

## Case Study 6 – Epoxy Resins Batch Plant Design

This consultant was hired as the sole process engineer of record to design an epoxy resins batch plant at an international location (Asia). The client, in a joint venture with an operating company having existing batch processing facilities, provided process definitions for the various epoxy products, establishing recipes and volumes for all products. Based on the process definitions, this consultant provided the process design and deliverables that included:

- Process flow diagrams
- Vessel sizing, equipment data sheets, and equipment layout
- Solvent recovery overhead heat exchanger design and hydraulic analysis
- Process and tank emissions estimates
- Process instrumentation and control design
- Programmable logic computer batch control sequencing and documentation
- Relief system sizing
- Process hazards analysis

This consultant worked closely with the operating company to provide the preliminary and final plant designs. The final process design, translated to the local language by the operating company engineering staff, was transferred to a local detailed engineering firm to provide the mechanical design. The plant was safely, quickly, and successfully started up in 1999 and continues to operate today.