

Overview

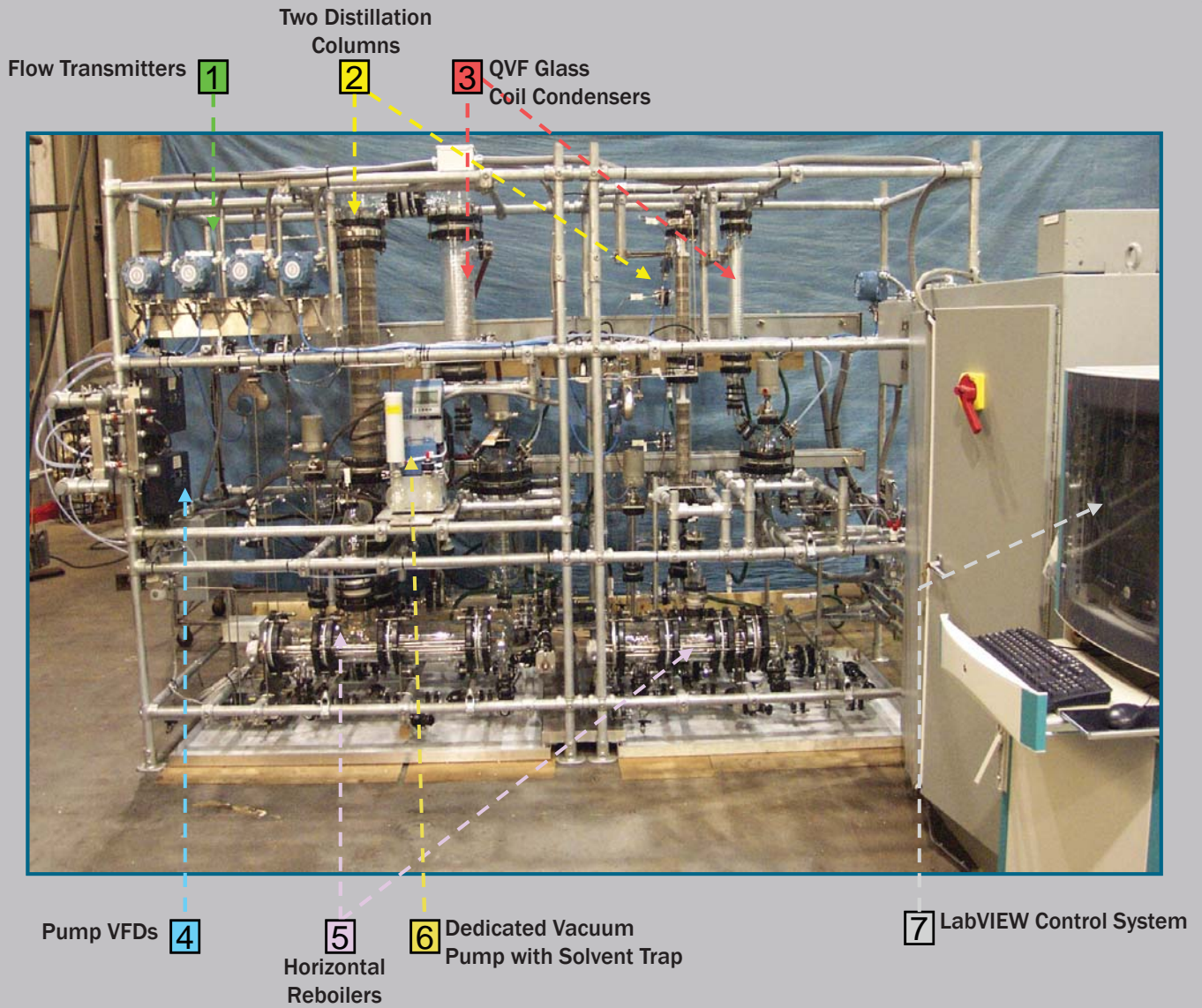
This purpose designed, electrically heated, QVF PILOT PLANT DUAL STAGE DISTILLATION SYSTEM by De Dietrich Process Systems permits selective stripping and rectification of aqueous aromatic solutions. A LabVIEW interface allows flexible in control and data logging of feed rates, reflux rates, feed points, operating pressure and other process parameters. The system was designed using GMP guidelines where practical. To assure untainted product quality, all materials were selected to prevent trace contamination. Borosilicate glass was used for major components to provide maximum process visibility.

Specifications

<i>System Design Pressure:</i>	-1 / 0.6 barg
<i>System Design Temperature:</i>	-20 °C to 150 °C
<i>Feed/Distillate Ratio:</i>	10:1 per stage, 100:1 overall
<i>Electric Power Requirement:</i>	60 Amps, 3 phase, 230 VAC
<i>Mobile Glass Feed Vessel Volume:</i>	50 L
<i>Mobile Glass Receivers:</i>	
<i>Stage 1 Bottoms</i>	50L
<i>Stage 2 Bottoms</i>	10L
<i>Stage 2 Distillate</i>	0.5L
<i>Control System using LabVIEW:</i>	
<i>Instrumentation readouts:</i>	Flow rates, temperature, pressure, level
<i>Controls:</i>	Valves, vacuum pump, feed rates, reflux rates, level, and heating

Scope of Supply

- 2 x QVF borosilicate glass, packed columns, one DN150 (6" diameter) and one DN80 (3" diameter). Multiple temperature probes spaced along the column length.
- Stainless steel structured column packing, designed for maximum theoretical plates per meter. Packed height of 960mm per column.
- Control system with PC based interface.
- 3 x Mobile QVF Cylindrical Glass Vessels with bottom drain valve and quick disconnect fittings for vacuum and liquid lines. Used for feed stock and bottoms product.
- Final Distillate Receiver, borosilicate glass, 0.5L, with screwed connection for easy removal.
- 3 x electric emersion heaters for Stage 1 feed preheat, Stage 1 Reboiler, and Stage 2 Reboiler.
- 5 x metering pumps.
- 1 x dedicated lab vacuum pump with solvent trap.
- 5 x QVF Water Cooled, Coil Condensers, borosilicate glass.
- All required instrumentation, solenoid valves, and wiring.
- Schedule 40 tubular galvanized steel support structure.
- Complete engineering design package including:
 - P&ID
 - General Arrangement Drawings and Parts List
 - Documentation and Owner's Manual



De Dietrich Process Systems, Inc.

244 Sheffield Street
Mountainside, NJ 07092

P 908.317.2585
F 908.889.4960

www.ddpsinc.com
sales@ddpsinc.com

