TYPICAL APPLICATIONS

TTK system is the suitable answer to detect and locate leaks of hydrocarbon liquids or non-conductive solvents, and to effectively protect the different environments. TTK oil leak detection systems can be used in hazardous areas with explosive atmosphere (ATEX "Zone 0") with zener barriers. Some typical applications of the system are :

Tank Farm

Storage tanks may leak through the tank walls or through the tank bottom. After some years of operation, a storage tank frequently experiences bottom corrosion either due to stored fluid or soil humidity. TTK oil leak detection system with FG-OD sense cable provides a continuous monitoring and protection, it helps to prevent soil contamination and loss of valuable product.

The FG-OD sense cable provides fully mapped, simultaneous leak locations across the network of cables together with an alarm and logging system.

Under-ground and Above-ground Pipelines

The FG-OD sense cables are installed along the entire length of the pipeline to be monitored. It allows detection of small quantities of liquid when coming into contact with the sense cable. FG-OD sense cables are addressable, re-usable and can detect multiple leaks over long-line systems.

Airport Fuel Hydrant System

Airports have a special application since the consequence of hydrant leaks can be very high due to its aviation activities. The key for leak detection in airports is to accurately locate the leak on a few kilometers of pipelines which are positioned under the apron.

TTK system is the ideal solution for airport fuel hydrant systems. The sense cables are installed under the pipelines and serviced through access risers on the apron. They ensure a continuous protection of the whole pipeline. In the event of fuel leak, TTK system provides accurate location of the leak, thus significantly reducing the time and financial cost of repair.

Building Environment - Generator

Technical rooms in a commercial building such as power generator rooms are critical areas especially after a power failure. TTK sense cables are installed in the perimeter of the equipment to be protected.

Whenever a TTK water leak detection system (with FG-SYS or FG-NET monitoring panel) is already installed, it is easy to extend the installed system by deploying sense cables to monitor one or several rooms for possible oil leaks.

For more detailed technical information or specific application design guide, contact us or visit our website.

LIQUID LEAK DETECTION SYSTEMS

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R&D DEPARTMENT - MANUFACTURING PLANT
PARIS - SINCE 1989

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- CONSTRUCTION DIVISION
- CHEMICAL DIVISION

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LIQUID LEAK DETECTION SYSTEMS

OIL & GAS DIVISION

ABOUT TTK

Specialist, Manufacturer and Market Leader

TTK, Liquid Leak Detection specialist and manufacturer, offers innovative products and tailored solutions for detecting hydrocarbon leaks, for both industrial and commercial applications.

With a 30 year history and with offices in Europe, Amercia, Middle East and Asia, we are at the forefront of designing, manufacturing and installing digital liquid leak detection equipment in risk areas of facilities around the globe.

TTK's Oil & Gas Division, R&D center and the manufacturing facilities are headquartered in Paris. Since it was established, the company has built its brand name on Quality and Innovation.

All products are manufactured in France. TTK products hold a number of recognized international safety standards and specific approvals such as UL, FM, TUV/GS, IEC, and ATEX.

The TTK brand is well-known in the water and acid leak market. Thanks to the advanced technology and the high reliability of its products, TTK has achieved a leadership position via numerous reference projects all over the world.

Dangers of Hydrocarbon Leaks - TTK in response

In the Oil and Gas industry, the three potential risk consequences from hydrocarbon leaks are fires, explosions and environmental contamination. All may cause irreversible damage to personnel, businesses or the ecosystem. The regulatory framework is also becoming increasingly stricter in the sector.

Consequently, it is imperative to consider an efficient detection system to continuously protect your production, distribution lines or storage tanks from leakage.

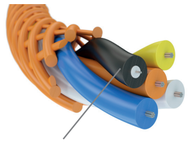
TTK hydrocarbon leak detection system in the Oil & Gas industry is specially designed to be installed in different environments, such as tank farms, pipelines, airports and refineries. The system is capable of detecting gasoline, fuel, crude oil, and jet fuel amongst others. Early detection with accurate location of oil leaks provided by the system allows reacting at a very early stage thus preventing environmental damage.

Oil spill at Evrona Nature Reserve
Photo by Israel Environmental Protection Ministry

Oil contamination to water and land

TTK SOLUTIONS

TTK hydrocarbon leak detection systems consist of **FG-OD** range sense cables, point sensors and **FG-NET-LL** range digital monitoring units.



The heart of the technology: Silicone jacket element containing carbon black particles. It swells quickly by absorbing liquid hydrocarbon.

Oil Sense Cable - The Latest Innovative Technology

TTK offers the **FG-OD** range: **a fast response, re-usable and ATEX approved** oil leak detection digital sense cable, to be used with FG-NET-LL range digital units or in point sensors. It detects and locates, along the entire length, at very early stage, hydrocarbon and non-conductive solvent leaks.

Microprocessor embedded in each FG-OD sense cable allowing independent digital transmission to the monitoring unit.

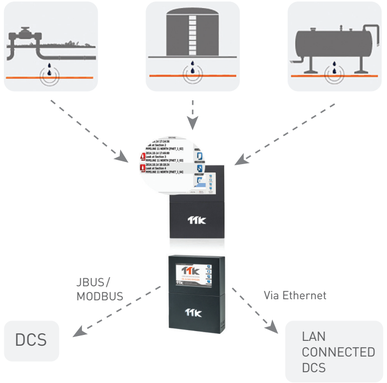
FG-NET-LL - Digital Monitoring Unit for Leak Detection

FG-NET-LL is a powerful and user-friendly interface. It collects and transmits information from sense cables to local or/and remote monitoring systems.

Up to 2400 meters of sense cables can be managed independently by one FG-NET-LL.

What's more, it allows leak progression analysis based on alarm logs.

Oil Leak Detection System's Reactions



1. In the event of hydrocarbon leakage, the sense cable in contact with the liquid detects and transmits rapidly the location of the leak to the monitoring panel.
2. The monitoring panel triggers an audible alarm and displays the accurate location of the leak which can also be seen on an integrated dynamic map. It can shut off appropriate pumps or valves if required.

   The system provides the **Dynamic Leak Evolution Monitoring** feature, allowing monitoring the leak's progression over time.
3. The panel reports to the DCS / Safegrarding system and can send alerts (email) to a remote DCS.

Technical Advantages

- Early detection with accurate location of oil leaks
- Reliable detection: oil sense cables are insensitive to water, pressure or pollution
- Oil sense cables can be cleaned and are reusable
- Microprocessor embedded in each sense cable allowing independent digital transmission to monitoring panel
- Report to LAN connected BMS/DCS, send alerts by email and SNMP traps via JBUS/ MODBUS, TCP/IP connection
- Can be used in hazardous areas with explosive atmosphere (ATEX "Zone 0").
- Robust system with long service life

What Can TTK Offer You More?

- Cost savings with reusable oil sense cables / point sensors
- Long Line system: specially designed for long distance application: sense cables are provided with built-in intermediate embedded connections for each section, allowing optimized system architecture
- Sense cables can be tested for oil leak detection under real conditions
- Unique 'Dynamic Leak Evolution Monitoring'
- Strong technical engineering support
- Technology and products made in France

Microprocessor embedded in each sense cable - truly independent cable.

PETROCHEMICAL PLANTS

GENERATOR ROOMS

PIPELINES

UNDERGROUND TANKS

OIL REFI NERIES

AIRPORTS