

IVC APPLICATION NOTE:

Monitoring Hazardous Environments

IVC video systems are being used by Dupont Chemicals at their nylon plant in Bridge City, Texas to monitor a hazardous material incineration facility. The cameras are used to monitor the flow of materials through the facility, confirm the accuracy of material identification, and importantly, to assure employee safety in potentially hazardous areas.

IVCAPTZ-3142-01 cameras were selected for their high range optical zoom, high image quality and rugged enclosures. They are located to view the following:

- Tank Farm Area where the tops of multiple tanks are viewed to assure no personnel are “down”.
- Truck Unloading Bay where tank trucks unload hazardous materials into holding tanks for storage or “hot piped” directly to the incinerator. A spill in this area could be extremely dangerous and a rapid response is essential.
- Drum Conveyors where one camera overlooks five rows of conveyors that carry 55 gallon drums to a master belt which then takes them to the incinerator. The high zoom enables the camera to read the 5” x 10” labels on the drums to verify their contents as they move down the lines. A second camera is placed to view the drums at the last conveyor stage point before they enter the furnace.
- Process Back End viewing an area where normally no staff are present, to assure there are no process problems and no individuals are down.
- Drum Unloading Area surveying the front end of the process where trucks enter and drums are unloaded. This is a potentially hazardous area where immediate response is required if a drum spills or an employee is down.



“ IVC did a great job and went the extra mile in providing support as needed during the installation, integration and start-up.”

In addition to the IVC cameras, there was an existing fixed view camera in a air-cooled enclosure that looks into the incinerator hearth. This camera was integrated into the IVC camera management system to simplify the operator interface.

IVC cameras were selected for the image quality, the high quality zoom, the specialized industrial enclosures for hazardous areas, the ability to connect over an existing fiber LAN, and ease of integration with their the process control software. Specifically, the IVC TCP/IP based video runs at this facility on a multimode fiber optic network with Cisco 2400 10/100 switches. The IVC cameras include fully integrated fiber optic media converters. The facility uses the ABB Infi-90 DCS control software and the IVC video and video controls are displayed through the “ABB Operate IT” HMI software.

The IVC cameras, which are pressurized with nitrogen and certified by Factory Mutual to Class I Division2 for use in potentially explosive areas, enables the facility to operate more safely and efficiently.

