

66069776

(A) 4886071
207

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Manufactured and certified by NUSCO SUPPLY & MANUFACTURING INC. 1604 - 8TH STREET NISKU ALBERTA CANADA T9E 7S6
(Name and address of manufacturer)

2. Manufactured for Husky Oil Operations Ltd. 707-8th Avenue SW Calgary, Alberta T2P 1H5

(Name and address of purchaser)

3. Location of installation Husky Oil Operations Ltd. 03-21-49-19 W5M

(Name and address)

4. Type: Vertical Separator 005739-200 K-9276.23 D1227-200 Rev.0 2002
(Horiz. or vert. tank) (Mfr's serial No.) (CRN) (Drawing no.) (Nat'l Bd. No.) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1

2001

Year

to

Addenda (Date)

Code Case Nos.

Special Service per UG 120(d)

6. Shell: SA-106-B 1.031" 0.0625" 16" OD 6' - 6"
(Mat'l. (Spec No., Grade)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (overall) (ft. & in.))

7. Seams: Type-S Seamless 100% - - Type-1 * Spot 1
(Long. (Welded, Dbl., Sngl., Lap, Butt)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp (F)) (Time (hr)) (Girth (Welded, Dbl., Sngl., Lap, Butt)) (R.T. (Spot, Partial, or Full)) (No. of Courses)

8. Heads: (a) Mat'l. SA-516-70N (b) Mat'l. SA-516-70N
(Spec No., Grade) (Spec No., Grade)

| | Location (Top, Bottom, Ends) | Minimum Thickness | Corrosion Allowance | Crown Radius | Knuckle Radius | Elliptical Ratio | Conical Apex Angle | Hemispherical Radius | Flat Diameter | Side to Pressure (Convex or Concave) |
|-----|------------------------------|-------------------|---------------------|--------------|----------------|------------------|--------------------|----------------------|---------------|--------------------------------------|
| (a) | TOP | 0.813" | 0.0625" | - | - | 2:1 | - | - | - | Concave |
| (b) | BOTTOM | 0.813" | 0.0625" | - | - | 2:1 | - | - | - | Concave |

If removable, bolts used (describe other fastenings)

(Mat'l. Spec. No., Gr., Size, No.)

9. MAWP 1440 psi at max. temp. 100° °F
Min. design metal temp. -20 °F at 1440 psi. Hydro. 2160 psi. test pressure

10. Nozzles, inspection and safety valve openings:

| Purpose (Inlet, Outlet, Drain) | No. | Diam. or Size | Type | Mat'l. | Nom. Thk. | Reinforcement Mat'l. | How Attached | Location |
|--------------------------------|-----|---------------|------------|--------------------|-----------|----------------------|--------------|----------|
| N1 Inlet | 1 | 3" | 600# RFWN | SA-105N / SA-106-B | XXH | N/A | UW-16.1(c) | Shell |
| Gas Outlet | 1 | 3" | 600# RFWN | SA-105N / SA-106-B | XXH | N/A | UW-16.1(c) | Top Head |
| C1 Outlet (HCL) | 1 | 1" | TOL | SA-105N | 3000# | N/A | UW-16.1(a) | Shell |
| C2 Water Outlet | 1 | 1" | TOL | SA-105N | 3000# | N/A | UW-16.1(a) | Shell |
| C3 Drain | 1 | 2" | 3000# CPLG | SA-106 B | SCH 160 | N/A | UW-16.1(c) | Btm Head |
| C4 LC (HCL) | 1 | 2" | TOL | SA-105N | 3000# | N/A | UW-16.1(a) | Shell |
| C5 LC (Water) | 1 | 2" | TOL | SA-105N | 3000# | N/A | UW-16.1(a) | Shell |
| SEE U4 FORM | - | - | - | - | - | - | - | - |

11. Supports: Skirt Yes Lugs - Legs - Other - Attached Welded to Bottom Head
(Yes or no) (No.) (No.) (Describe) (Where and how)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: -

(Name of part, item number, Mfr's name and identifying stamp)

-Construction Drawing No. D1317-200 Rev.0 -Vessel is Impact Test Exempt per UG-20(f) & UCS-66(a)
-Radiography - as per UW-11(a)5(b) -Hydrotested Vertically
-Customers responsibility to install adequate pressure relief valve. -Capacity 7.5 Cu. Ft.

CERTIFICATE OF SHOP / FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1. "U" Certificate of Authorization No. 24,776 expires March 27, 2005

Date 29 2002 Co Name NUSCO SUPPLY & MANUFACTURING INC. Signed [Signature]
(Manufacturer) (Representative)

CERTIFICATE OF SHOP / FIELD INSPECTION

Vessel constructed by NUSCO SUPPLY & MANUFACTURING INC. at 1604 - 8TH STREET NISKU, ALBERTA CANADA T9E 7S6

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Alberta and employed by Alberta Boilers Safety Association have inspected the component described in this Manufacturer's Data Report on 29 2002 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 29 2002 Signed [Signature] Commissions AB # 132
(Authorized Inspector) (N.B. Board No. and jurisdiction State, Prov. and No.)

FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by NUSCO SUPPLY & MANUFACTURING INC. 1604 - 8TH STREET NISKU ALBERTA CANADA T9E 7S6
(name and address of manufacturer)

2. Manufactured for Husky Oil Operations Ltd. 707-8th Avenue SW Calgary, Alberta T2P 1H5
(name and address of purchaser)

3. Location of installation Husky Oil Operations Ltd. 03-21-49-19 W5M
(name and address)

4. Type: Vertical Separator 005739-200
(horiz., vert., or sphere) (tank, separator, heat exch., etc.) (mfg's serial no.)

K-9276.23 D1227-200 Rev.0 2002
(CRN) (drawing no.) (Nat'l. Bd. no.) (year built)

Nozzles, inspection, and safety valve openings:

| Purpose (Inlet, Outlet, Drain, etc.) | No. | Diameter or Size | Flange Type | Material | | Nozzle Thickness | | Reinforcement Material | How Attached | | Location (Insp. Open.) |
|--------------------------------------|-----|------------------|-------------|----------|--------|------------------|---------|------------------------|--------------|--------|------------------------|
| | | | | Nozzle | Flange | Nom. | Corr. | | Nozzle | Flange | |
| C6 A/B LG (HCL) | 2 | 3/4" | TOL | SA-105N | - | 3000# | 0.0625" | - | UW-16.1a | - | Shell |
| C7 A/B LG (Water) | 2 | 3/4" | TOL | SA-105N | - | 3000# | 0.0625" | - | UW-16.1a | - | Shell |
| C8 PI | 1 | 1/2" | TOL | SA-105N | - | 3000# | 0.0625" | - | UW-16.1a | - | Shell |
| C9 TI | 1 | 3/4" | TOL | SA-105N | - | 3000# | 0.0625" | - | UW-16.1a | - | Shell |
| C10 PSHL | 1 | 1" | TOL | SA-105N | - | 3000# | 0.0625" | - | UW-16.1a | - | Shell |
| C11 HLSD | 1 | 2" | TOL | SA-105N | - | 3000# | 0.0625" | - | UW-16.1a | - | Shell |
| C12 PSV | 1 | 1" | TOL | SA-105N | - | 3000# | 0.0625" | - | UW-16.1a | - | Shell |
| C13 A Inspection | 1 | 2" | TOL | SA-105N | - | 3000# | 0.0625" | - | UW-16.1a | - | Shell |
| C13 B Inspection | 1 | 1 1/2" | TOL | SA-105N | - | 3000# | 0.0625" | - | UW-16.1a | - | Top Head |
| - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - |

Data Report
Item Number

Remarks

Construction Drawing No: D1317-200 Rev.0

Certificate of Authorization: Type U No 24 776 Expires March 27 2005

Date 11 29 2002 Name NUSCO SUPPLY & MANUFACTURING INC. Signed [Signature]
(Manufacturer) (representative)

Date 11 29 2002 Name [Signature] Commission AB#132
(Authorized Inspector) (Nat'l. Board incl. endorsement state province and no.)



W
RT

MAX ALLOW
WORK PRESS

140

100

MIN DESIGN
METAL TEMP

3

1440

SERIAL
NO.

3739-200

2002

DESIGN
PRESS

10

PSI AT

200

THICK

0.0625

IN

10

KPA AT

38

1.59

MM

HEAD
MTRL

6-70N

THICK

0.813

IN

20.65

MM

SHELL
MTRL

106-R

THICK

1.031

IN

26.19

MM

CRN

48276.23

48807

NISTCO-4101

W
RT-2



MAX. ALLOW
WORK. PRESS.

1440

PSI

AT

100

°F

MIN. DESIGN
METAL TEMP.

-20

°F

AT

1440

PSI

SERIAL
NO.

005739-200

YEAR BUILT

2002

DESIGN
PRESS.

1440

PSI

AT

100

°F

CORR
ALLOW

0.0625

IN.

9929

KPA

AT

38

°C

CORR
ALLOW

1.59

MM.

HEAD
MTRL.

SA-516-70N

THK.

0.813

IN.

20.65

MM.

SHELL
MTRL.

SA-106-B

THK.

1.031

IN.

26.19

MM.

CRN.

K-9276.23

Husky Energy

PRESSURE VESSEL INSPECTION REPORT

PAGE : 1 of 2

| | | | | | |
|----------|-------------|------|----------------|----------|--------------|
| FACILITY | Ansel Field | DATE | Sept. 27, 2005 | REPORT # | IR050927MAWF |
|----------|-------------|------|----------------|----------|--------------|

VESSEL STATIC DATA

| | | | | | | | | |
|--|------------|---------|---|----------|----------------|---|------------|--------------------------|
| Prov. Insp. # 488071 | | | CRN K9276.23 | | | Equip Tag # | | |
| Equipment Location (LSD) 12-27-049-19 W5M | | | | | | Serial # 005739-200 | | |
| Equipment Description Inlet Separator | | | | | | Vessel Class Separator | | |
| Manufacturer Nusco | | | | | | Year Built 2002 | | |
| MAWP 9929 KPag @ 38 °C | | | | | | MDMT -29 °C | | |
| CODE : UM <input type="checkbox"/> U <input checked="" type="checkbox"/> U2 <input type="checkbox"/> | | | RT : 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> | | | PWHT : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> | | |
| Diameter mm | | Length | (T/T) mm | OAL mm | Vertical | <input checked="" type="checkbox"/> | Horizontal | <input type="checkbox"/> |
| Shell Mat'l | SA 106B | | Thickness | 26.2 mm | Corr Allowance | 1.59 | | mm |
| Head Mat'l | SA 516-70N | | Thickness | 20.65 mm | Corr Allowance | 1.59 | | mm |
| Nozzle Mat'l | | | Thickness | mm | Corr Allowance | mm | | |
| Internal Coating : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> | | | Internal Clad : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> | | | Capacity m ³ | | |
| Manway : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> | | | Inspection Port : YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> | | | Skirt <input checked="" type="checkbox"/> Legs <input type="checkbox"/> Saddle <input type="checkbox"/> | | |
| Nozzle Rating | 600 | lb ANSI | Painted : YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> | | | Insulated : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> | | |

PROCESS DATA

| | | | | | | | |
|---------------------|------------------------|-------|-------------------------------------|------|--------------------------|------|--|
| Product Description | Gas / Condensate / H2O | Sweet | <input checked="" type="checkbox"/> | Sour | <input type="checkbox"/> | PPM: | |
| Operating Pressure | 4000 | KPag | Operating Temperature | 5 | °C | | |

PSV STATIC DATA

| Serial No. | Location | Size | Set | Capacity | Manufacturer | Model | Service |
|------------|---------------|----------|---------------------|----------|--------------|--------|---------|
| Inlet | Outlet | Pressure | SCFM / Lbs/Hr / GPM | Type | Date | | |
| 1059-8 | Side of Shell | 1" | 1" | 9929 KPa | 5181 SCFM | Taylor | 06/2002 |

INSPECTION HISTORY

| | | | | | | | | | | | | | | | | | |
|--------------------------------|--|----|--|----|--|----|--|---|--|----------------------|--|---------|--|-------------------|--|---------------------|--|
| RBI Category | | | | | | | | A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> | | Last Inspection Date | | | | W.O. # 6039160 | | | |
| Inspection Task List # | | | | | | | | Inspection Type | | | | VE | | Inspection Reason | | SEQA DUE | |
| Inspection Techniques Required | | | | | | | | Next Inspection Type | | | | VE / UT | | Due Date | | | |
| VE | | VI | | RT | | UT | | MT | | PT | | PT | | TT | | Outstanding Repairs | |

INSPECTION SUMMARY

- Visual external completed as per Husky procedures and API 510.
- No significant findings to reports at time of inspection.
- Vessel is fit for service.

RECOMMENDATIONS

- Tighten leaking connections and check for thread quality if required.

REPAIRS COMPLETED

| Object Name | Cause | Damage | Repair Activity |
|---|-------|--------|-----------------|
| - No repairs were required at time of inspection. | | | |

VESSEL STATUS

| | | | |
|--|--|---|------------------------------------|
| Integrity Status | <input checked="" type="checkbox"/> Suitable for Continued Service | <input type="checkbox"/> Immediate Repairs Required | <input type="checkbox"/> Replace |
| Inventory Status | <input checked="" type="checkbox"/> In service Fully Utilized | <input type="checkbox"/> Future Repairs Required | <input type="checkbox"/> Scrap |
| This IR completes a thorough inspection. Reschedule as indicated | | <input checked="" type="checkbox"/> | Partial IR only. Do not reschedule |



| | | | | | |
|-----------------|--------------------|-------------|-----------------------|-----------------|---------------------|
| FACILITY | Ansel Field | DATE | Sept. 27, 2005 | REPORT # | IR050927MAWf |
|-----------------|--------------------|-------------|-----------------------|-----------------|---------------------|

INSPECTION OBSERVATIONS**NONCOMPLIANCES OR INSPECTION DEFICIENCIES ISSUED**

- No NCR / IDR issued.

EXTERNAL VISUAL INSPECTION

- Vessel is supported by a skirt which is securely welded to the skid.
- Vessel is painted with no evidence of rust or other paint damage.
- Minor leaks evident on an elbow, ball and check valve all at threaded connections; No other leaks noted.
- PI / TI gauge indicate vessel is operating within design limits.
- Level / indicator gauges, control valves and instrumentation all appear in good working condition.
- The PSV has nameplate attached displaying all required information with seal / service tag intact.

EXTERNAL NDE EXAMINATION

- UT is scheduled to be performed later this year.

INTERNAL VISUAL INSPECTION

- No visual internal inspection performed at this time.

INTERNAL NDE EXAMINATION

- No internal NDE performed at this time.


PRESSURE TEST

Test Completed ☐ Yes ☐ No Test Acceptable ☐ Yes ☐ No Test Report #

INSPECTOR CERTIFICATION

I, the undersigned certify that the above equipment has been inspected in accordance with the assigned task list and that statements within this report are correct and represent inspection findings

Inspectors Name Mike Williams C.E.T.


Inspector's Signature 

Inspection Company Titan Quality Assurance Ltd.

Date Sept. 27, 2005

LEAD INSPECTOR'S ACCEPTANCE & SCHEDULE CONFIRMATION

Lead Inspector Jim Rice

Signature 

Date OCT 11, 05

Vessel Inspection Interval 5 years

Leave "as-is" ☐

Change to

PSV Inspection Interval

Leave "as-is" ☐

Change to

Office Use Only Report Entered to SEQA Database by
Static Data Verified by

Date
Date