

Polytron Pulsar on US television

In August 2002 a programme entitled "World Business Review" aired in the United States and contained a segment on the application of the Draeger Polytron Pulsar Open Path Gas Detector.

This type of product marketing has grown significantly in the past few years. It is used extensively to show applications of new products and complements the traditional methods of direct mail, exhibitions and journal advertising. The programme is aimed at the business world and goes out on Public Broadcasting (PBS) networks each week to a potential audience of 50 million people.

Additionally it is rebroadcast to International organizations, Universities, Large Corporations and is available on the Yahoo website at www.broadcast.yahoo.com.

The host of the programme is General Alexander Haig, a former Secretary of State under President Ronald Reagan and now a Director on some of America's top 500 companies. Polytron Pulsar is one of the new Open Path gas detectors and it is used to detect explosive gases over distances from 6 – 200 metres. The application chosen for this programme was a cogeneration plant containing gas turbines in a plastics plant to the west of Houston Texas. Although the cogeneration plant is well ventilated it can get very warm in summer with temperatures around 35 deg C (95 deg F) and relative humidity between 90 – 100%. This is well within the specification of the Polytron Pulsar but for human beings a little on the high end. This is one of the reasons why the gas detector had to work with minimum maintenance. The Polytron Pulsar was installed prior to summer and was working perfectly throughout the June to August summer months. The gas detector comes as a transmitter and receiver. Location is usually at some height above ground so there is a clear path for the infra red beam to pass unobstructed between transmitter and receiver. Any gas passing across the beam, reduces the intensity and this is read by the Pulsar as

a concentration in Lower Explosive Level Metres (LEL Metres). This is a function of gas concentration and distance.

Preset alarm levels will trigger an emergency response to warn of the high levels of gas. Set up of the instrument is a simple matter of connecting a hand held terminal to the Pulsar and aligning the beam. A crosshair on the handheld unit indicates when transmitter and receiver are in alignment. Maximum beam strength value is also indicated when there is perfect alignment. In the cogeneration plant the Pulsar was located above the gas turbines so leaks could be determined from any of them. On the set day the camera crew arrived and began filming the Pulsar positions, interior of the cogeneration plant and some ancillary equipment such as Polytron IR point gas detectors.

For any television show there has to be a set format and timing to ensure everything fits into the programme. A script was written by Terry Alligan (Marketing Manager GDS Houston) and two Draeger personnel (Ken Johnson, Regional Sales Manager and Mike Moore, Technical Sales Associate) were set to deliver it throughout the filming. Nothing ever runs smoothly and in high temperatures and humidity there were a few mistakes but these were edited out of the final sequence. In all, a good performance under very trying conditions.

The plastics company had chosen Polytron Pulsar (apart from its performance) because it was easy to install and virtually maintenance free. Companies do not want high ongoing costs associated with their Safety Equipment so reliability is high on their list of requirements.

The danger when dealing with gas under pressure is that you may have a small leak in an isolated area that goes undetected and then becomes large enough to cause an explosion. Existing technologies for detection are varied and have been around for many years. Single point gas detectors are good for small areas but the cogeneration plant was a large area with a high air flow. There was also



the cost of ownership. It is easier to maintain one instrument than say 20. The Polytron Pulsar does not solve all the safety problems in this application and this is why there was a short cut away sequence in the filming to the Polytron IR single point gas detector. This is used in locations where there is no clear line of site or there is a specific area where a leak could occur.

The overall objective by the plastics company was to look for a technology that would be maintenance free, have inbuilt redundancy and operate over a wide area with fast detection. The Open Path Pulsar technology has no wearing parts and no consumables. Periodic checks by the plastics company has confirmed its low maintenance. Another challenge was to ensure this new technology integrated with traditional ones.

The Pulsar technology can be used in Analog or Digital mode so it fits in with all existing technologies from small to large distributive control systems.

Comments from the plastics manufacturer were, "Its inbuilt diagnostics tell us if there is a problem, we don't have to second guess. Our confidence level is very high for this type of gas detection. Without a doubt, keeping business communities and the environment safe is made easier by the advancement in these technologies." ■

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