

MANUFACTURERS OF
VIDEO SMOKE DETECTION

BSS-ME
British Security Specialists - Middle East
MIDDLE EAST SALES AND SUPPORT OFFICE

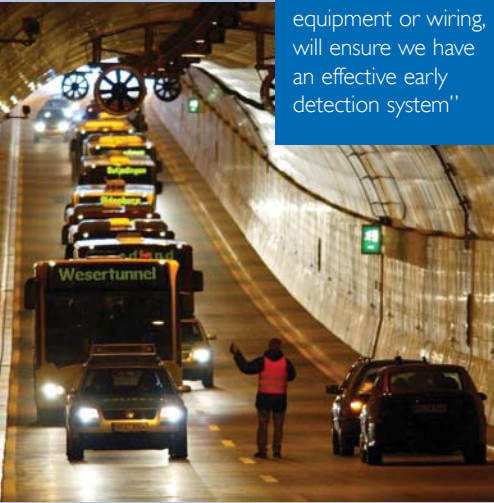


CAMERA BASED FIRE DETECTION



"Utilising conventional CCTV cameras, the VSD system is a unique solution to smoke detection."

"Integrating D-Tec's VSD into the existing traffic management system, without additional field equipment or wiring, will ensure we have an effective early detection system"



"For the protection of the light wells, VSD was the only architecturally acceptable solution that provided the rapid smoke detection required".



Technology Overview

The early detection of smoke in lofty, voluminous areas, or where high airflows are present and even in external areas has always posed a problem to fire safety professionals. Practically, it is just not possible to place detectors close enough to the area of risk to provide an effective level of fire detection.

Conventional point smoke detection placed in a normal office environment will always be close to the source of the fire and smoke will be detected quickly and effectively. Place the same detection in a large voluminous area such as an aircraft hanger or warehouse and there is a high reliance on the smoke overcoming distance, stratification and temperature layering before being detected. In this type of environment all methods of conventional smoke detection have always been found to be lacking, until now.

With the arrival of D-Tec's Video Smoke Detection (VSD) technology the economical protection of these critical areas has now become a reality.

In situations ranging from power stations, historic buildings, road tunnels, rail depots, warehouses, shopping malls and aircraft hangers, VSD has become your front line of protection.



Principles of Operation

VSD is based on the computer analysis of video images provided by standard CCTV cameras. Using advanced image-processing technology and extensive detection and known false alarm phenomena algorithms; VSD automatically identifies the particular motion pattern of smoke and alerts the system operator to its presence in the shortest time possible.

By effectively detecting smoke at its source, VSD does not rely on the proximity of smoke to a detector and therefore is unconstrained by distance. Whether the camera is mounted 10 metres or 100 metres from a risk area VSD will detect smoke in the same amount of time.

The VSD system rapidly detects smoke by looking for small areas of change within an image. These areas of change are then passed through a series of filters, which seek particular characteristics that can be associated with smoke behaviour.

VSD can process video information from up to eight cameras simultaneously. The video hardware is designed to allow simultaneous real time digitising of all eight images, which means no information is lost or delayed. All alarm condition images are logged, time & date stamped, and stored within the system's memory.

Overwhelming Benefits

- Very early detection of the incipient stage of a fire.
- The only solution for external smoke detection
- VSD is not affected by high airflow movements that could take smoke away from standard detectors.
- Gives accurate, visible location of the fire allowing appropriate response to be taken
- Visual alarm verification gives the ultimate in false alarm rejection
- Substantial cost savings can be achieved through the use of existing CCTV installations
- Detects all types of visible smoke
- Guarantees quick response times by detecting fires at source.
- The ability to "look in" allows cost effective detection within hazardous, EX or toxic areas

Successful Project Experience

London Underground's Stratford Market Maintenance Depot highlights the many benefits to be derived from the use of VSD.

After experiencing extensive false alarms with the new fire detection system it became necessary to re-evaluate its design to decide on possible radical modifications. The problem lay specifically with the high-level beam detectors that mainly triggered through misalignment caused by building movements, sunlight, particulate contamination and even flying pigeons!

Protection of an area of this size (190m long 110m wide and 30m high) utilising a high level beam detection system, was at the time accepted as the de facto design for this type and size of building. But as the false alarm situation worsened the system finally had to be turned off.

D-Tec was invited to look at a solution to this problem by replacing the high-level beam detectors with a VSD system. This had been trialled in other areas of the LUL network but had not been used

before in this particular application.

Considering the problems, a very exacting specification was put together for the replacement system. Over eighty smoke tests were carried out to prove the effectiveness of the VSD system under various operational conditions, including the deployment of steam cleaning machines used for cleaning the rolling stock and varying lighting conditions.

Installation of a 24-channel VSD system was completed in December 2002. The installation comprises a 24-camera system, linked by fibre optic cable to the main operations' room.

Incorporation of VSD into Stratford Market's overall fire strategy has ensured complete, effective and trouble free protection. Since the installation of the VSD system there has only been 1 recorded unwanted alarm and that occurred during the initial setting up period prior to system handover.

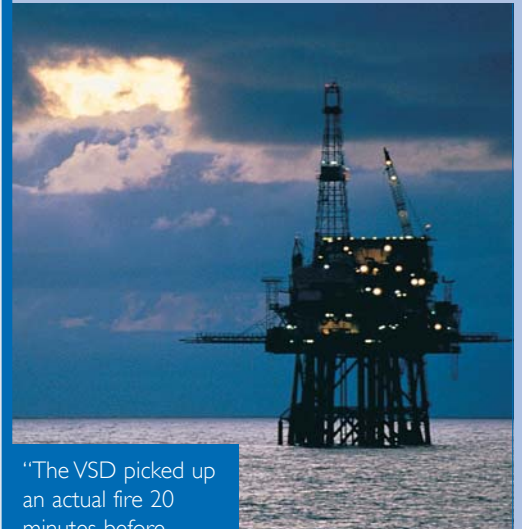
D-Tec-Our Background

D-Tec is acknowledged as the world leader in the technology of VSD and its products are specified by name worldwide.

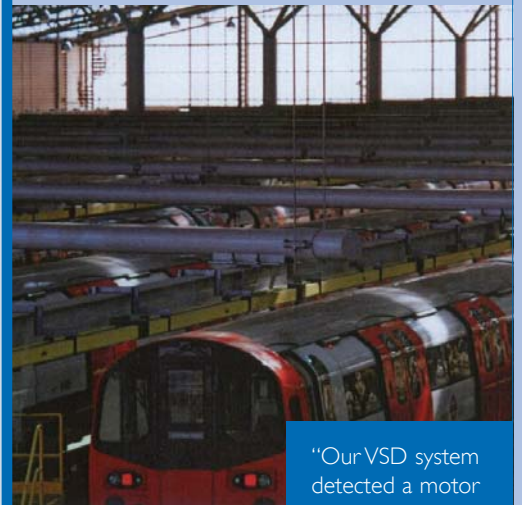
Through an on-going commitment to research and development D-Tec has, over the years, diversified into a number of related markets with products that

have set new standards in design.

VSD has been developed to overcome many of the problems associated with smoke detection. It provides solutions for previously unsolvable fire detection scenarios and represents a true technological breakthrough in fire prevention.



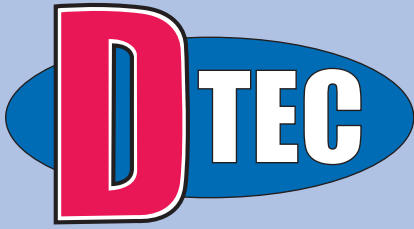
"The VSD picked up an actual fire 20 minutes before other systems detected it."



"Our VSD system detected a motor burnout 24 hours after installation"



"Usage of cameras for both security and fire protection will demonstrate considerable savings for us"



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Service & Maintenance

Without effective maintenance even the best equipment will deteriorate. D-Tec's maintenance division has been formed to ensure that our agents and distributors have both online and telephone access to fully trained D-Tec engineers.

For further information please email us at maintenance@dtec-fire.com or contact your local agent or distributor.

Approvals and Awards

VSD is specified and installed in a variety of applications worldwide and has received approvals from Factory Mutual (FM) and SSL, and has received the Queen's Award for Innovation.

Award product and is now in British Standards.

NFPA 72 Committees are currently in the process of incorporating VSD into the National Fire Alarm Code.

VSD has been featured on television science programmes, is a Millennium

Your Local Agent

