### CENTRIFUGAL PUMP DATA SHEET

**Company:** Process Engineering Associates, LLC  
**Service:** Reflux Pump  
**Item No:** RefluxPump  
**Date:** 4/2/09

### PROCESS AND PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid</td>
<td>Light Hydrocarbons</td>
</tr>
<tr>
<td>Normal Capacity (gpm)</td>
<td>2.3</td>
</tr>
<tr>
<td>Design Capacity (gpm)</td>
<td>2.6</td>
</tr>
<tr>
<td>% Total Solids</td>
<td>0.00%</td>
</tr>
<tr>
<td>% TS Dissolved</td>
<td>0.00%</td>
</tr>
<tr>
<td>% TS Suspended</td>
<td>0.00%</td>
</tr>
<tr>
<td>Max. Particle Size</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.70</td>
</tr>
<tr>
<td>Temperature (°F)</td>
<td>99.5</td>
</tr>
<tr>
<td>Vapor Pressure (psig)</td>
<td>30.3</td>
</tr>
</tbody>
</table>

### MECHANICAL DETAILS

#### Included:
- Seal
- Motor
- Baseplate
- Coupling

#### Type:
- End Suction
- In Line
- Recessed Impeller
- Self Priming
- Disc
- Canned Motor
- Mag Drive
- Multistage

#### Standard:
- ANSI
- API
- Other

#### Jacket Fluid:
- Full Casing
- Partial Casing
- Rear Cover/Seal Chamber
- None

#### Nozzles:
- Suction: Vent:
- Discharge: Drain:

#### Baseplate:
- Grouted
- Stilt Mounted
- Drip Lip

#### Lubrication:
- Oil Reservoir
- Oil Mist
- Grease

#### Oil Seal:
- Labyrinth
- Lip
- Magnetic

#### Coupling:
- Elastomeric
- Disc
- Taper lock bore
- Straight bore

#### Coupling Guard:
- OSHA APPROVED
- Carbon Steel
- Stainless Steel
- Other

#### Mechanical Seal
- Single
- Double
- Tandem
- Metal Bellows
- Component Mount
- Seal Hardware
- Rotating Ring
- Stationary Ring
- Seals/O-ring

#### Seal Flush:
- Flush Plan No.
- ANSI
- API

#### Seal Chamber:
- Enlarged Cylindrical
- Enlarged Tapered
- Stuffing Box

#### Pump --- Total BHP Required: Efficiency:

#### Motor --- Type:
- HP:
- RPM:

#### Electricity --- Voltage:
- 460 V
- Hertz:
- 60 Hz
- Phase:
- 3

#### Electrical Area --- Class:
- I
- Group:
- D
- Div:
- II

### MATERIALS OF CONSTRUCTION

- Casing: 316 SS or Better
- Containment Shell
- Impeller: 316 SS or Better
- Inner Sleeve Bearing
- Shaft: Outer Sleeve Bearing
- Shaft Sleeve: Inner Magnet
- Baseplate: Outer Magnet
- Gaskets: Vendor to Determine

### Remarks:
- Selected 1700 RPM due to low NPSHr
- Roughly equivalent to Goulds 3196

### PROCESS AND PERFORMANCE DATA

<table>
<thead>
<tr>
<th>HEAD</th>
<th>SUCTION</th>
<th>DISCHARGE</th>
<th>DIFFERENTIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static (ft of Liquid)</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure (ft of Liquid)</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friction (ft of Liquid)</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (ft of Liquid)</td>
<td>0.00</td>
<td></td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Normal Suction Press (psig):</th>
<th>Normal Discharge Press (psig):</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NASH Available (ft of Liquid.):</th>
<th>Pump Design Head (ft of Liquid.):</th>
</tr>
</thead>
<tbody>
<tr>
<td>-51.9</td>
<td>0 Ft.</td>
</tr>
</tbody>
</table>

4/2/2009 Pump Template.xls