Leader in Bioproduct Feedstock Builds Second Pilot Plant

A company that develops high quality feedstock for the bioproduct and biofuel supply chain awarded a second contract to MAVERICK to provide engineering and to commission the control, human-machine interface (HMI) and data historian systems for its second pilot plant.

Main Objective

By building a second pilot plant, the client wanted to scale-up its processes to produce larger amounts of high-quality cellulosic sugars and lignin from biomass sources. Cellulosic sugars are a raw material for many products in the biochemical, biofuel and bioproduct markets. Lignin can be used as a solid fuel and as a feedstock for products made from carbon fibers, plastics and phenol.

Customer Results

MAVERICK developed the control systems and provided systems to visualize plant processes and allow operators to analyze collected process data. Being a pilot plant, this facility was designed to allow for experimentation. MAVERICK quickly adapted the commissioned systems to match the process changes that the client wished to execute and implemented additional functionalities under tight deadlines.

Application Description

- The architecture of the systems that MAVERICK provided includes Allen-Bradley ControlLogix PLCs, Rockwell Software’s FactoryTalk HMI, Data Historian and VantagePoint modules.
- The client’s process equipment supplier delivered equipment to the plant sequentially, leading to a sequential start-up of the equipment.
- At each stage, MAVERICK developed the control system, HMI and historian systems to integrate easily with the equipment’s on-board control systems, instrumentation and drives as they came on-line. Flexibility was crucial since some processes were commissioned as others were already in production mode.
- The MAVERICK team developed and implemented an interface between the historian server and the existing laboratory information system (LIMS).
- MAVERICK created a robust data analysis environment in which users can produce both preconfigured and ad-hoc reports and trends. Reports and trends have the capability to show historical process data and LIMS test results together if desired by the user.
- The MAVERICK plant commissioning team consisted of personnel from many different disciplines including: engineering, field services, instrument technicians, project management and design.
- MAVERICK provided key operator training for the HMI system and documented procedures to allow plant engineers and IT personnel to modify the data analysis configuration in the future as needed.

The MAVERICK Difference

MAVERICK’s familiarity with the client and the process helped the team achieve all installation goals quickly and efficiently. MAVERICK developed the systems effectively, provided flexible support as system requirements changed and provided a strong, multi-disciplined commissioning team.