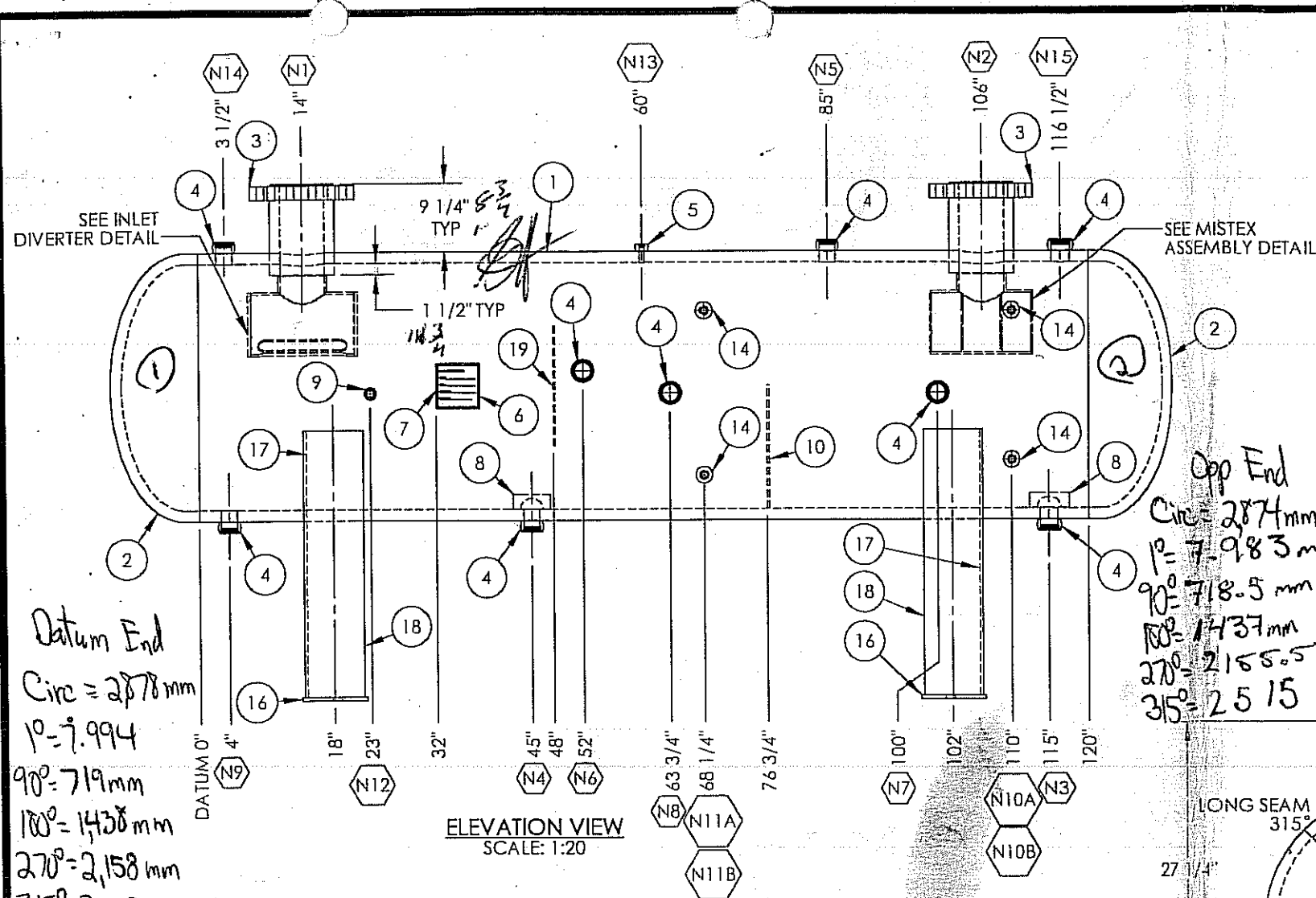




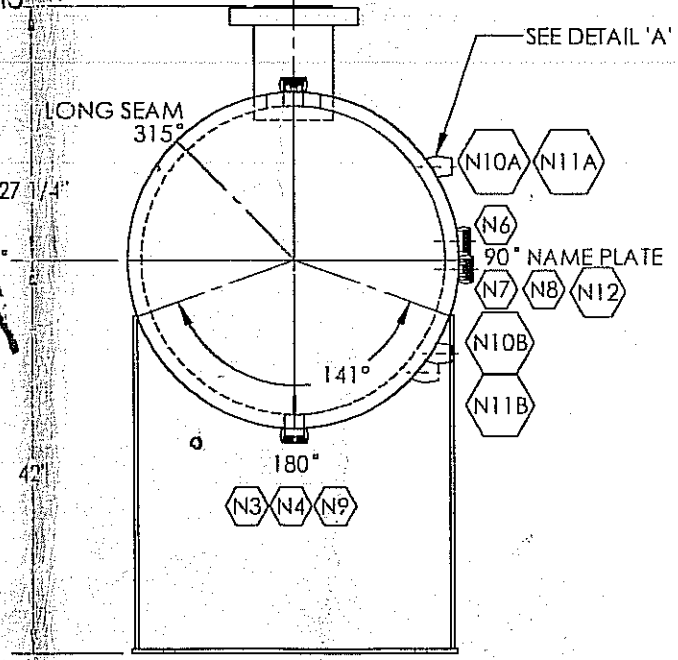
Datum End  
Circ = 2878 mm  
P = 7.994  
90° = 719 mm  
180° = 1438 mm  
270° = 2158 mm  
315° = 2518 mm

- NOTES
1. EXPOSED INSIDE EDGES OF NOZZLES OR OPENINGS SHALL BE ROUNDED PER UG-76C. RFLWN REQUIRE 3/8" RADIIUS AS PER UW-16.1g.
  2. VESSEL TO BE CLEANED WITH ALL OPENINGS PLUGGED BEFORE SHIPMENT.
  3. USED WELD PROCEDURE NWP-1 (REV 4), NWP-3 (REV 3), NWP-5 (REV 2) FOR ALL TACK WELDS.
  4. PRIME AND PAINT: AS PER CLIENT SPECIFICATIONS.
  5. SURFACE PREPARATION: HAND TOOL CLEAN (MIN.).
  6. THE EDGE OF CUT-OUTS IN SOLID PLATE SHALL NOT BE PLACED CLOSER THAN 1/2" FROM THE EDGE OF ANY WELD AS PER UW-14d.
  7. THE SEPARATION CHART DISTANCES ARE BASED ON THE MAX. ELLIPTICAL OPENING SIZE WHEN THE PIPE OR LWN CONNECTIONS ARE OFFSET ON THE SHELL OR HEADS.

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| ITEM | MATERIAL   | PART # | DESCRIPTION                                        | MTR #     | LENGTH | QTY. |
|------|------------|--------|----------------------------------------------------|-----------|--------|------|
| 1    | SA-516-70N | SOT    | SHELL PLATE - 1 1/2" THK x 10' LG ROLLED TO 36" OD | 5833267   |        | 1    |
| 2    | SA-516-70N | SOT    | 2:1 SE HEAD - 36" OD x 1 1/2" THK C/W 2" S.F.      | PC4123401 |        | 2    |
| 3    | SA-105N    | SOT    | 6"-600 ANSI RFLWN FLANGE x 12" LG                  | C27135    |        | 2    |
| 4    | SA-105N    | 164107 | 2" CL 3000 ON 8"-36" TOL                           | C725AN    |        | 9    |
| 5    | SA-105N    | 422445 | 1/2" CL 6000 ON 3/4"-36" TOL                       | 805753    |        | 1    |
| 6    | SA-36/44W  | 144448 | NAME PLATE BRACKET - 6" x 6" x 3/16"               | 56814     |        | 1    |
| 7    | ALUMINUM   | 956275 | VESSEL NAME PLATE BLACK/SILVER DEEP ETCHED         | 79044-SS  |        | 1    |
| 8    | SA-36/44W  | 869455 | STEEL PLATE - 1/4" THK x 48" x 96" - 137654-4      | 479639    | 0.005  | 2    |
| 9    | SA-105N    | 898888 | 3/4" CL 6000 ON 1 1/2"-36" TOL                     | 57534     |        | 1    |
| 10   | SA-36/44W  | 869455 | STEEL PLATE - 1/4" THK x 48" x 96" - 137654-1      | 479639    | 0.15   | 1    |
| 11   | SA-234-WPB | SOT    | REDUCING TEE, 8"x8"x6", SCH 40, BW                 | 852753    |        | 2    |
| 12   | SA-36/44W  | 453322 | STEEL PLATE - 3/8" THK x 48" x 96" - 137654-8      | 715311    | 0.015  | 2    |
| 13   | SA-36/44W  | 869455 | STEEL PLATE - 1/4" THK x 48" x 96" - 137654-2      | 479639    | 0.015  | 4    |
| 14   | SA-105N    | 099616 | 3/4" CL 6000 ON 1"-36" ELBOWLET                    | 57547     |        | 4    |
| 15   | 316L       | 621651 | MISTEX PAD                                         |           |        | 2    |
| 16   | SA-36/44W  | 048524 | STEEL PLATE - 1/2" THK x 48" x 96" - 137654-5      | 593885    | 0.1    | 2    |
| 17   | SA-36/44W  | 453322 | STEEL PLATE - 3/8" THK x 48" x 96" - 137654-6      | 71534     | 0.3    | 2    |
| 18   | SA-36/44W  | 453322 | STEEL PLATE - 3/8" THK x 48" x 96" - 137654-7      | 715211    | 0.07   | 4    |
| 19   | SA-36/44W  | 869455 | STEEL PLATE - 1/4" THK x 48" x 96" - 137654-3      | 479639    | 0.15   | 1    |

Opp End  
Circ = 2874 mm  
P = 7.983 mm  
90° = 718.5 mm  
180° = 1437 mm  
270° = 2155.5 mm  
315° = 2515 mm



| VESSEL DESIGN DATA                      |                                                                                              |
|-----------------------------------------|----------------------------------------------------------------------------------------------|
| DESIGN AND FABRICATE TO:                | ASME SECTION VIII, DIVISION 1<br>2007 EDITION, 2008 ADDENDUM                                 |
| MAX. ALLOWABLE WORKING PRESSURE (MAWP): | 1440 PSIG                                                                                    |
| DESIGN TEMPERATURE:                     | 130°F                                                                                        |
| MIN. DESIGN METAL TEMPERATURE (MDMT):   | -20°F                                                                                        |
| IMPACT TEST:                            | EXEMPT PER UG-20f (1-5), UCS-66a,<br>UCS-66b (FIG UCS-66.1), UCS-66g,<br>FLANGES PER UCS-66c |
| RADIOGRAPHY:                            | FULL PER UW-11a                                                                              |
| POST WELD HEAT TREATMENT:               | NONE                                                                                         |
| HYDROSTATIC TEST PRESSURE:              | 1874 PSIG                                                                                    |
| CORROSION ALLOWANCE:                    | 1/8"                                                                                         |
| PRE-HEAT:                               | 200°F                                                                                        |
| HEAD THICKNESS MIN.:                    | 1.4375"                                                                                      |
| WEIGHT EMPTY:                           | 8000 LBS                                                                                     |
| WEIGHT FULL:                            | 14,000 LBS                                                                                   |
| CAPACITY:                               | 80 ft <sup>3</sup>                                                                           |
| QUALITY CONTROL PROGRAM:                | AQP-1253                                                                                     |
| WELDING PROCEDURE REGISTRATION NO.:     | 1604.2                                                                                       |
| WELD PROCEDURES:                        | NWP-1, NWP-3, NWP-5                                                                          |
| SERVICE:                                | HYDROCARBONS                                                                                 |
| CRN NO.:                                | U8943.2130                                                                                   |
| DESIGN REGISTRATION DRAWINGS:           | 2778-01 A&B REV 2                                                                            |
| REFERENCE CALCULATIONS:                 | 48-2-1440-2778-R1                                                                            |

| DOCUMENT NO. | DESCRIPTION | REV | DATE       | BY | CHK | APP |
|--------------|-------------|-----|------------|----|-----|-----|
| 137654-CNC   | CNC DRAWING | 0   | 2009.07.15 | MC | JHK | DF  |
|              |             | A   | 2009.06.12 | MC | JHK | DF  |

| REFERENCE DRAWINGS |  | DRAWING REVISIONS |  |
|--------------------|--|-------------------|--|
|                    |  |                   |  |

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THIRD ANGLE OF PROJECTION

ALL DIMENSIONS IN INCHES

**NWP**  
INDUSTRIES INC.  
Total oilfield supply.

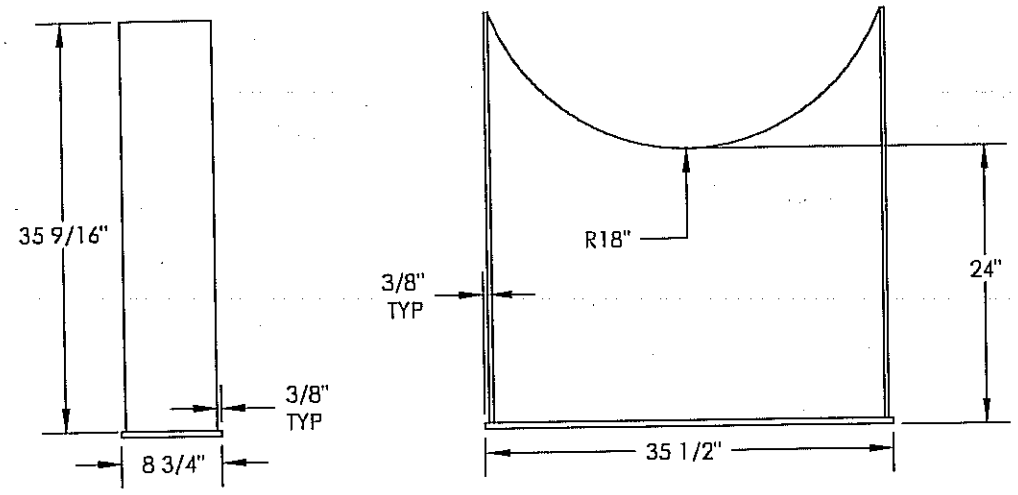
P.O. BOX 6280, INNSFAIL, AB T4G 1S9  
PH: (403) 227-4100 FAX: (403) 227-4102

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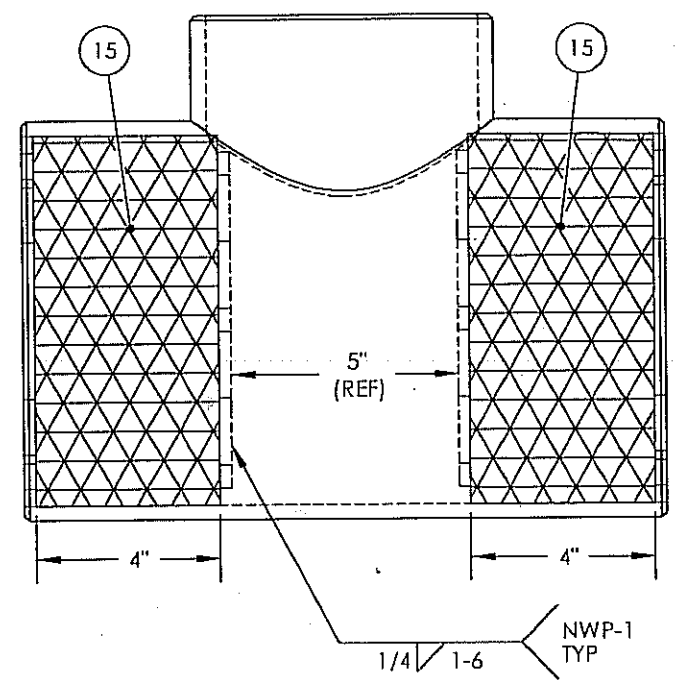
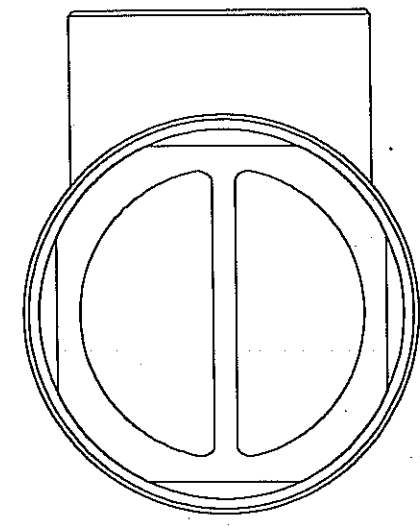
HORIZONTAL SEPARATOR  
36" OD x 120" S/S  
1440 PSIG @ 130°F, 3 PHASE  
1/8" C.A., SWEET SERVICE  
VESSEL ASSEMBLY

|                  |                  |                  |
|------------------|------------------|------------------|
| DWN: MC          | CHK: JHK         | APP: GH          |
| DATE: 2009.06.12 | DATE: 2009.06.12 | DATE: 2009.06.12 |
| SCALE: 1:20      | DWG: 137654      | REV: 0           |
| SHEET: 1 OF 3    |                  |                  |



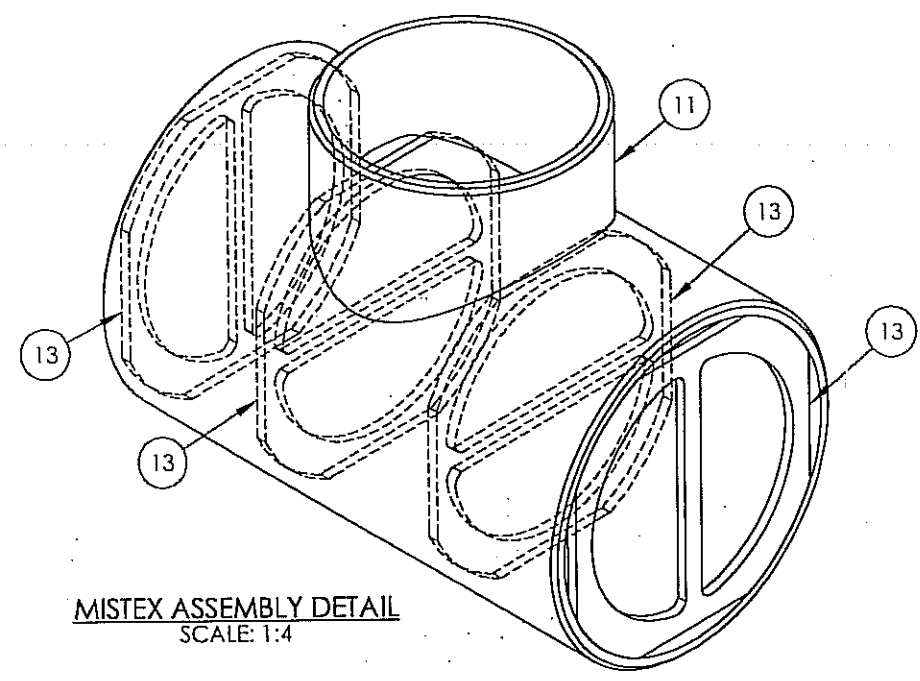


SADDLE DETAIL  
SCALE: 1:16



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6833  
JUL 27 2009

**ORIGINAL**  
*M. D.*



MISTEX ASSEMBLY DETAIL  
SCALE: 1:4

| STANDARD TOLERANCES |              |
|---------------------|--------------|
| FABRICATION:        |              |
| GENERAL DEVIATION:  | ±1/8"        |
| OVERALL LENGTH:     | ±1/4"        |
| ANGULAR:            | ±1°          |
| WELD PREPARATION:   |              |
| LAND:               | 1/16" ±1/32" |
| ROOT GAP:           | 1/8" ±1/16"  |
| ANGULAR:            | ±15°         |

| REFERENCE DRAWINGS |             | DRAWING REVISIONS |            |    |     |     |                         |
|--------------------|-------------|-------------------|------------|----|-----|-----|-------------------------|
| DOCUMENT NO.       | DESCRIPTION | REV               | DATE       | BY | CHK | APP |                         |
| 137654-CNC         | CNC DRAWING | 0                 | 2009.07.15 | MC | JHK | DF  | ISSUED FOR CONSTRUCTION |
|                    |             | A                 | 2009.06.12 | MC | JHK | DF  | ISSUED FOR APPROVAL     |

**ISSUED FOR CONSTRUCTION**

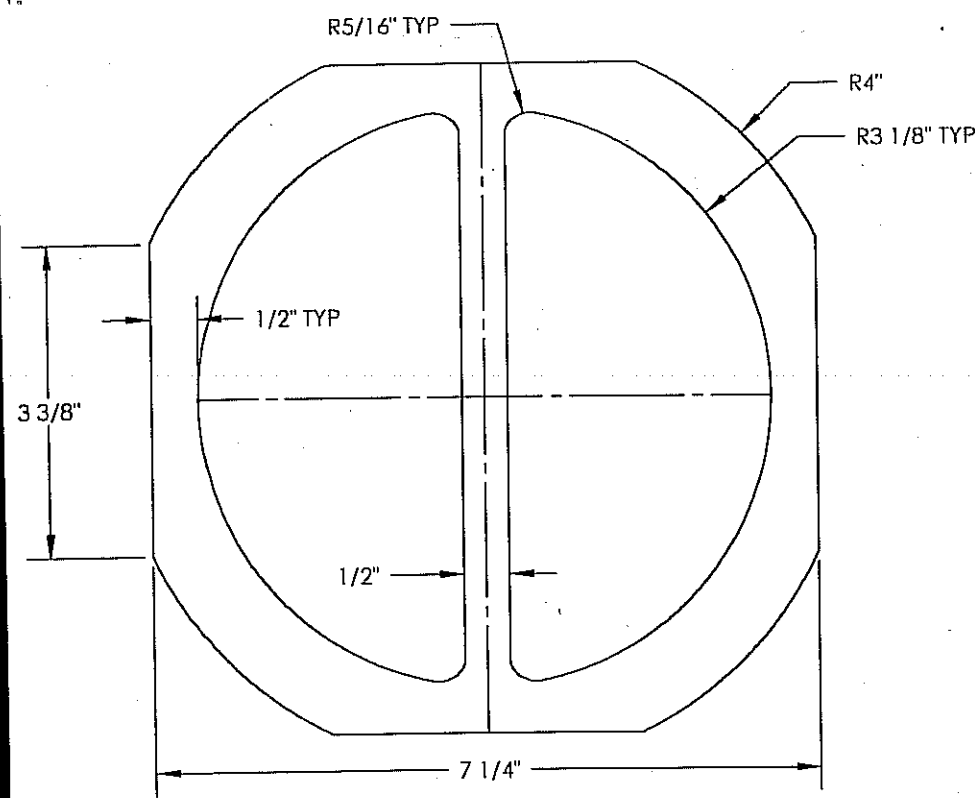
THIRD ANGLE OF PROJECTION  
ALL DIMENSIONS IN INCHES

**NWP INDUSTRIES INC.**  
Total oilfield supply.

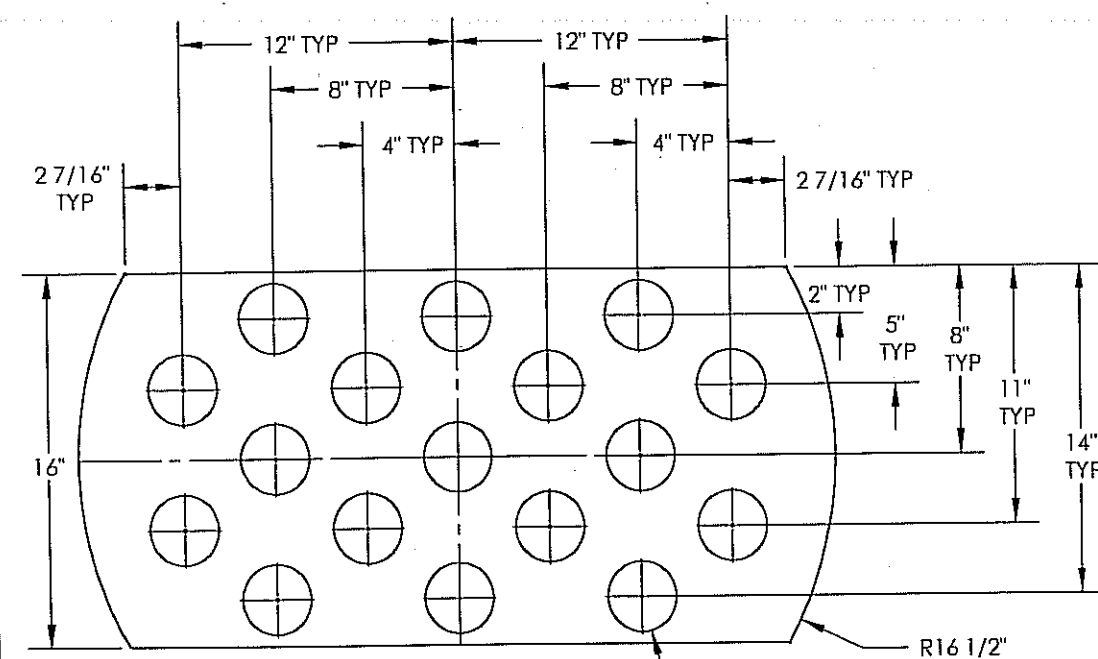
P.O. BOX 6280, INNISFAIL, AB T4G 1S9  
PH: (403) 227-4100 FAX: (403) 227-4102

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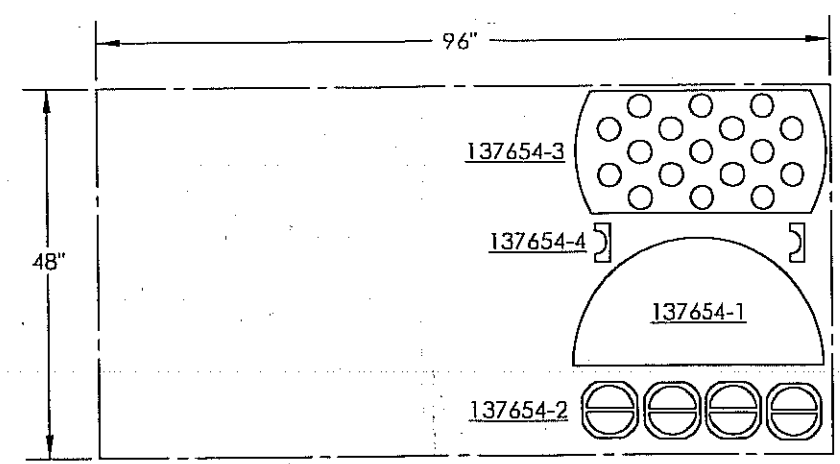
| HORIZONTAL SEPARATOR<br>36" OD x 120" S/S<br>1440 PSIG @ 130°F, 3 PHASE<br>1/8" C.A., SWEET SERVICE<br>VESSEL ASSEMBLY |                  |                  |
|------------------------------------------------------------------------------------------------------------------------|------------------|------------------|
| DWN: MC                                                                                                                | CHK: JHK         | APP: GH          |
| DATE: 2009.06.12                                                                                                       | DATE: 2009.06.12 | DATE: 2009.06.12 |
| SCALE: 1:20                                                                                                            | DWG: 137654      |                  |
| SHEET: 3 OF 3                                                                                                          | REV: 0           |                  |



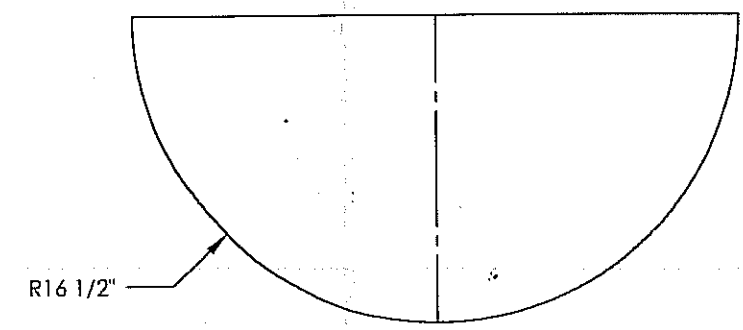
137654-2 - MISTEX RING  
SCALE: 1:2



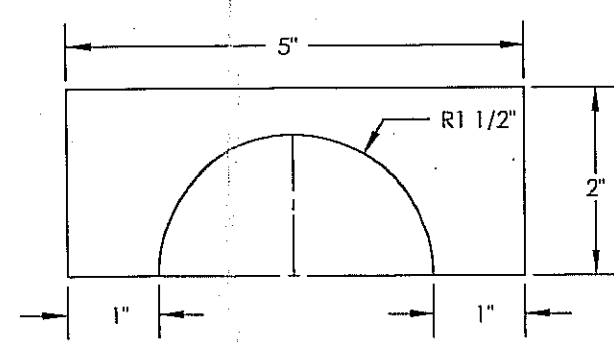
137654-3 - BAFFLE DETAIL  
SCALE: 1:8



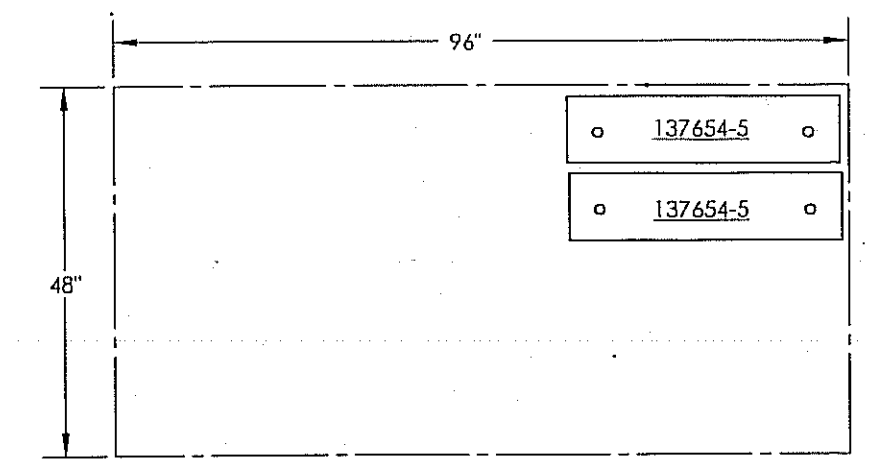
137654 - PARTS ON 1/4\"/>



137654-1 - WEIR  
SCALE: 1:10

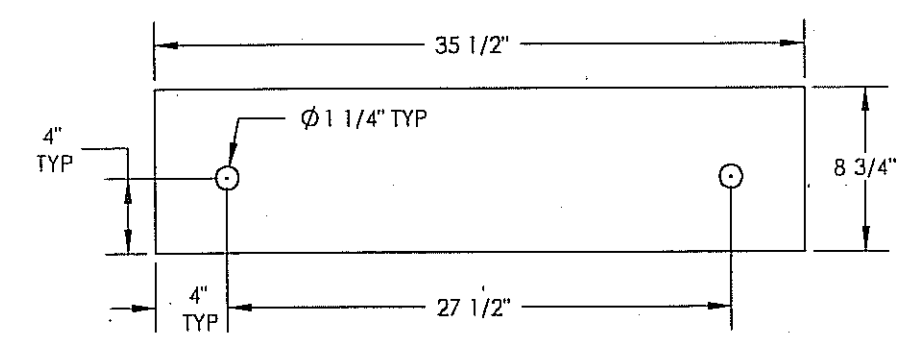


137654-4 - VORTEX  
SCALE: 1:2



137654 - PARTS ON 1/2\"/>

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137654-5 - SADDLE BASE PLATE  
SCALE: 1:10

**ORIGINAL**

| DOCUMENT NO.       | DESCRIPTION    | REV | DATE       | BY | CHK | APP | DRAWING REVISIONS                       |
|--------------------|----------------|-----|------------|----|-----|-----|-----------------------------------------|
| 137654             | VESSEL DRAWING | 0   | 2009.06.12 | MC | JHK | DF  | ISSUED FOR INFORMATION FOR CONSTRUCTION |
| REFERENCE DRAWINGS |                |     |            |    |     |     |                                         |

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FOR  
INFORMATION

THIRD ANGLE OF PROJECTION

ALL DIMENSIONS IN INCHES

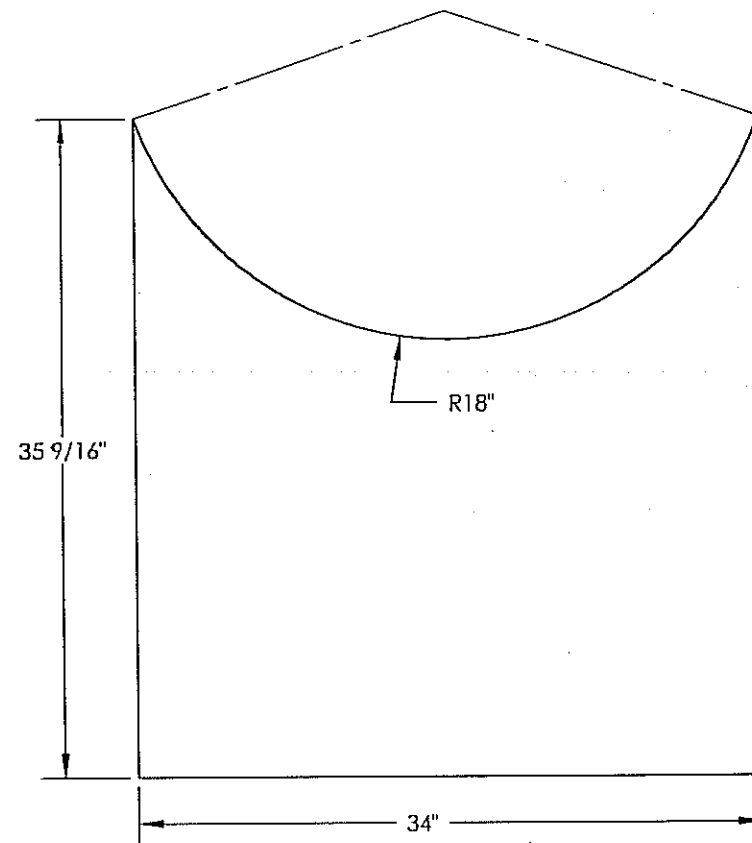
**NWP**  
INDUSTRIES INC.  
Total oilfield supply.

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PH: (403) 227-4100 FAX: (403) 227-4102

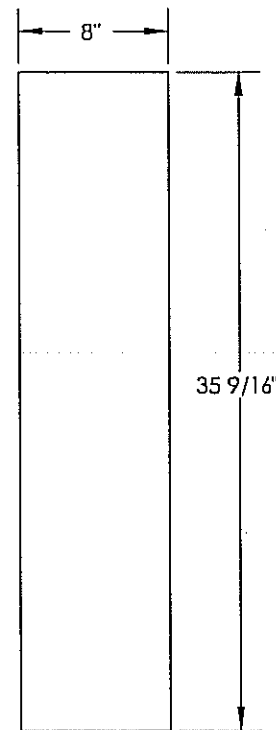
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HORIZONTAL SEPARATOR  
36" OD x 120" S/S  
1440 PSIG @ 130°F, 3 PHASE  
1/8" C.A., SWEET SERVICE  
CNC DIMENSIONAL DRAWING

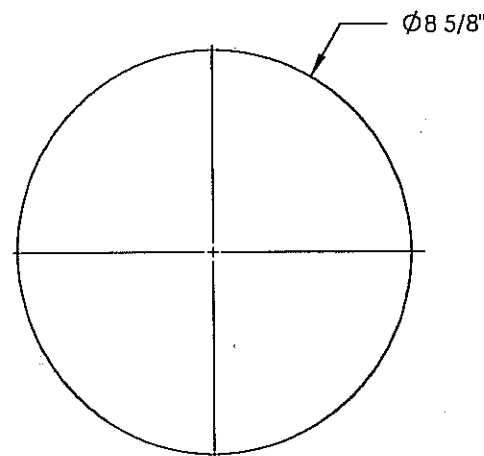
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| DWN: MC          | CHK: JHK         | APP: GH          |
| DATE: 2009.06.12 | DATE: 2009.06.12 | DATE: 2009.06.12 |
| SCALE: 1:1       | DWG: 137654-CNC  |                  |
| SHEET: 1 OF 2    | REV: 0           |                  |



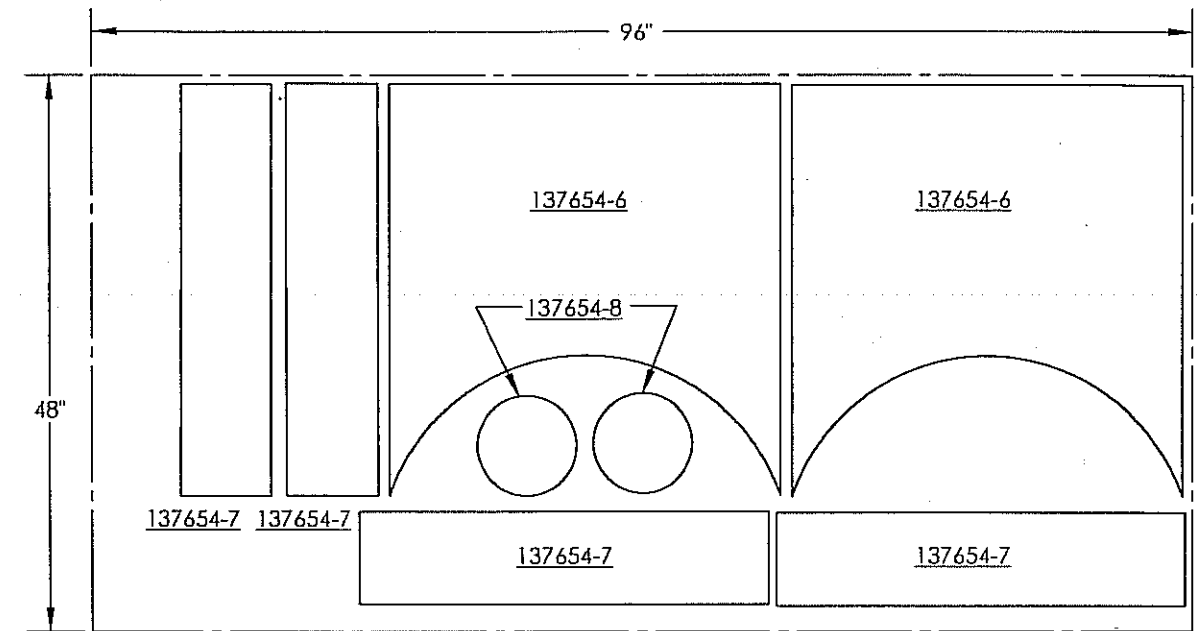
137654-6 - SADDLE FACE PLATE  
SCALE: 1:10



137654-7 - SADDLE SIDE PLATE  
SCALE: 1:10



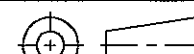
137654-8 - INLET DIVERTER END PLATE  
SCALE: 1:4



137654 - PARTS ON 3/8" THK PLATE  
SCALE: 1:16

SIN NWP-1698  
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6833 JUL 27 2009

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*[Signature]*

|                    |                |                   |            |    |     |     |                                         |                              |                                                                                                                                                  |                                                                                                                                                 |                  |                  |        |
|--------------------|----------------|-------------------|------------|----|-----|-----|-----------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|--------|
|                    |                |                   |            |    |     |     |                                         | ISSUED<br>FOR<br>INFORMATION | <br><b>NWP</b><br>INDUSTRIES INC.<br>Total oilfield supply. | HORIZONTAL SEPARATOR<br>36" OD x 120" S/S<br>1440 PSIG @ 130°F, 3 PHASE<br>1/8" C.A., SWEET SERVICE<br>CNC DIMENSIONAL DRAWING                  |                  |                  |        |
|                    |                |                   |            |    |     |     |                                         |                              |                                                                                                                                                  | DWN: MC                                                                                                                                         | CHK: JHK         | APP: GH          |        |
|                    |                |                   |            |    |     |     |                                         |                              |                                                                                                                                                  | DATE: 2009.06.12                                                                                                                                | DATE: 2009.06.12 | DATE: 2009.06.12 |        |
|                    |                |                   |            |    |     |     |                                         |                              |                                                                                                                                                  | SCALE: 1:1                                                                                                                                      |                  | DWG: 137654-CNC  | REV: 0 |
|                    |                |                   |            |    |     |     |                                         |                              |                                                                                                                                                  | SHEET: 2 OF 2                                                                                                                                   |                  |                  |        |
| 137654             | VESSEL DRAWING | 0                 | 2009.06.12 | MC | JHK | DF  | ISSUED FOR INFORMATION FOR CONSTRUCTION |                              | <br>THIRD ANGLE OF PROJECTION<br>ALL DIMENSIONS IN INCHES   | THIS DRAWING IS PROPERTY OF NWP INDUSTRIES INC.<br>AND MAY NOT BE REPRODUCED WITHOUT PERMISSION.<br>THIS DRAWING MUST BE RETURNED UPON REQUEST. |                  |                  |        |
|                    |                |                   |            |    |     |     |                                         |                              |                                                                                                                                                  |                                                                                                                                                 |                  |                  |        |
| DOCUMENT NO.       | DESCRIPTION    | REV               | DATE       | BY | CHK | APP |                                         |                              |                                                                                                                                                  |                                                                                                                                                 |                  |                  |        |
| REFERENCE DRAWINGS |                | DRAWING REVISIONS |            |    |     |     |                                         |                              |                                                                                                                                                  |                                                                                                                                                 |                  |                  |        |
|                    |                |                   |            |    |     |     |                                         |                              |                                                                                                                                                  |                                                                                                                                                 |                  |                  |        |