



HPI, LLC

Alpart RDU

Alpart, Jamaica's largest bauxite and alumina producing company, has recently approved the controls upgrade for one of their HSDE DIGICON™ based Turbo-Generator Packages at their St. Elizabeth Plant.

A single HPI RDU was designed as a 'plug and play' direct replacement for the DIGICON™ with functions that include inputs and outputs, permissive, sequencing, alarms, shutdowns, PID loop control, communication and operator interface terminal (HMI). The Equipment was mounted in a specially developed enclosure; the enclosure was designed to fit directly into the space previously occupied by the HSDE DIGICON™ equipment. The new enclosure was designed to provide easy access to equipment mounted at the rear of the enclosure. The new system was designed to connect directly to the existing 'J' connectors at the rear of the DIGICON™.



The operator interface is via the existing panel mounted HMI. The HMI provides the user with all the necessary control and monitoring functionality. The HMI communicates with the PLC via an Ethernet Network. HPI modified the HMI configuration to communicate via an RSLinx OPC server. In addition to the existing Control and monitoring functionality the HMI was expanded to provide additional diagnostics to improve the fault finding and troubleshooting capabilities of the system. The provision of an Ethernet Network allows remote access. The new controller utilizes the latest Allen Bradley FlexLogix system. This provides the end user with the benefits of a commercially off the shelf third party system, while still meeting the performance and functional requirements of the original DIGICON™ controller.

As technological leaders in the supply of turbo-generator services, for both the OEM and retrofit markets, HPI uses professional project teams with extensive experience in the design of hardware and software, manufacturing, testing, installation, commissioning and supporting of turbine systems. Former key VT Controls and HSDE staff have over 150 cumulative years experience in the industry make up the HPI engineering, project, organization and management teams; they have been proven through many years of providing turbine retrofits and are formed of highly qualified personnel who fully understand the demands of this specialized industry.
