| BECHTEL | Mechanical Data Sheet: Vessel | Plant Item No. 24590-PTF-MV-TLP-VSL-00002 |
|---|---|---|
| | | Data Sheet No. 24590-PTF-MVD-TLP-00004 |

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| | | | |
|---|---|---|---|
| Project | RPP-WTP | P&IDs | 24590-PTF-M6-TLP-00002 |
| Project No | 24590 | | |
| Project Site | DOE Hanford | Process Calculation 1 | 24590-PTF-MVC-TLP-00002 |
| System No | TLP | | |
| Building | PTF | Vessel Drawings | 24590-QL-POA-MEVV-00001-01-204 |
| | | | |
| Description | Treated LAW Evaporator Condensate Vessel TLP-VSL-00002 | | |

ISSUED BY RPP-WTP PDC INIT DATE

**Reference Data**

| | |
|---|---|
| Charge Vessels (Tag Numbers) | N/A |
| Pulse Jet Mixers / Agitators (Tag Numbers) | N/A |
| RFDs/Pumps (Tag Numbers) | N/A |

**Service Data**

| | | | |
|---|---|---|---|
| Quality Level | CM | Fabrication Specification | 24590-WTP-3PS-MV00-T0001 |
| Seismic Category | SC-III | Design Code | ASME Section VIII Division 1 |
| Service/Contents | Process Condensate | Code Stamp | Yes |
| Design Specific Gravity | 1.0 | NB Registration | Yes |
| Max Operating Volume gal | 1,916 | Wind Design | None |
| Total Volume gal | 2,227 1 | Snow/Ash Design | None |
| Postweld Heat Treat | Not Required | Seismic Design | 24590-WTP-3PS-MV00-T0002<br>24590-WTP-3PS-FB01-T0001 1 |
| Seismic Base Moment* ft*lb | N/A 1 | | |

**Design Data**

| | | | | |
|---|---|---|---|---|
| Inside Diameter inch | 72 | | Corrosion Allowance inch | 0.04 |
| Length/Height (TL-TL) inch | 110.69 1 | | | |
| | Vessel Operating | Vessel Design | Coil/Jacket Design | Notes |
| Internal Pressure PSIG | -0.07 | 15 | N/A | |
| External Pressure PSIG | 0 | 14.7 | N/A | |
| Temperature °F | 100 | 150 | N/A | |
| Min Design Metal Temp °F | 49 | | Hydrostatic Test Pressure PSIG | 19.5 1 |

**Materials of Construction**

| Component | Material | Containment | Notes |
|---|---|---|---|
| Top Head | SA-240 304 1 | Auxiliary | 5/8" thickness; maximum carbon content of 0.030% for welded components 1 |
| Shell | SA-240 304 1 | Primary | 5/8" (Upper), 3/8" (Lower) thickness; maximum carbon content of 0.030% for welded components 1 |
| Bottom Head | SA-240 304 1 | Primary | 1/2" thickness; maximum carbon content of 0.030% for welded components 1 |
| Vessel Support | SA-240 304 1 | N/A | Maximum carbon content of 0.030% for welded components |
| Jacket/Coils/Half-Pipe Jacket | N/A | N/A | |
| Internals | N/A | N/A | |
| Pipe | SA-312 TP304 1 | Note 1 | Maximum carbon content of 0.030% for welded components |
| Forgings/ Bar stock | SA-182 F316 1 | N/A 1 | Maximum carbon content of 0.030% for welded components |
| Gaskets | N/A 1 | N/A 1 | |
| Bolting | N/A 1 | N/A 1 | |
| Wash Ring 1 | SA-312 TP304 1 | N/A 1 | Maximum carbon content of 0.030% for welded components 1 |

**Miscellaneous Data**

| | |
|---|---|
| Orientation | Vertical |
| Support Type | Stainless steel legs 304 SS (max. carbon content 0.030%) 1 |
| Insulation Function | None |
| Insulation Thickness inch | None |
| Insulation Material | None |
| External Finish | Welds descaled as laid |
| Internal Finish | Welds ground smooth |

**Notes**

Notes: (1) Nozzles located below the top of the overflow nozzle are primary containment. See 24590-WTP-3PS-MV00-T0001 for NDE requirements.
(2) Nozzle tolerance +/- 1/4"
(3) 40 years design life
(4) NDE for this vessel must meet requirements per para. 6.1, 6.4, and 7.2 of specification 24590-WTP-3PS-MV00-T0001

**Revision History**

| Rev | Description | By | Checked | Reviewed | Approved | Date |
|---|---|---|---|---|---|---|
| 1 | Changed as noted | E. Le | R. Nowak | G. Butt | J Julyk | 5/27/04 |
| 0 | Issued for Procurement | E. Le | A. Donnelly | J. Julyk | M. Hoffmann | 1/30/2003 |