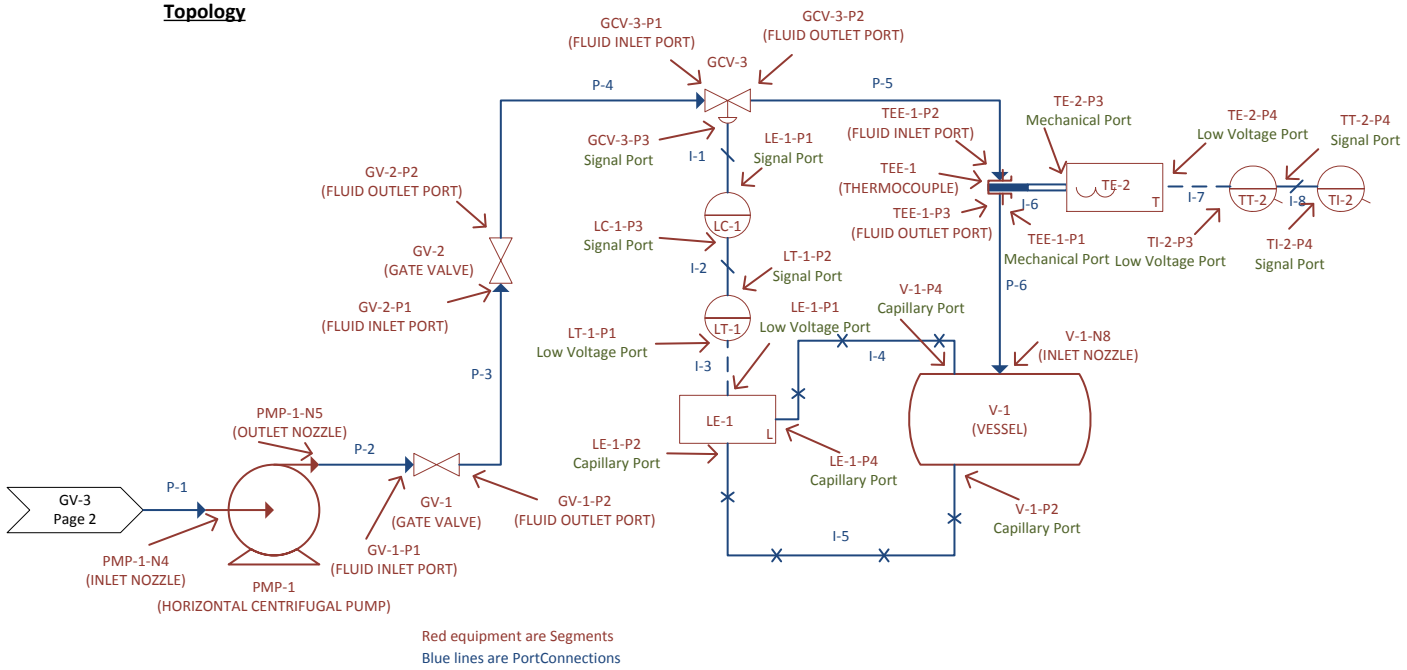
# P&ID Scenario

## Page 1

**Topology**




Red equipment are Segments
Blue lines are PortConnections

### Vessel Data Sheet Parameters

| | | |
|---|---|---|
| LOWER LIMIT DESIGN PRESSURE | 1100 | kPag |
| OPERATING PRESSURE | 1170 | kPag |
| OPERATING TEMPERATURE | 53 | °C |
| TEST PRESSURE | 1430 | kPag |
| UPPER LIMIT DESIGN PRESSURE | 1300 | kPag |
| UPPER LIMIT DESIGN TEMPERATURE | 75 | °C |
| UPPER LIMIT PRESSURE | 1400 | kPag |
| UPPER LIMIT TEMPERATURE | 100 | °C |

### Pump Data Sheet Parameters

| | | |
|---|---|---|
| ABSOLUTE DESIGN PRESSURE | 1340 | kPa |
| DESIGN PRESSURE | 1240 | kPag |
| DIFFERENTIAL PRESSURE | 70 | kPag |
| FLOW RATE | 167 | $m^3/hr$ |
| INLET PRESSURE | 1170 | kPag |
| LOWER LIMIT DESIGN PRESSURE | 400 | kPag |
| NOMINAL DIAMETER | 12 | in |
| OPERATING PRESSURE | 1240 | kPag |
| OPERATING TEMPERATURE | 53 | °C |
| OUTLET PRESSURE | 1240 | kPag |
| RATED CURRENT | 1000 | amp |
| RATED OUTPUT POWER | 250 | kW |
| RATED VOLTAGE | 240 | V |
| ROTATIONAL SPEED | 1000 | RPM |
| TEST PRESSURE | 4400 | kPag |
| UPPER LIMIT DESIGN PRESSURE | 3900 | kPag |
| UPPER LIMIT DESIGN TEMPERATURE | 200 | °C |
| UPPER LIMIT HEAD WITH RATED IMPELLER DIAMETER | 1200 | ft |
| UPPER LIMIT POWER CONSUMPTION WITH RATED IMPELLER | 500 | kW |
| UPPER LIMIT PRESSURE | 5000 | kPa |
| UPPER LIMIT TEMPERATURE | 425 | °C |
| VAPOUR PRESSURE | 1000 | kPag |

### Assembly Breakdown

Work Unit (ISA-95 Work Unit)
- PMP-1 (HORIZONTAL CENTRIFUGAL PUMP)
- V-1 (VESSEL)
- GV-1 (GATE VALVE)
- GV-2 (GATE VALVE)
- GCV-3 (GATE CONTROL VALVE)
- LC-1 (LEVEL CONTROLLER)
- LT-1 (LEVEL TRANSMITTER)
- LE-1 (LEVEL ELEMENT)
- TI-2 (TEMPERATURE INDICATOR)
- TT-2 (TEMPERATURE TRANSMITTER)
- TE-2 (TEMPERATURE ELEMENT)
- TEE-1 (THERMOCOUPLE)

### Transmitter Properties

| Instrument | Range | UOM | OPC Address |
|---|---|---|---|
| LT-1 | 0-100 | % | LT1_PV |
| TT-2 | 0-260 | °C | TT2_PV |

### Asset Installation

| FuncLocation | Asset | Date | WorkOrder# |
|---|---|---|---|
| PMP-1 | 810001 | 2011-08-01 | 100001 |
| V-1 | 710001 | 2011-08-01 | 100002 |
| GV-1 | 610001 | 2011-08-01 | 100003 |
| GV-2 | 610002 | 2011-08-01 | 100003 |
| GCV-3 | 620001 | 2011-08-01 | 100003 |
| LC-1 | 510001 | 2011-08-02 | 100004 |
| LT-1 | 530001 | 2011-08-02 | 100004 |
| LE-1 | 540001 | 2011-08-02 | 100004 |
| TI-2 | 520001 | 2011-08-02 | 100004 |
| TT-2 | 530002 | 2011-08-02 | 100004 |
| TE-2 | 540002 | 2011-08-02 | 100004 |

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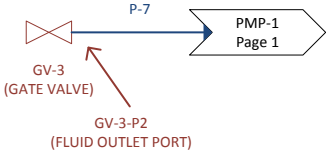
## Page 2




**Assembly Breakdown**

Work Unit (ISA-95 Work Unit)
GV-3 (GATE VALVE)