Water & Acid Leak Detection Installation References Examples

TTK equips 300+ biggest data centers in Europe, 90+ in Asia-Pacific; 360+ large sites of Banking and Finance in the world.

DATA CENTER & TELECOM

- 1-Net** 2015
- Bouygues Telecom
- Digital Realty Trust 2015
- Equinix 2015
- Eurosport 2015
- Facebook 2015
- Google 2015
- IBM 2015
- Hutchison Telecom 2015
- Mobistar* 2015
- NTT 2015
- PCCW 2015
- SFR*** 2015
- Starhub Shine** 2015
- Telecity 2015
- Vodafone* 2015

BANKING & FINANCE

- ABN Amro Bank
- Bank of China 2015
- Barclays Bank
- BNP Paribas 2015
- Citigroup
- Credit Suisse 2015
- Deutsche Bank 2015
- DBS Bank 2015
- Goldman Sachs 2015
- HSBC 2015
- JP Morgan Chase 2015
- Riyadh Bank* 2015
- Schroders 2015
- Société Générale* 2015
- Standard Charted Bank 2015
- UBS 2015

PUBLIC & COMMERCIAL

- Abu Dhabi Investment Authority HQ*** (UAE2010-2014)
- Bloomberg (United Kingdom)
- Defense Ministry (France)
- European Council (Belgium)
- Frimley Park Hospital (United Kingdom)
- Hong Kong Airport (HK, China 2015)
- King Abdullah University of Science & Technology* 2015
- Kowloon Commerce Centre Tower 1&2 (HK, China2015)
- Museum Louvre (France, UAE** 2015)
- National Library (France)
- Shanghai Stock Exchange (China)
- Supreme Council for National Security* (UAE 2015)
- The European Patent Office (Germany)
- University of Cambridge (United Kingdom)
- Yau Mai Tei Police Station (HK, China 2015)

LABORATOIRES / CLEANROOMS

- Atomic Energy and Alternative Energies Commission* (France2015)
- Changi Water Reclamation Plant (Singapore)
- MMi Cleanroom (China)
- Sanofi (France)
- Taiwan Chimei Semi-conductor Plant
- Taiwan Semiconductor Manufacturing Company* 2015

INDUSTRY

- Abu Dhabi Company for Onshore Oil (UAE)
- Airbus (France 2015)
- ARAMCO (KSA)
- Electricity of France - EDF (France)
- Fujitsu (United Kingdom)
- IBM (France 2015)
- Petroleum Development Oman (Oman)
- Qatar Petroleum (Qatar)
- Thales (France) 2015
- TOTAL (France)

2015: New projects 2015.
*: Project amount (50-100k USD); **: Project amount (101-300k USD); ***: Project amount (>300k USD).

Hydrocarbon Leak Detection Installation References Examples

COUNTRY / CITY	PROJECT	MONITORED AREA TYPE
France	Leading Energy Provider	Hydrocarbon Underground Pipe-in-pipe
	Airport	Jet Fuel Distribution System
	Principal Data Center & Colocation Provider	Diesel Generator Room in Data Center
Singapore	Water Traitement Company	Diesel Distribution System Underground Pipe-in-pipe
Hong Kong	Private Sport Club	Genset Room
Taiwan	Military Project	Oil Tank Storage Room
Sydney	Main Data Center	Generator Room
Oman	Royal Residence 2015	Buried pipe, Tank
KSA	Government Project 2015	Generator, Fuel Tank
	Universities	Fuel Tank
	Public Research Center	Outdoor Pipe, Fuel Tank, Generator
	Data Center	Fuel Pump Room, Fuel Tank
	Minsitry 2015	Fuel Pipeline
	Telecom Technical Builidings	Generator Room, Fuel Tank, Fuel Pipe Trench
	Bank Headquarters	Fuel Supply Pipe, Generator Room Trenches
UAE	Telecommunication Service Provider	Fuel Tank, Generator
	Gas Process Facilities 2015	Underground Fuel Pipes
	Investment Council Headquarters	Fuel Tank, Generator
	Landmark Commercial Building	Fuel Tank, Generator Rooms
	Petrol Station 2015	Underground Diesel Tank

LIQUID LEAK DETECTION SYSTEMS

TTK S.A.S.
HEADQUARTERS
R&D DEPARTMENT - MANUFACTURING PLANT
PARIS - SINCE 1989

- OIL & GAS DIVISION
- CONSTRUCTION DIVISION
- CHEMICAL DIVISION

TTK FRANCE S.A.S.*	TTK GMBH*	TTK UK LTD*	TTK ASIA LTD*	TTK(S) PTE LTD*	TTK MIDDLE EAST*	TTK NORTH AMERICA INC.*
PARIS SINCE 1989	FRANKFURT SINCE 1997	LONDON SINCE 2000	HONG KONG SINCE 2003	SINGAPORE SINCE 2003	DUBAI SINCE 2006	OTTAWA SINCE 2014

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LIQUID LEAK DETECTION SYSTEMS



TTK Company

TTK is the world's **leading manufacturer** of Liquid Leak Detection Systems for commercial and industrial applications. Our expertise focuses in 3 fields: **Water, Acid Leak Detection and Hydrocarbon Leak Detection**.

TTK's headquarters; R&D center and the manufacturing facilities have been based in the Paris region, in the heart of France, for the past **25 years**. TTK **designs, develops, manufactures, sells and installs** (via subsidiaries or local partners) the leak detection systems. 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 and specific approvals such as **UL, TUV/GS, IEC**, and **ATEX**. Thanks to the **innovative technology** and the **high reliability** of its products, TTK has achieved a leadership place via numerous references all over the world.

MADE IN FRANCE
FABRICATION FRANÇAISE

CONSTRUCTION DIVISION	CHEMICAL DIVISION	OIL AND GAS DIVISION
WATER LEAK DETECTION	ACID LEAK DETECTION	HYDROCARBON LEAK DETECTION

Technical Advantages of the TTK Systems

- Early detection with accurate location of leaks (precision to 1 m)
- Reliable detection: unique cable structure helps to efficiently prevent false alarms
- Simultaneous faults can be detected, no single leak can hide behind another in the same zone
- Addressable system: micro chip embedded into each sense cable
- Very fast response & reusable cables
- TCP/IP connection, MODBUS integration
- Robust system with long service life

What Can TTK Bring You More?

- Energy savings: Consume much less electricity with zero slave module
- Cost savings: Reduce costs on equipment and maintenance
- Simple design, simple installation
- Flexible solutions available for small, medium and large area monitoring
- Ideal and already widely exploited for mission critical environments such as data centers, cleanrooms, Oil & Gas industry

Water & Acid Leak Detection

Liquid Leak Risks

The critical technical environments such as data centers, banking transmission systems, air traffic control centers, semiconductor plants, aim towards a "24/7" 0 defect safety. A non-detected liquid leakage can be extremely detrimental with the exploitation and generate very important financial or personal consequences.

TTK In Response With Digital Leak Detection Systems

The digital leak detection system **FG-NET** and **FG-SYS** consists of a series of sense cables and digital unit. These sense cables are often installed under the raise floors, to protect the critical areas.

The cables communicate with the panel via a digital serial interface. In the event of a leak on one sense cable, the digital panel triggers an audible alarm immediately. It displays the location of the leak (precision of 1 meter) on an interactive map allowing a quick action so as to reduce the operation downtime.

The digital panel also capable to:
- Send the alarm messages to the remote equipments, as host BMS or a computer.
- Send the alarm messages by email and SNMP via TCP/IP network.





Applications

TTK offers the best quality products to protect property from water and acid leakages. TTK systems are being used in a variety of applications such as data centers, government buildings, UPS rooms, laboratories, water supply systems, and industrial premises.

Hydrocarbon Leak Detection

Dangers of Hydrocarbon Leaks

In the Oil and Gas industry, the three potential consequences engendered by hydrocarbon leaks are **fire, explosion and environmental contamination**. All of them may cause irreversible damage to personnel, businesses or the ecosystem. The regulatory framework is also increasing in the sector.
Consequently, it is imperative to consider an efficient detection system to protect your production / distribution lines or storage tanks from the hydrocarbon leaks.

TTK In Response With the Latest Innovative Technology

TTK offers **FG-OD: a fast response, re-usable and ATEX approved** oil leak detection sense cable. Used with different digital units or in Point Sensors, it detects and locates quickly, even small hydrocarbon leaks, at very early stage.
The system provides the **Dynamic Leak Evolution Analysis** allowing the operator to monitor leak's progression and to gain precious time in the event of a leak, particularly in pipelines and tank farm applications where the access to leak is time consuming and difficult.
The panel reports to the LAN-connected DCS / Safeguarding System by driving dynamic drawings and sending email alerts and SNMP traps.

Applications

FG-OD sense cable is capable of detecting gasoline, diesel oil, crude oil, and jet fuel amongst others.
TTK oil leak detection systems are suitable for installation in the different environments of the Oil & Gas industry.





DATA CENTERS - MISSION CRITICAL AREAS



CLEAN ROOM - SEMI CONDUCTER PLANTS



TECHNICAL ROOMS



PIPELINES



TANK FARMS - FUEL DISTRIBUTION NETWORKS



OIL REFI NERIES - PETROCHEMICAL PLANTS



GENERATOR ROOMS

