

AUTOMATION CASE STUDIES



A coal mine and preparation plant's water system is responsible for drawing water from a local river, transfer to several storage ponds and tanks, chlorine treatment, and pumping underground as well as to the plant for use in various processes. This system was being monitored and controlled manually resulting in high maintenance costs and inaccurate control. Pillar Innovations networked and automated the system so that little or no human involvement is needed. A software package was provided for visualization, alarming, and trending as well as control.

Pillar's experience in underground mining has led to the development of the Mine-Wide Monitoring System. These systems, installed at many of the country's largest mines, integrate many processes and systems including: conveyor belts, fans, pumps, water systems, atmospheric monitoring systems, and electrical systems. Operators monitor alarms and conditions through a distributed system that provides client access across the corporate network.

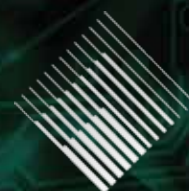


Prior to the development of the Emulsion Control Unit, high levels of solcenic fluid were continuously being used to lubricate equipment at a Pennsylvania operation. By controlling the mixing station, Pillar Innovations is able to save the client money and improve efficiency by precisely monitoring and controlling the emulsion system. This way the equipment is not endangered by low levels and waste is not created by using excess fluid.

Pillar Innovations successfully replaced, updated and integrated processes at an activated carbon facility. The process was controlled by an outdated Modicon PLC and the process utilized individual P.I.D. controllers which needed tuning every time the process started. All the motor push-buttons, P.I.D. controllers and chart recorders were replaced with one PanelView MMI. A Control Logix PLC was installed with new logic that reduced startup time from 1.5 hours to 10 minutes. Visibility and trending has also been improved with client access to historical values and current conditions remotely.



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