum of 50%.**

Gas detector to alarm on high LEL is normally recommended. As a minimum, Owner procedures must cover minimum requirements for personnel safety when at site.

Procedures for detecting gas accumulation, building entry, operation and re-start of the unit are the main responsibility of the Owner and must be in place to assure personal safety and prompt response in case of abnormal conditions.

These labels should be attached near each ventilation opening mechanisms.

FOR LOUVERS

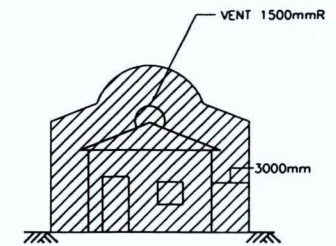
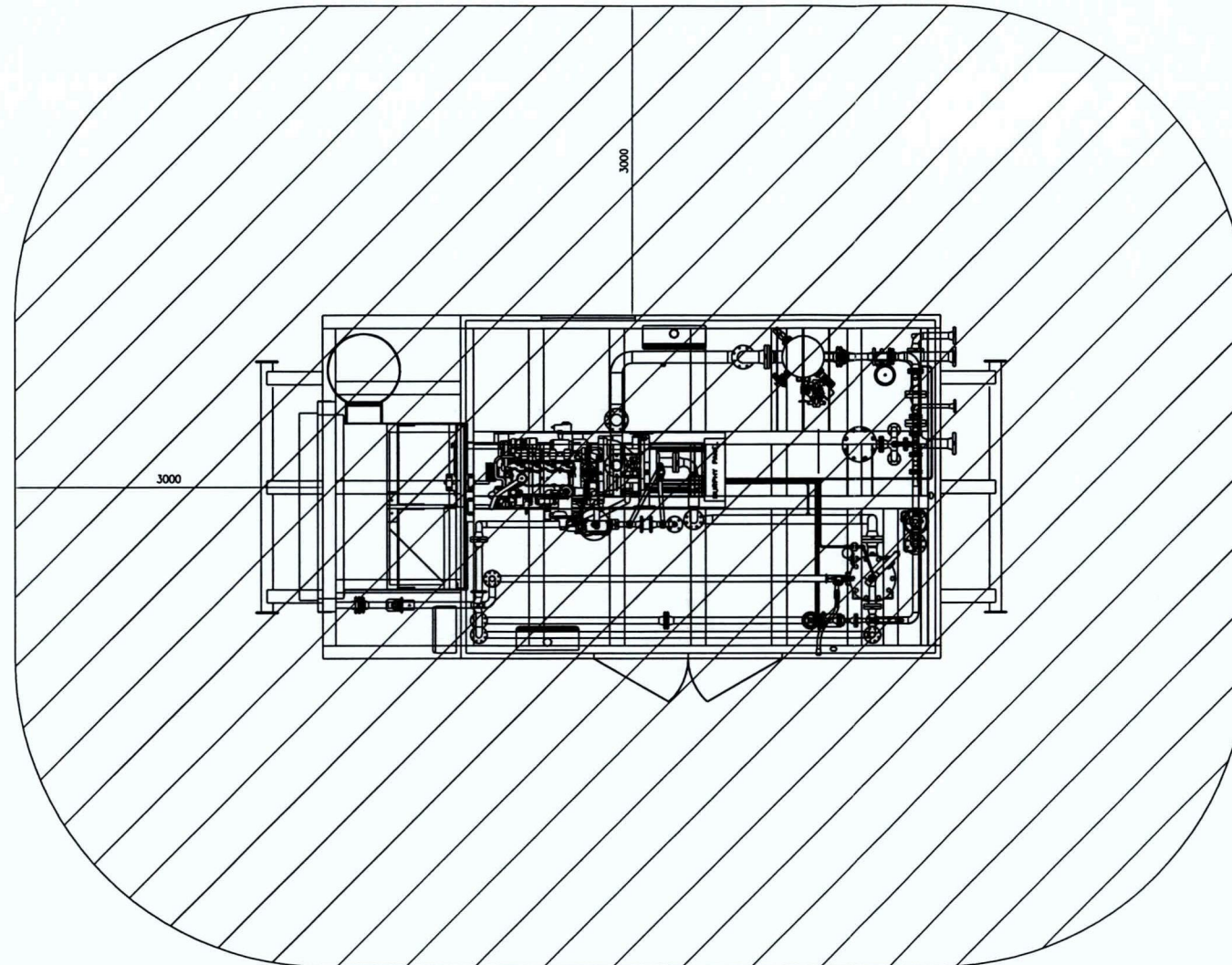
CAUTION

This building is classified as Class I, Zone 2 based on fugitive emission study and adequate natural ventilation. All three (3) louvers must be minimum 50% open at all times.

FOR RIDGE VENT

CAUTION

This building is classified as Class I, Zone 2 based on fugitive emission study and adequate natural ventilation. Ridge Vent must be minimum 50% open at all times.



CLASS 1, ZONE 2 BUILDING
PER FUGITIVE EMISSION STUDY

LEGEND

- CLASS 1 ZONE 0, GROUP IIA
- CLASS 1 ZONE 1, GROUP IIA
- CLASS 1 ZONE 2, GROUP IIA
- CLASS 1 ZONE 2, GROUP IIA FOR 450mm ABOVE GRADE (UNLESS OTHERWISE NOTED)
- NONCLASSIFIED

NOTES:

- COMPRESSOR SKID VENDOR SHALL SUPPLY AND INSTALL LAMACARDS WITH RED LETTERS ON A WHITE BACKGROUND WHICH READS AS FOLLOWS:

FOR EACH LOUVER

CAUTION

THIS BUILDING IS CLASSIFIED AS CLASS 1, ZONE 2 BASED ON FUGITIVE EMISSION STUDY AND ADEQUATE VENTILATION. LOUVRES MUST BE OPEN A MINIMUM OF 50% AT ALL TIMES WITH GAS GROUP IIA AND TEMP CODE T1.

FOR RIDGE VENT

CAUTION

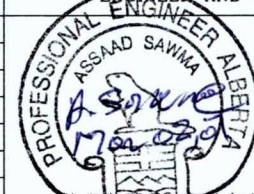
THIS BUILDING IS CLASSIFIED AS CLASS 1, ZONE 2 BASED ON FUGITIVE EMISSION STUDY AND ADEQUATE VENTILATION. RIDGE VENT MUST BE OPEN A MINIMUM OF 50% AT ALL TIMES.

ONE (1) SIGN TO BE LOCATED AT THE RIDGE VENT OPERATOR CHAIN AND ONE (1) SIGN TO BE LOCATED AT EACH LOUVER.

- ALL ELECTRICAL EQUIPMENT INSIDE THE BUILDING AND WITHIN THE THREE METER ZONE 2 ENVELOPE MUST BE CSA APPROVED AND SUITABLE FOR CLASS 1, ZONE 2 AREA CLASSIFICATION.
- FUGITIVE EMISSION AND NATURAL VENTILATION CALCULATIONS FOR BUILDING ARE BASED ON API RECOMMENDED PRACTICE 505, NOV. 1997, SECTION 6.6 AND APPENDIX 'A' (ZONES).
- FUGITIVE EMISSION CALCULATION IS FOR SKID 1220 SCREW ROTARY COMPRESSOR PACKAGE ONLY.
- THE AREA CLASSIFICATION SHOWN IN THIS DRAWING IS VALID FOR A STAND ALONE UNIT ONLY. WHEN THIS UNIT IS INSTALLED IN A FACILITY INVOLVING MULTIPLE HAZARDOUS AREAS A DETAILED AND INTEGRATED AREA CLASSIFICATION DRAWING MUST BE PREPARED TO ASSURE THE CLASS 1, ZONE 2 AREA IS MAINTAINED.

| DWG. NO. | REFERENCE DRAWINGS | REV | REVISIONS | DATE (MM/DD/YY) | BY | CHK'D | APP'D | CLIENT APP'D |
|----------|--------------------|-----|-------------------------|-----------------|----|-------|-------|--------------|
| | | 0 | ISSUED FOR CONSTRUCTION | 23/02/07 | OA | AS | SD | |
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ENGINEER AND PERMIT STAMPS



PERMIT TO PRACTICE
COLT ENGINEERING CORPORATION
Signature: *[Signature]*
Date: 5 MAR 07
PERMIT NUMBER: P 725
The Association of Professional Engineers,
Geologists and Geophysicists of Alberta

This drawing is provided solely for the use of the contractual Customer of Colt Engineering Corporation ("Colt") and Colt assumes no liability to any other party for any representations contained in this drawing.

| | BY | DATE (MM/DD/YY) |
|-------------|----|-----------------|
| DESIGNED | SA | 02/23/07 |
| DRAWN | OA | 02/23/07 |
| CHECKED | AS | 02/23/07 |
| PROCESS CK. | | |
| MECH. CK. | | |
| STRUCT. CK. | | |
| ELECT. CK. | SD | 03/09/07 |
| INSTR. CK. | | |
| COLT APP. | | |
| CLIENT APP. | | |

Colt Engineering Corporation



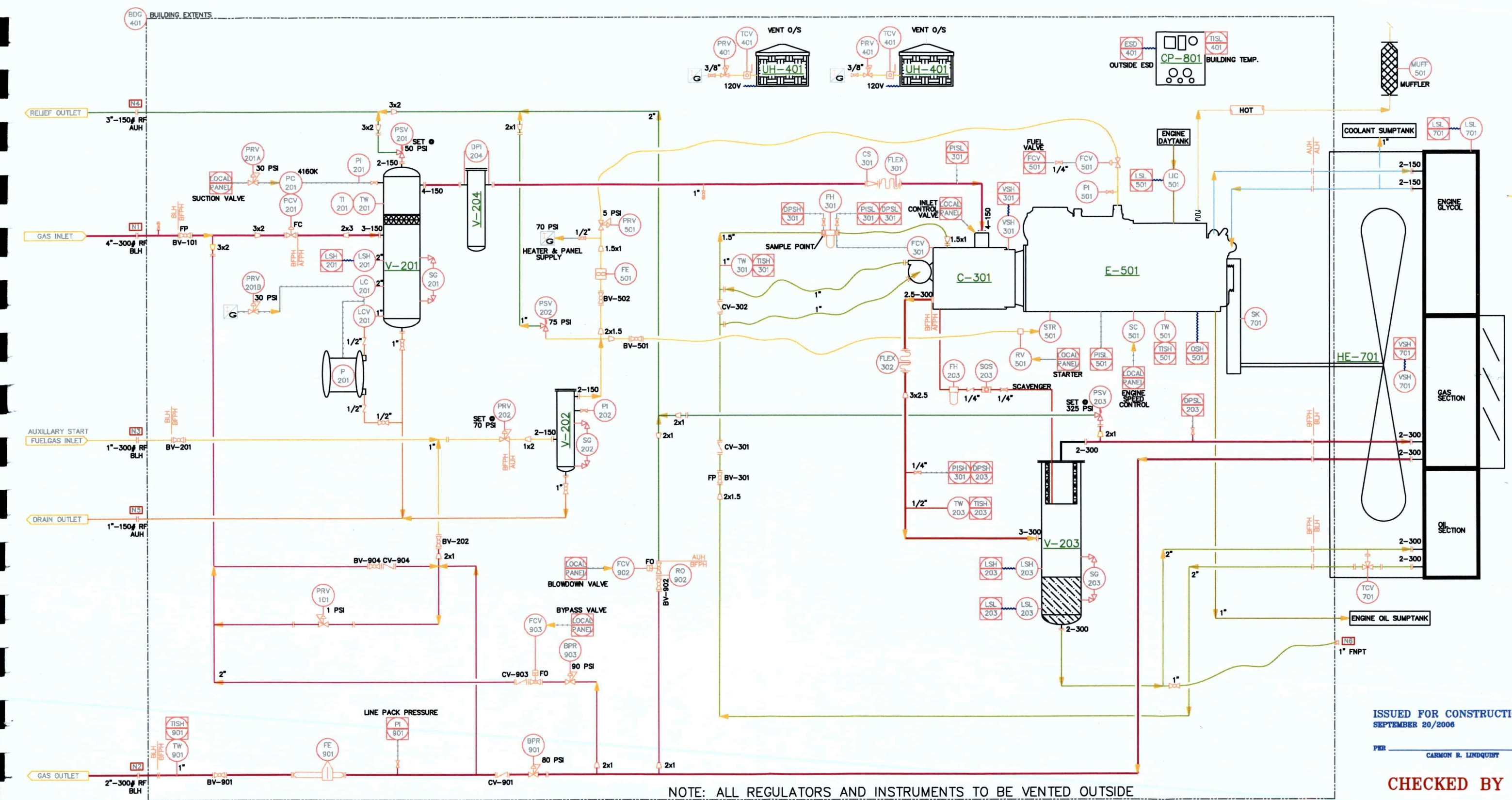
CLIENT WATERFLOOD SERVICES & SALES

PROJECT 1220 FLOODED SCREW COMPRESSOR

AREA CLASSIFICATION

| JOB NO. | SCALE | DWG. NO. | SHEET |
|---------|-------|--------------|--------|
| 07C6525 | 1:30 | D-1220-E-101 | 1 OF 1 |

| | | | | | | | | |
|--|---|---|---|--|---|---|---|---|
| V-201 INLET VESSEL WATERFLOOD SERVICE AND SALES LTD. MODEL#: 600TIS SIZE: 18" x 48" (8.8 CU. FT.) DESIGN: 260 PSI @ 200°F CRN#: A4060.32 | V-202 FUEL GAS SCRUBBER WATERFLOOD SERVICE AND SALES LTD. MODEL#: FUEL GAS-B SIZE: 8" x 47" (1.27 CU. FT.) DESIGN: 260 PSI @ 200°F CRN#: OH5535.231 | V-203 OIL COALESCING VESSEL WATERFLOOD SERVICE AND SALES LTD. MODEL#: 600TOS SIZE: 18" x 55" (8.1 CU. FT.) DESIGN: 375 PSI @ 233°F CRN#: R2078.23 | V-204 INLET FILTER VESSEL WATERFLOOD SERVICE AND SALES LTD. MODEL#: WSSFCP40E10 SIZE: 10" x 32" (1.5 CU. FT.) DESIGN: 150 PSI @ 233°F CRN#: OH0670.32 | UH-401 BLDG. HEATERS MAKE: CISCAN NATURAL GAS MODEL No.: MKII 24x24 C/W EXP. PROOF THERMOSTAT C/W 120V STARTERS | C-301 SCREW COMPRESSOR MAKE/MODEL: CARNER DENVER SSHG99D TYPE: ROTARY SCREW C/W 5.2V, INLET CONTROL VALVE AUX. OIL PUMP, SAE#1 ADAPTOR | E-501 ENGINE DRIVER MAKE: CATERPILLAR MODEL No.: G3304NA 10.5:1 COMPRESSION, NATURAL GAS RATED: 95 HP @ 1800 RPM | HE-701 HEAT EXCHANGER MAKE: ACE J48A-6 DESIGN: BOX END, TUBE TYPE CRN: ALBERTA & SASK. LOW TEMP, LOW SPEED FAN | CP-801 CONTROL PANEL MAKE: F.W. MURPHY MODEL No.: 50-30-3740 CONTROLLER: TTDJ-IGN-T CLASSI, DIVI, INTRINSICALLY SAFE |
|--|---|---|---|--|---|---|---|---|



ISSUED FOR CONSTRUCTION
SEPTEMBER 20/2006

PER CARMON R. LINDQUIST

CHECKED BY

| REV | DATE | REVISION DESCRIPTION | CRL | TITLE | PROJECT | DESIGNED | DATE | DRAWN | DATE |
|-----|----------|----------------------|-----|---|---------------------------------------|-------------------|-----------------|------------------|----------|
| 1 | 03/11/07 | AS BUILT | | WATERFLOOD SERVICE & SALES LTD. SSH ROTARY FLOODED SCREW COMPRESSOR | G3304NA/SSH P&ID PRINT JOB 1220 | CARMON LINDQUIST | 09/20/06 | CARMON LINDQUIST | 09/20/06 |
| 2 | | | | | | APPROVED | DATE | CHECKED | DATE |
| 3 | | | | | | SCALE | COMPUTER FILE # | SHEET | REV |
| 4 | | | | | | NTS | 1220 P&ID.DWG | 1 OF 1 | 1 |
| | | | | | | DRAWING CONTROL # | 1220P&ID-1-1 | | |



WATERFLOOD

WFS

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LTD.

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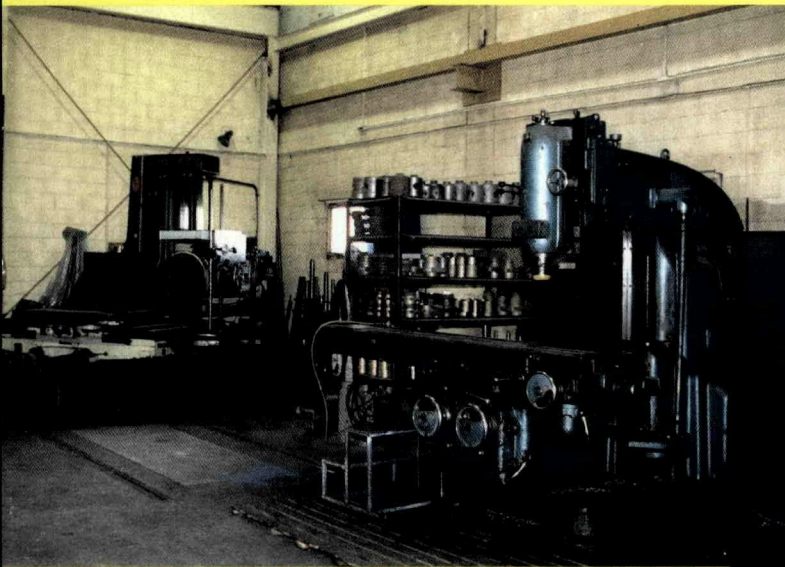
waterflood

Service Centres

Waterflood Service Centres provide professional, cost effective solutions to your machining and mechanical repair needs.

Waterflood is committed to:

- An understanding of our customer's needs
- Efficient, professional service
- Cost effective solutions to our customers requirements
- Ongoing employee product and services training
- Internal quality control from start to finish of every job, big or small
- A safe and healthy work environment



About the company

Waterflood Service and Sales Ltd. was founded in 1970 and is a privately owned Canadian company located in Western Canada. The family that originally started the company over 29 years ago is still involved in the day-to-day operations. Our

company has evolved into a highly technical and diverse service and supply company. Waterflood has sales, engineering services, machining and mechanical service centres throughout Western Canada.

product line

PUMPS

Gardner-Denver: plunger, duplex, well service, drilling

OPI: plunger, well service, drilling

Ajax: vertical plunger pumps

Viking: centrifugal, rotary, turbine

Bowie: gear

Remanufactured: National, Wheatly and Oilwell plunger pumps



COMPRESSORS

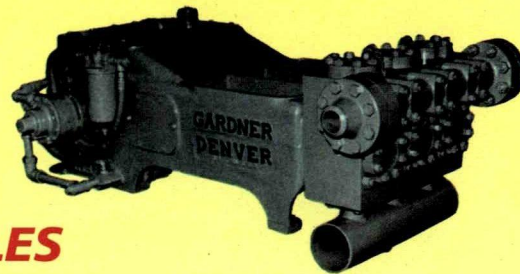
Gardner-Denver: VRU, Flooded Screw

Ajax Remanufactured: gas

AC Ro-Flo: VRU, gas, air

Ariel: gas

Corken: VRU, gas, air



PARTS AND EXPENDABLES

Gardner-Denver: pump and compressor parts

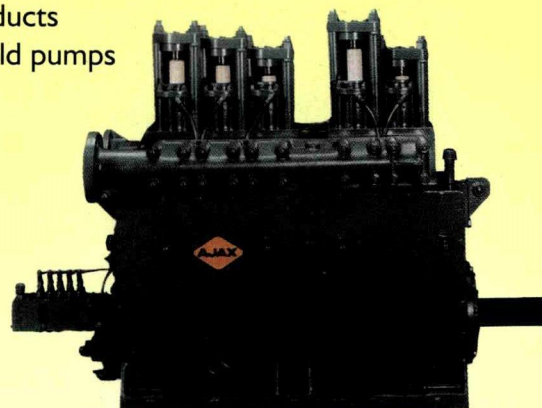
Ajax: pump, engine and compressor parts

Coors: valves, plungers, centrifugal expendables

Utex: packing, mechanical seals, moulded products

WSS: manufactured spare parts for most oilfield pumps

Drilling Equipment: parts and equipment



ACCESSORIES

Stabilizers: Coors P.E., Fluid-Kinetics, Pulsation Performance

Engines: New and Remanufactured: Ford, Caterpillar, Detroit Diesel, Waukesha, Ajax

Electric Motors: Westinghouse, Toshiba

Filtration: bag, cartridge

Drives: belt, coupling, gear boxes

Instrumentation: F.W. Murphy, flowmeters, end devices

Skids, piping, guards: WSS fabricated



HEAD OFFICE/PLANT

Estevan, Saskatchewan, Canada

P.O. Box 1490, 130 Perkins Street, S4A 0C3

Phone 1-306-634-7212

Fax 1-306-634-7887

SERVICE CENTRE

Lloydminster, Alberta, Canada

P.O. Box 1859, Bay B, 4810 - 62 Avenue, T9V 2E9

Phone 1-780-875-7638

Fax 1-780-875-6108

SERVICE CENTRE

Edmonton, Alberta, Canada

8705 - 53rd Avenue, T6E 5E9

Phone 1-780-465-2333

Fax 1-780-465-3900

SALES OFFICE

Calgary, Alberta, Canada

Box 432 Station M, T2P 2J1

Phone 1-403-221-8000

Fax 1-403-221-8004

SERVICE CENTRE

Taber, Alberta, Canada

5810 - 58th Avenue, T1G 1Y2

Phone 1-403-223-9529

Fax 1-403-223-2569

"Get pumped up at www.waterflood.com"



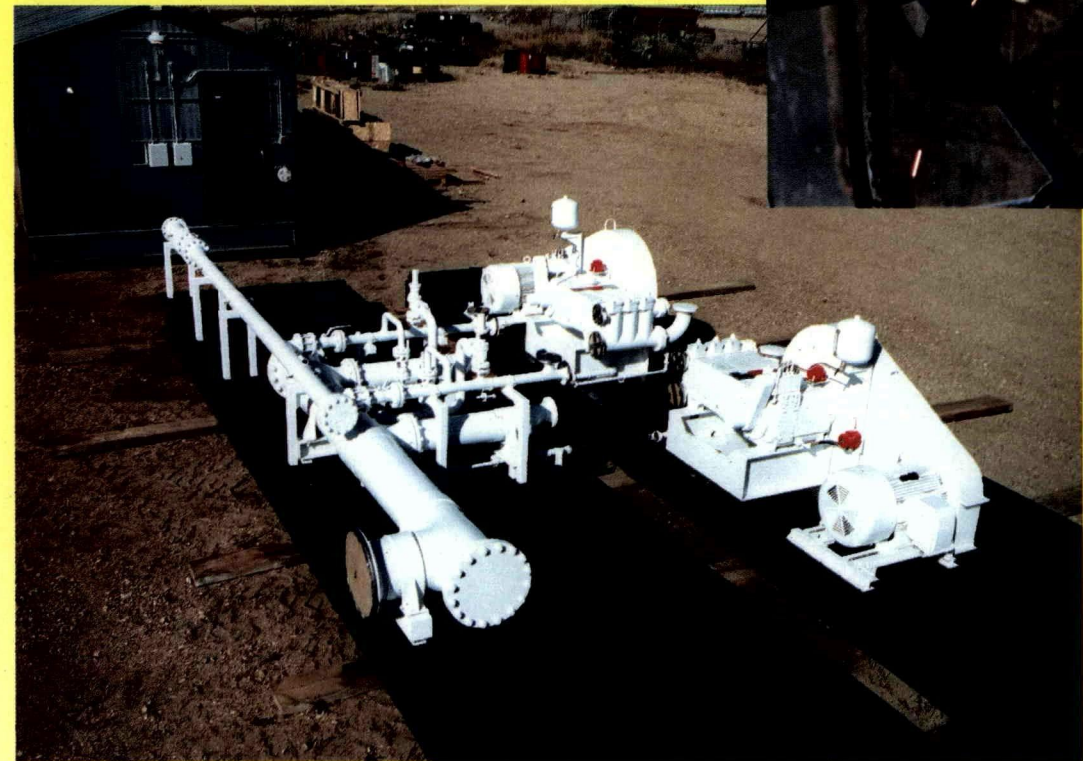
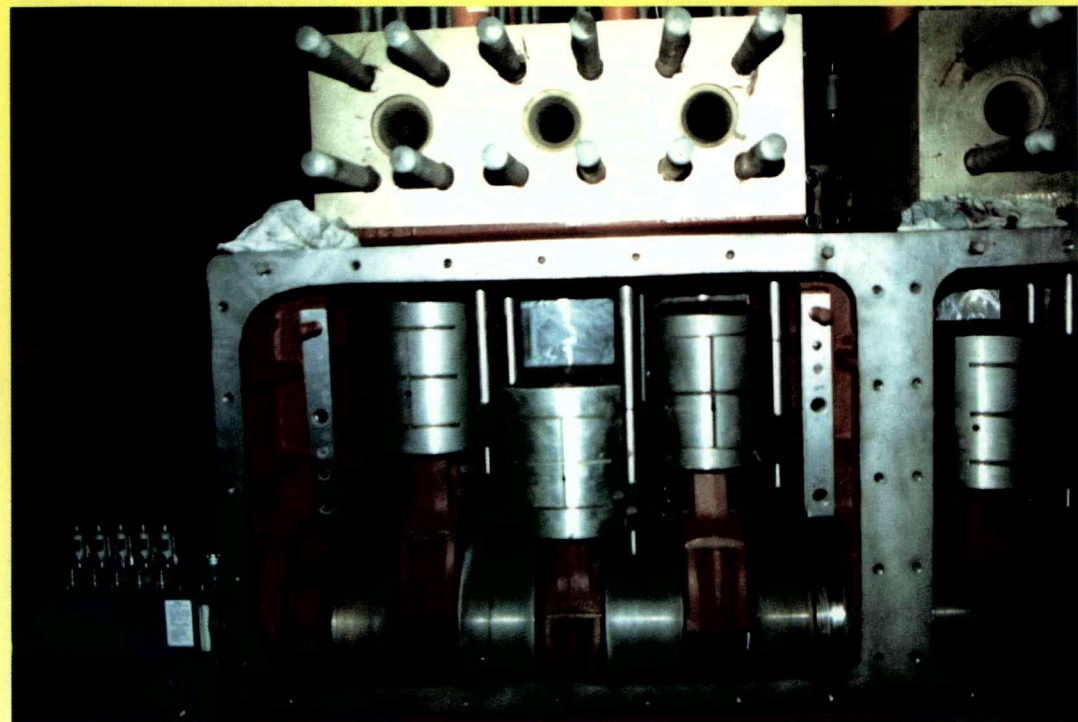
Quality Control

Waterflood has established and maintains an in-house quality control system which compliments the requirements of CWB and our registered provincial quality control manual.



Safety

Waterflood believes safety and production are synonymous. Waterflood provides ongoing safety training to all employees, providing them with the required knowledge to perform their work in the safest possible manner. Our in-house safety program continually monitors and updates all safety aspects, from the beginning employee to upper management.



Engineering Services

The Engineering group provides technical support for Waterflood Service Centres and packaging department. Our engineers and technicians are knowledgeable in the latest and existing technology to provide our customers with comprehensive service.



Fabrication & Packaging

Waterflood's fabrication shop is able to package oilfield equipment efficiently in a controlled all service environment.

waterflood