CANTY

PROCESS TECHNOLOGY

Vapor Detection System

Company:

Canty Gas Works

Purpose:

This report details the steps required to check installation, start up and test Canty Vapor Detection System. This method is also to be used for interval calibration testing. Following the prescribed procedure will allow system to be optimally configured for detecting vapor leaks gas manifolds.

A. Installation:

1) Camera - Cameras must be installed with clear focused views of the pump systems. A typical image is included to guide the installation, however it is desirable to have an even tighter zoom on the pump package to maximize resolution. Manifold view should encompass the entire image in order to maximize resolution

For vapor detection, the algorithm in use is an image subtraction routine and therefore interruptions in the image must be avoided. The pump view only in the image is desirable to eliminate possibilities of outside agencies (human traffic, wildlife etc…)

2) Lighting – area of pump should be well lit and stable over time.

3) Electrical connections – All connections should be checked for continuity prior to start up.

B. Calibration

Two Cantivision files will be used for each camera, one for fluid detection and other for vapor detection. Every file requires an output on the ADAM module. From Cantivision the outputs are selected by means of channels so every file will communicate to the ADAM module using one channel. To run the application properly all the files (six overall) have to be open.

1) Vapor Detection.

See software manual in the **Help** section of the menu to initiate the pre set camera document under File Open / Camera Document. When document is open, select **Toolbox** from menu and select **Camera Controls** and start scans.

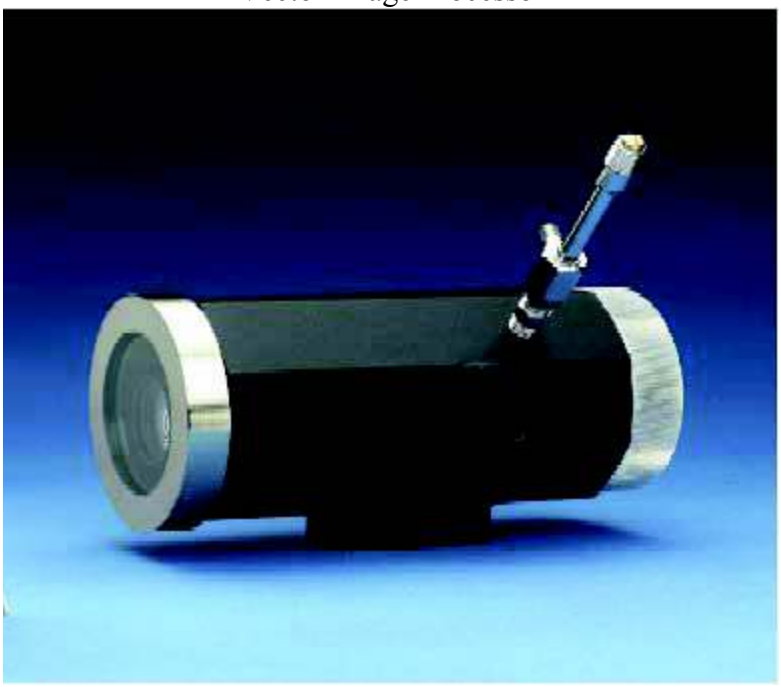
a. Start scans and spray vapor at desired detection intensities. A fire extinguisher is sometimes a useful tool for this. Spray at minimum levels to register detection. Note the change in the intensity output. This will be the trigger point for alarm.

b. Set up small, multiple zones as opposed to one large zone in order to maximize system detection resolution.

c. Color speck tool must be running for vapor detection. The following images show clear views, views with vapor and the detection outputs.

C. Equipment used to detect vapor:

Vector Image Processor



Canty Ethernet Surveillance Camera