JM CANTY
Process Technology

VECTOR SYSTEM - OPACITY / TURBIDITY

The Vector System is a unique process control system designed for use in virtually any environment. A complete system consists of a Canty Vision System Camera, Canty lighting, and the microprocessor based Vector System. The Vector System itself consists of two main components : a Vector Processor and controlling software.

Vector System

The Vector System accepts a video image from a Canty Vision Camera System and stores that image in memory. The Vector then breaks down that picture into a matrix of pixels. Each pixel is analyzed and the color or gray scale intensity of each pixel is stored in memory as a numerical value. For example, a black and white system uses a shade of gray scale, where black is represented by the number 0, and white by 255. All shades of gray in-between are then scaled appropriately. Thus, colors or gray scale intensities can be represented by numerical values. This information can then be accessed by the Vector software and used to control your process.

Opacity / Turbidity Software

The opacity/turbidity software package uses the principals of the gray scale to perform process control functions. With the opacity functions - the intensity of a user defined zone of a video picture is monitored and the average gray scale reading is supplied via a continuous 4-20 mA output to the appropriate interfacing device. In this manner, the opacity of the fluid in a pipeline, sightflow or small vessel can easily be monitored. The user can interface with a DCS to alarm once the desired opacity is reached.

This same software is used to perform turbidity analysis. The average gray scale intensity of a video input is monitored and the corresponding 4-20 mA signal on a continuous gray scale reading is used to measure turbidity. As the turbidity increases, your average gray scale value will increase. A DCS or simple user supplied meter with set points can be used to activate a relay, or sound the appropriate alarm. Outputs can be easily calibrated to NTU values.

Options

Multiplexing - Allows user to multiplex up to 8 cameras with one Vector System. The system will control up to 8 Canty Vision Camera Systems, providing the same software module is required on each system. 4-20 mA Output Option- Allows user to obtain a 4-20 mA output from the Vector System to control the process.