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.

Objective

By building a second pilot plant, the customer 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.

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 desired process changes and implemented additional functionalities under tight deadlines.



Solution

The architecture of the systems that MAVERICK provided includes Allen-Bradley® ControlLogix® PLCs and the FactoryTalk®, Data Historian and VantagePoint modules from Rockwell Automation®.

The customer's process equipment supplier delivered equipment sequentially, allowing for a sequential startup 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 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 engineers and IT personnel to modify the data analysis configuration in the future as needed.

The MAVERICK Difference

MAVERICK's familiarity with the customer 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.



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MAVERICK Technologies, LLC

265 Admiral Trost Drive | Columbia, IL 62236 USA +1.888.917.9100 | Fax +1.618.281.9191 info@mavtechglobal.com | mavtechglobal.com