### Notes

1. Welding & Inspections shall be performed in accordance with AWS D.1.6
2. All welds to be Watertight except those on Baffle
3. All angles 90° ± 1
4. All welds shall be Dye penetrant inspected
5. Material certifications required

### Material

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Material</th>
<th>Name</th>
<th>Material Description</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>1</td>
<td>Sump tank</td>
<td>SS-304</td>
<td>V Grav</td>
<td>EPDM</td>
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<tr>
<td>2</td>
<td>Kwik-Clamp gasket hjt</td>
<td>EPDM</td>
<td>SWAGELOK JC40E</td>
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<td>3</td>
<td>Sump tank cover gasket hjt</td>
<td>1/8&quot; BUNA-N SHEET, 50A</td>
<td>MCMASTER-CARR #86715K869</td>
<td>203-HJT-T0643</td>
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<td>Sump tank support hjt</td>
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<td>FLUORATEK</td>
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<td>5</td>
<td>Sump tank cover hjt</td>
<td>LEXAN SHEET, 22.000 OD x .500 THK</td>
<td>203-HJT-T0642</td>
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<td>SUMP TANK</td>
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### Drawing Information

- **Sheets**: 1 of 2
- **Drawing Number**: 203-HJT-T0640
- **Scale**: 1:6
- **Sheet Number**: 1 of 2
- **Drawing Approval**: C
- **Revision Date**: 01/12/2006

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**Remote Systems Group**

**Oak Ridge National Laboratory**

**MERIT Experiment**

**HG Syringe Assy**

**Sump Tank Assy**
NOTES

1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.6
2. ALL WELDS TO BE WATER-TIGHT EXCEPT THOSE ON BAFFLE
3. ALL ANGLES 90° ± 1
4. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
5. MATERIAL CERTIFICATIONS REQUIRED

SUMP TANK ASSY

HJT 203-HJT-0600

2 of 2

THIRD-ANGLE PROJECTION

SECTION C-C

SECTION A-A

SOME COMPONENTS NOT SHOWN FOR CLARITY

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OAK RIDGE NATIONAL LABORATORY
operated for the U.S. Department of Energy under contract DE-AC05-00OR22725 Oak Ridge, TN

REMOTE SYSTEMS GROUP
NUCLEAR SCIENCE & TECHNOLOGY DIVISION
MERIT EXPERIMENT
HG SYRINGE ASSY
SUMP TANK ASSY

SCALE 1:6

DETAIL B
SCALE 1:2

1. ALL DIMENSIONS ARE IN INCHES
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES FORMED ANGLES
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
7. WHOLE NUMBERS AND FRACTIONS 1/16
8. DECIMALS .030
9. DECIMALS .010
10. DECIMALS .005 UNLESS OTHERWISE NOTED

BOLT SUMP TANK SUPPORTS TO TOP OF Hg CYLINDERS PRIOR TO WELDING TO SUMP TANK!!
1. Final position of legs to be determined.
2. All welds to be watertight except those on baffle.
3. All angles 90° ± 1.
4. Welding & inspections shall be performed in accordance with AWS D.1.6.
5. All welds shall be dye penetrant inspected.
6. Material certifications required.

MATERIAL CERTIFICATIONS REQUIRED

<table>
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<tr>
<th>ITEM NO.</th>
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<th>LENGTH</th>
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<td>PLATE 7.50 x 15.53 x .25</td>
<td>SS - 304L, ASTM A240</td>
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<tr>
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<td>PLATE 22.00 OD x .25 THK</td>
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<td>2</td>
<td>1</td>
<td>20-INCH SCH 10 PIPE x 9.00 L</td>
<td>SS - 304L, ASTM A240</td>
<td>20.00 DIA.</td>
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<td>PLATE 20.00 OD x .25 THK</td>
<td>SS - 304L, ASTM A240</td>
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</table>

NOTES:

- All dimensions are in inches.
- Interpret dimensions and tolerances per ASME Y14.5M.
- Machined finish 125 micro-inches RMS.
- Concentricity .010 TIR.
- Machined angles.
- Formed angles.
- Break sharp corners and remove all burrs.
- Whole numbers and fractions 1/16.
- X .030 decimals.
- XX .010 decimals.
- XXX .005 decimals.

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Remote Systems Group
Nuclear Science & Technology Division

MERIT Experiment
HG Syringe Assy
Sump Tank Weldment
1. Final position of legs to be determined
2. All welds to be watertight except those on baffle
3. All angles 90° ± 1
4. Welding & inspections shall be performed
5. In accordance with AWS D1.6
6. All welds shall be dye penetrant inspected
7. Material certifications required
MATERIAL: 1/8" BUNA-N SHEET, 50A

**DIMENSIONS**

1. **All dimensions are in** INCHES 
2. **Interpret dimensions and tolerances per ASME Y14.5M**
3. **Machined finish 125 micro-inches** RMS
4. **Concentricity .010 TIR**
5. **Machined angles ±1/2" formed angles ±1/8"**
6. **Formed angles ±1/16" and center all burrs and remove all burrs and center all burrs and remove all burrs**
7. **Whole numbers and fractions, decimals .030, .010, .005**

**NOTES**

- **Drawing approvals**
- **Date**
- **REV**
2 ANGLE, 1.50 x 1.00 x .13 x 2.00 SS - 304L, ASTM A276 2.00
1 TUBE, 1.50 SQ. x .12 x 25.50 SS - 304, ASTM A554 25.50

NOTES
1. ALL ANGLES 90° ± 1
2. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.6
3. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
4. MATERIAL CERTIFICATIONS REQUIRED

DIMENSIONS ARE IN INCHES
INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M

MACHINED FINISH 125 MICRO-INCHES RMS
CONCENTRICITY .010 TIR
MACHINED ANGLES FORMED ANGLES 1/2
BREAK SHARP CORNERS AND REMOVE ALL BURRS
WHOLE NUMBERS AND FRACTIONS 1/16
X DECIMALS .030
XX DECIMALS .010
XXX DECIMALS .005

MATERIAL CERTIFICATIONS REQUIRED
3. ALL WELDS SHALL BE DYE PENETRANT INSPECTED IN ACCORDANCE WITH AWS D.1.6
2. WELDING & INSPECTIONS SHALL BE PERFORMED
1. ALL ANGLES 90° ± 1
NOTES
1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.6
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. DIMENSIONS SHOWN ARE APPROXIMATE. FIELD MEASUREMENT REQUIRED
4. MATERIAL CERTIFICATIONS REQUIRED
5. PIPE TO TUBE ADAPTER NOT SHOWN
NOTES

1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.6
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. DIMENSIONS SHOWN ARE APPROXIMATE. FIELD MEASUREMENT REQUIRED
4. MATERIAL CERTIFICATIONS REQUIRED
1. **MATERIAL CERTIFICATIONS REQUIRED**

2. **MEASUREMENT REQUIRED**

   All dimensions are approximate. Field measurement required.

3. **WELDING & INSPECTIONS SHALL BE PERFORMED**

   All welds shall be dye penetrant inspected in accordance with AWS D1.6

4. **NOTES**

   - All bends 90° unless otherwise noted
   - Welding & inspections shall be performed in accordance with AWS D1.6
   - All welds shall be dye penetrant inspected. Field measurement required.
   - Material certifications required.

### Table

<table>
<thead>
<tr>
<th>Item No.</th>
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<td>1</td>
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<td>SS - 304L, ASTM A269</td>
<td>FIELD MEASURE</td>
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</table>
NOTES:
1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D.1.6
2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
3. DIMENSIONS SHOWN ARE APPROXIMATE. FIELD MEASUREMENT REQUIRED
4. MATERIAL CERTIFICATIONS REQUIRED

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY.</th>
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<th>MATERIAL</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
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<td>hg inlet piping hjt</td>
<td>SS - 304L ASTM A216</td>
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<td>2</td>
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<td>manual valve hjt</td>
<td>SS</td>
<td>SWAGELOK #SS-12UW-TW</td>
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<tr>
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<td>1</td>
<td>check valve hjt</td>
<td>--</td>
<td>WARNER CLASS 1500 SWING CHECK VALVE 1503HF</td>
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</table>

3/8" 0.065-WALL TUBING

1.00 DIA 4-BOLT SAE FLANGE PORT CODE 61 (3000 PSI)

1. ALL DIMENSIONS ARE IN INCHES
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES 1/2 FORMED ANGLES 16
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
7. WHOLE NUMBERS AND FRACTIONS 1/16
8. X DECIMALS .030
9. XX DECIMALS .010
10. XXX DECIMALS .005 UNLESS OTHERWISE NOTED

MERIT EXPERIMENT HG SYRINE ASSY
HG INLET ASSY

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REMOTE SYSTEMS GROUP NUCLEAR SCIENCE & TECHNOLOGY DIVISION

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NOTES

1. ALL BENDS 90° ± 2° UNLESS OTHERWISE NOTED
2. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.6
3. ALL WELDS SHALL BE DYE PENETRANT INSPECTED
4. DIMENSIONS SHOWN ARE APPROXIMATE. FIELD MEASUREMENT REQUIRED
5. MATERIAL CERTIFICATIONS REQUIRED