Keeping Our World Cleaner and Safer

The world's largest recyclers are recycled steel manufacturers. These companies reuse much of the aging steel that would otherwise be nothing more than eye sores. One of the great challenges to recycled steel manufacturers, however, is the proper detection and removal of radioactive sources that can be present in the recycled steel. Failure to remove radioactive sources from the hundreds of truck and rail loads that arrive each day can cost multi-millions in cleanup expenses and downtime.

An individual steel manufacturer contracted KCC Software to develop their monitoring solution. The result impressed Chase Environmental Group. They created a joint venture with KCC Software to develop a product suite supporting a wide range of detection manufacturers and an ever-increasing list of monitoring and reporting capabilities. KCC Software is the creator and developer of the application suite while Chase Environmental Group provides the industry expertise, field service, and marketing role. The product of this joint venture is called MillAlert. You can read more of it here.

The product suite includes a multi-processor PLC that interfaces with multiple radiation detection systems and includes an HMI for on-site interaction with the system. This PLC (an AutomationDirect DL06 with the F0-CP128 coprocessor module and an Ethernet module) includes a discrete wired interface to the detector controller, multiple serial interfaces, and an Ethernet interface to MillAlert: Server.

MillAlert: Server is the central brains for this application. This is a VB.net application. It gathers data from the remote PLCs via Ethernet and from other systems via OPC. The system displays the current status of each radiation detector in the mill. Some of the larger mills can have more than a dozen detectors. Data is collected as each truck or train car passes through a detection system. Some effluent systems collect continual data. All this data and alarms are stored in databases. This data is used for a collection of canned database reports, a custom report generation wizard, and for the daily generation of an executive summary.

MillAlert: Notifier, another VB.net application, monitors the data collected and notifies key personnel when alarms are detected. Numerous possible alarms exist in several alarm categories. MillAlert: Notifier can be configured to support a variety of shifts. The system notifies contacts based on the active shift and the alarm category. Emails and/or text messages are sent to the contact(s).

MillAlert: Effluent is another application that trends continual data. In addition to real-time data trending, data trending is also available for past data. This application also generates statistical analysis of the collected data.

Each interested employee can view the system using MillAlert: Remote, a web-based visualization application developed in ASP.net made available through the company intranet. This is configurable per employee allowing each to get desktop "pop-up" alerts

for the alarm categories and detection systems of interest. Being web-based, this can be placed on as many PCs as desired without the need for an installed application and the concerns that this requires.

This suite shows the flexibility of KCC Software. From PLC programming, HMI design and development, VB.net programming, database management, data trending, emailing and TXT messaging, and web-based configurable applications, KCC Software's range of capabilities are on display.

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