



Petro-Chemical / Gas Tanks  
Protection Technologies

Products and services insured by




TechnoKontrol is a member of the



**National Fire Protection Association**  
The authority on fire, electrical and building safety

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A large, intense fire or explosion with bright yellow and orange flames. The fire is the central focus, with a dense, turbulent column of flames rising from the bottom right towards the top center. The background is a hazy, orange-brown color, suggesting a large-scale fire or explosion. The overall scene is dramatic and high-contrast.

Anti Explosion Strategic  
Petro-Chemical / Gas Tanks  
Safety System



# Anti Explosion Strategic Petro-Chemical Gas Tanks Safety System

TK-AXSPCT TechnoKontrol Anti Explosion Strategic Petro-Chemical Tanks Safety System, offer the possibility not only to reduce exposure to dangerous operational situations but also has the beneficial effect of being financially rewarding for any size of operator especially in the oil-fuel-chemical industries where factors such as evaporation is an essential or expensive issue.

Apart from the client benefiting from not losing as much product which is normally caused from evaporation, via using our product, they will also benefit from the reduced cost on their insurance premiums as when the risk is reduced so too is their insurance. This will ensure that a return on their investment is seen from day one. Savings such as;

*Asset Risk Reduction*

*Health & Safety*

*Savings due to loss of product due mainly to evaporation*

*Reduction in insurance premiums*











TK-AXSPCT Anti Explosion Strategic Petro-Chemical Tanks Safety Systems brings with it all of the applied technology that comes with our main product line however also consists of additional systems such as;

*Reducing Vapor losses by up to 98%*

*Increase operation safety*

*Reduce maintenance costs*

*Low initial investment due to our financial options*

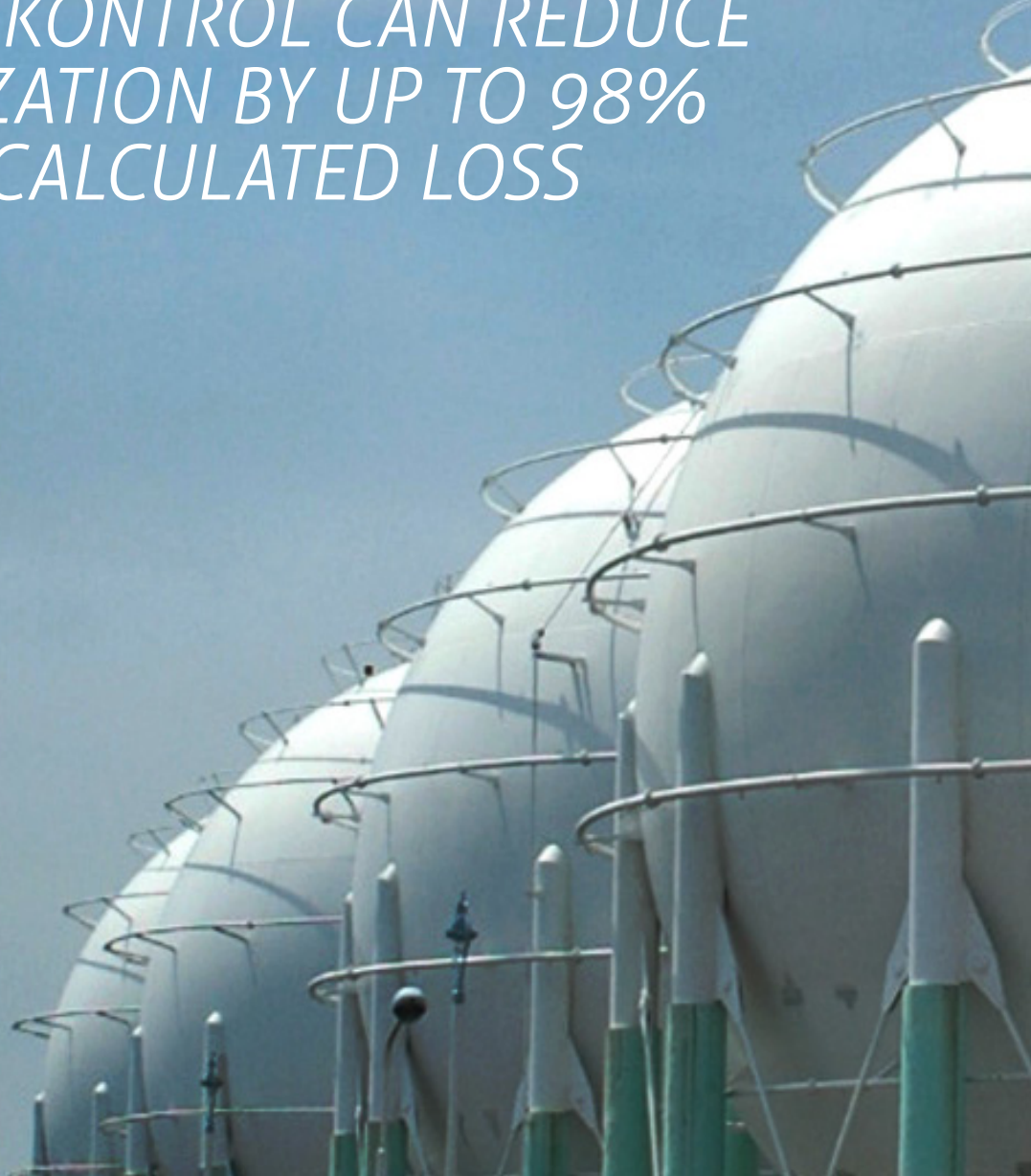
*QSSHE & QMSSHE standards*

*Fully meeting global EPA directives*

Many fuel-chemical operators have issues regarding vaporization and we have seen that some operators due to thermal wave exposure and due to using out dated deposit systems reach up to 5%-25% (depending on climatic, operational condition & age of installations) loss of product due to vaporization.

TechnoKontrol technology can reduce this by up to 98% of the expected or calculated loss. We are also working alongside the majority of the main insurance companies in this field so as to be able to offer our clients with an insurance premium reduction of at least 5%-25% (depending on climatic, condition, risk region & age of installations). For more information, please feel free to contact one of our TechnoKontrol Petroleum Experts.

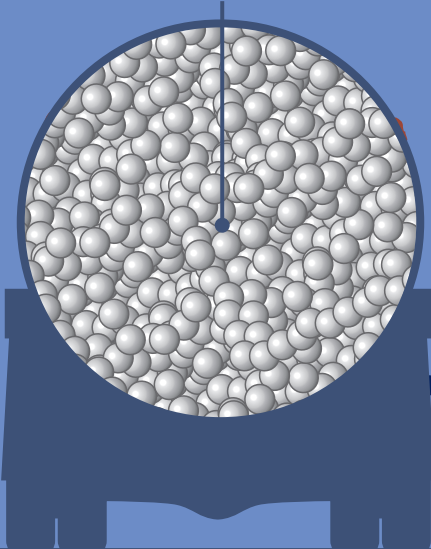
*TECHNOKONTROL CAN REDUCE  
VAPORIZATION BY UP TO 98%  
OF THE CALCULATED LOSS*



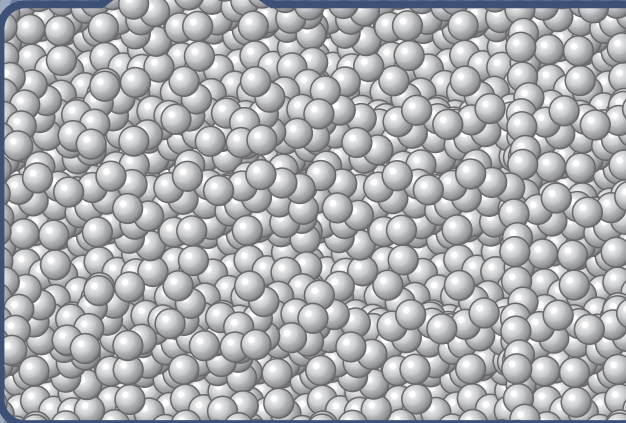


TK Protected  
Fuel/Gas Truck

TK Anti-Explosive  
Manhole Chamber

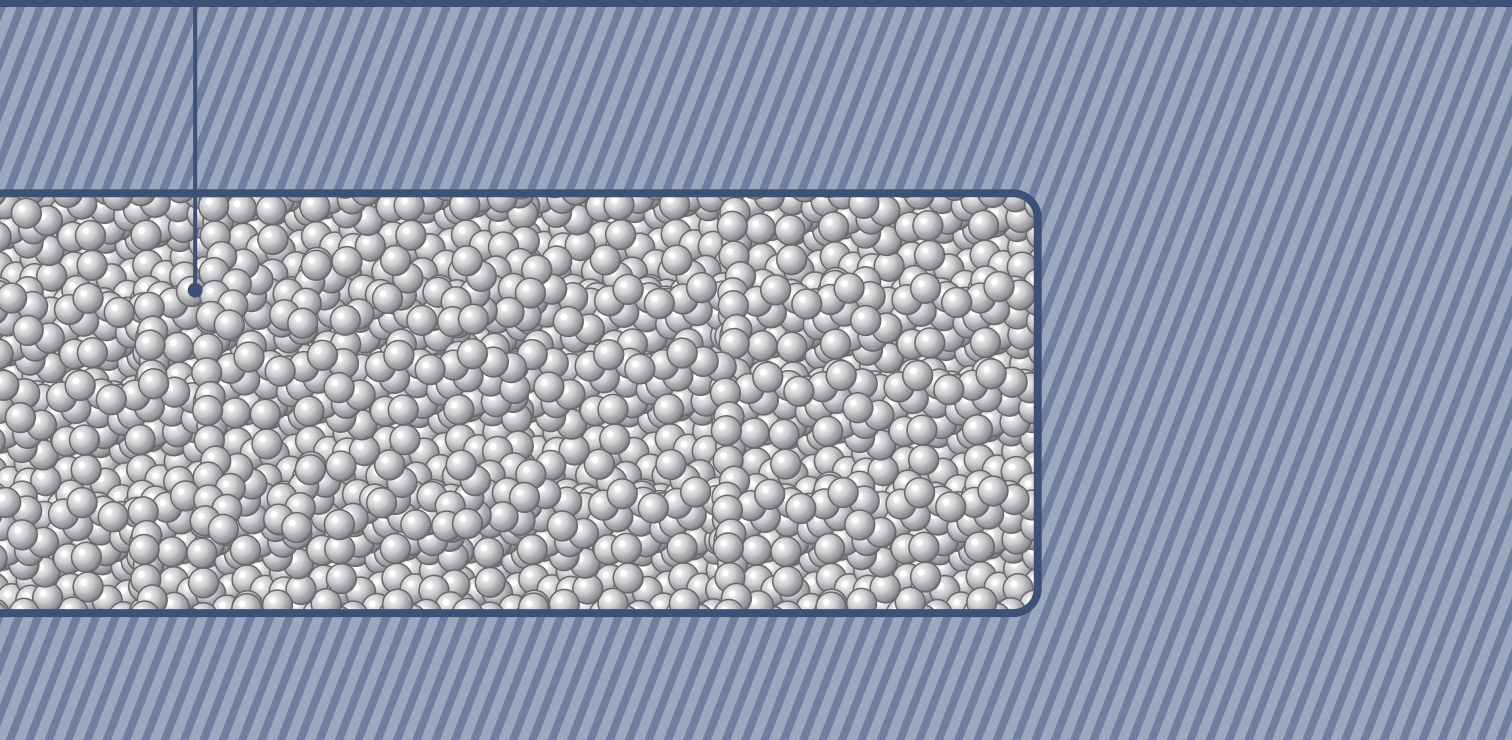


TK Safety Fuel  
Valve System



TK Anti-Explosive  
Jumbo Tank

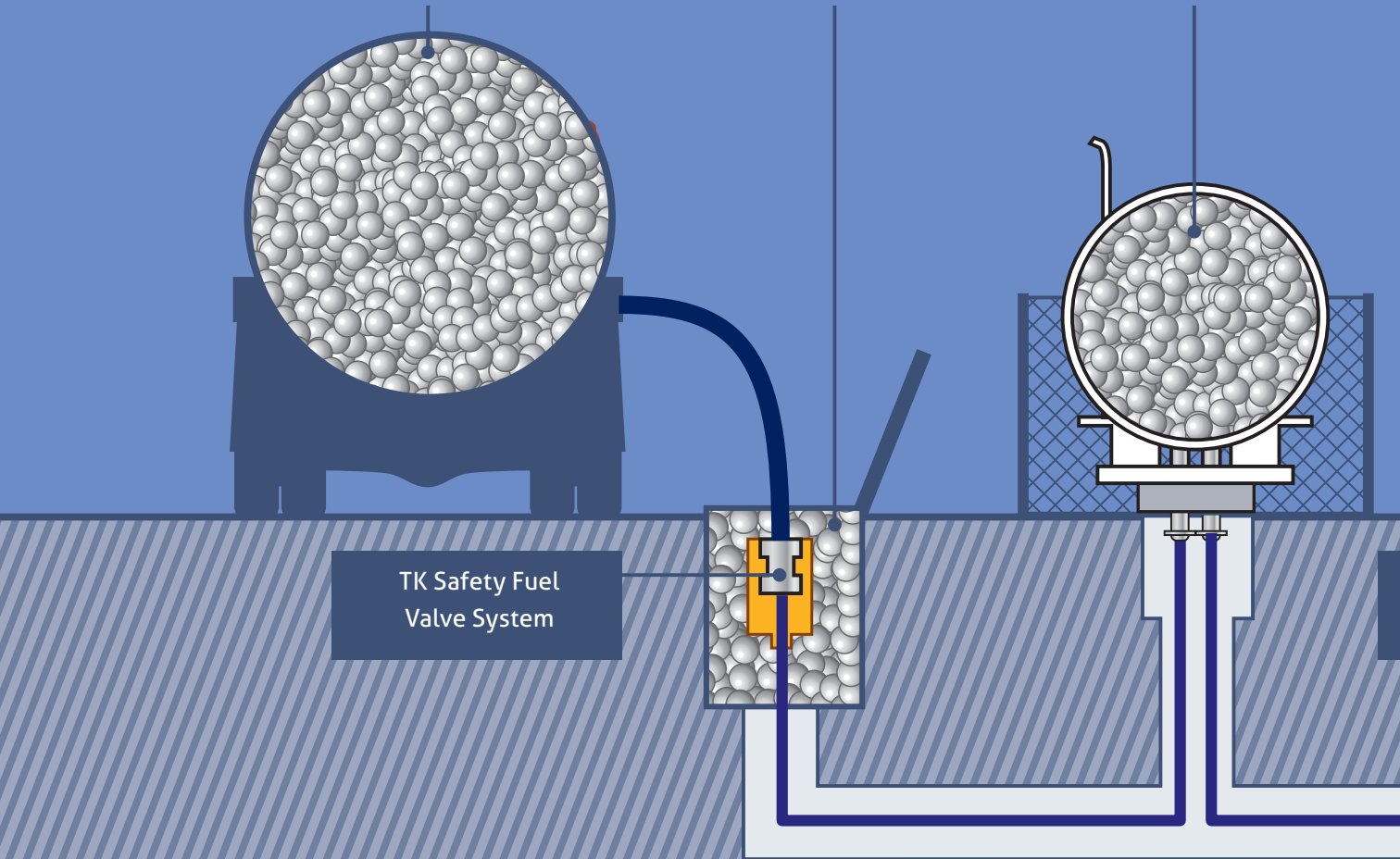
# Jumbo Tanks Diagram of the Chain Protection Process



TK Protected  
Fuel/Gas Truck

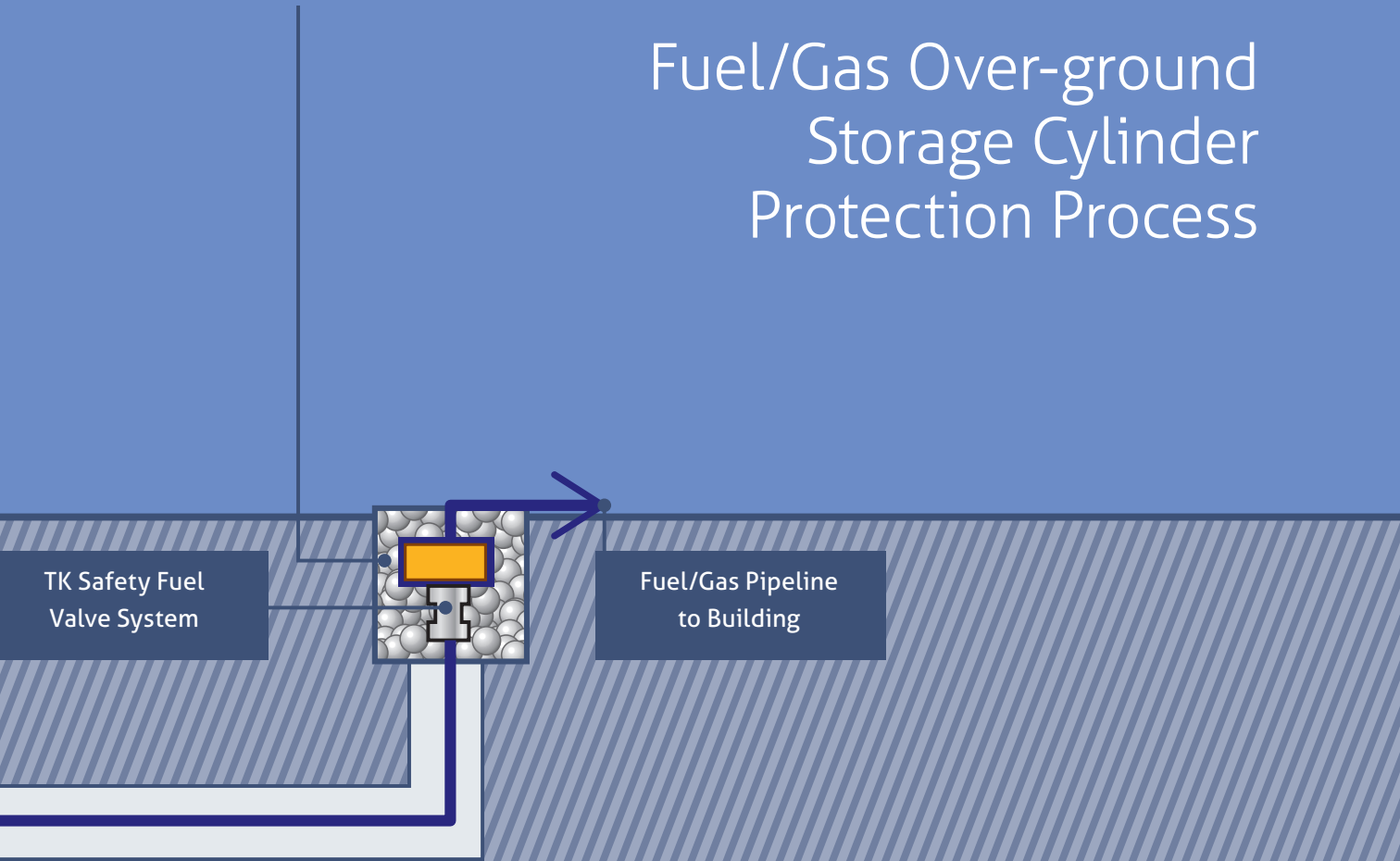
TK Anti-Explosive  
Manhole Chamber

TK Fuel/Gas Over-ground  
Storage Cylinder



TK Anti-Explosive  
Distribution Shaft

# Fuel/Gas Over-ground Storage Cylinder Protection Process



TK Safety Fuel  
Valve System

Fuel/Gas Pipeline  
to Building

Technokontrol safety products can be used for external or internal fuel, chemical, petro-chemical, all fuel based tanks from the small fuel tanker to the Oilfield Jumbo tank farm at production or storage to a pumping station.

On top of the above, our explosion suppressing security technology is the perfect application for products which are stored in volatile locations as it eliminates the possibility of accidental fires and/or explosions from flammable liquids and/or gases.

Even under the extreme conditions of an open fire inside the tank, our product has proven that it would protect the tank and enable it to be incapable of bursting into an explosion.

Repairs or welding can be done to the protected tanks without any risk of explosion even with fuel or gasses inside the fuel tanks. This is extremely important for war-social unrest areas where fire arms are used and even bullet holes damage can be welded-blocked without any risk of explosion.

Static discharges, lightning, flying sparks from maintenance repairs; none of the above would be capable of setting or igniting the stored product. Therefore we know at TechnoKontrol that we have created a new standard of maximum safety & security directives for all global petro-chemical- gas operations.







## Petro-Chemical-Gas Protection against:

*Lightning discharges*

*Flying ignited particles from nearby fires, maintenance works, repairs*

*Internal plant incidents & accidents*

*Bullet/shrapnel ignition*

*Corrosion-oxidation*

*Criminal & terrorist activities*

*Static charge sparks*

*Personnel mis operation or negligent procedures*

*Malicious attacks or sabotage*

*STATIC DISCHARGES, LIGHTNING, BULL  
FLYING SPARKS FROM NEARBY FIRES; NO  
OF SETTING OR IGNITING*



*ET-SHRAPNEL, CORROSION-OXIDATION,  
ONE OF THE ABOVE WOULD BE CAPABLE  
OF DESTROYING THE STORED PRODUCT*



*Due to the need for this product being custom made we can provide specifically designed applications from Jumbo Tanks to Ship tankers in all industries and fields of operations. To gain more information on the above products, we suggest that you contact us immediately so that one of our TechnoKontrol Petroleum Experts can provide you with a personalized quote for your business.*





# Fuel tank internal installation process images depending on size, volume, petro-chemical stored

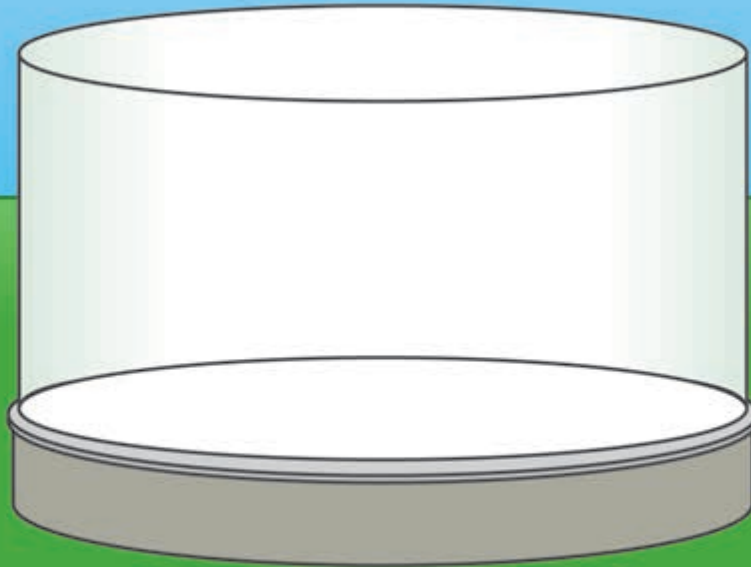
Larger Fuel/Jumbo tanks will require specialist infrastructure systems designed and installed by TK-Global Engineering to install fully the internal volume of the tanks with our anti-explosion, anti-vaporization, anti-corrosion, anti-algae, anti-electrostatic safety and security technologies.



# Empty tank

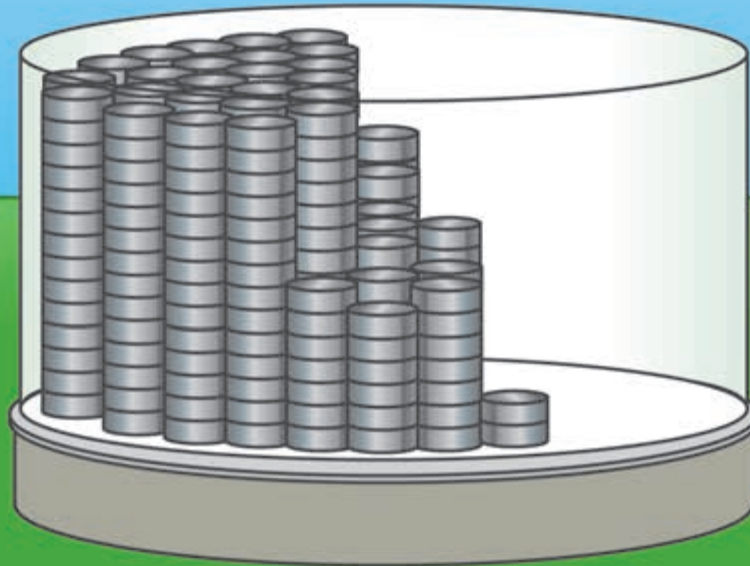
Tank without protection

TK-Jumbo Tank



# Installation

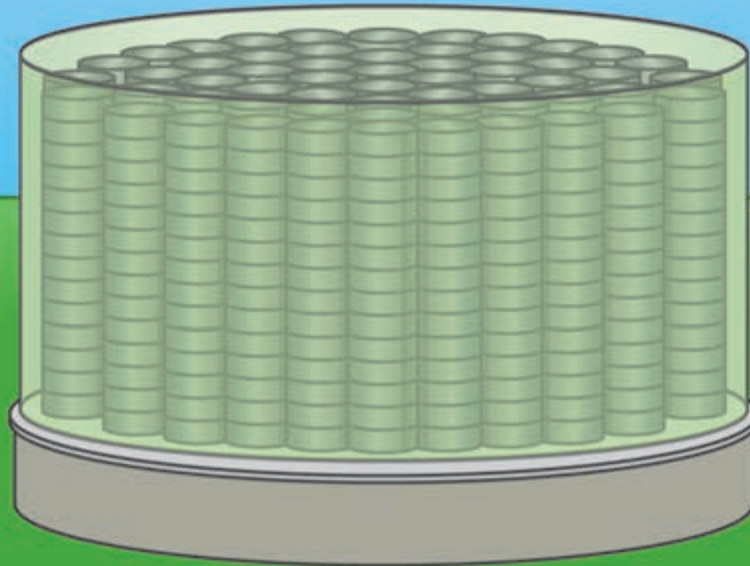
TK Alloy being installed into tank





# Full tank

Tank completely protected with TK Alloy







## Chemical accidents, sabotage & terrorist actions against strategic national industrial, commercial, economic and transport systems

An Anti-chemical fire fighting/chemical protection machine is seen at the site of a chemical freight train explosion trying to disperse atmospheric chemicals which may reach the general population or even injure, kill, fire fighters, civil protection , health & safety operators, investigators, law enforcement operatives and ground-aerial emergency services, etc.

These safety & security anti-chemical contamination systems can be used, transported, installed in all types of our Technokontrol vessels, transports, safety platforms involving petro-chemical plants, storage facilities, refineries, chemical production plants, pipelines, rail freight, ports, harbors, etc.

Chemical transports can not only be used for normal industrial & commercial use but also used for an easy, effective way for sabotage, terrorist, anti-system attacks in any nation at global level as chemicals accidents or incidents can be easily made into chemical explosives/explosions with the simple derailment

of a train, road tanker, sabotage of port chemical refueling/discharge facilities, internal plant fires, emergency operational system closures, etc.

Worst of all of atmospheric chemical sabotage, terrorist attacks which can be covered as operational accidents but really have political, strategic social, media and economic intentions to effective whole transport networks and closing, evacuating town, cities, general population.

These accidents have already occurred three times in the last year in Belgium where we all believe that safety and security are always of the highest European levels but as one can see these accidents or attacks can happen to any nation, operator, anywhere and at anytime globally, thus prevention, security and safety using Technokontrol technologies is and always will be paramount at all levels, especially at government, transport, law enforcement, civil protection, health & safety levels for any nation regardless of its global location.





An aerial photograph showing a scene of industrial destruction. In the foreground, several large, dark, cylindrical objects, possibly gas cylinders or pipes, are scattered on the ground. The middle ground is dominated by a large, dark, irregularly shaped area of debris and rubble, with a small, light-colored pool of water in the center. A prominent red tanker truck with the name 'KORVAN' on its side is parked on a dark, paved area to the right. Other vehicles, including a yellow excavator and a white truck, are visible in the background. The overall scene is one of significant damage and chaos.

*THESE ACCIDENTS OR ATTACKS  
OPERATOR, ANYWHERE AN*

*S CAN HAPPEN TO ANY NATION,  
ND AT ANYTIME GLOBALLY*









# TK-QMSSHE/QSSHE GLOBAL CERTIFICATION

TK-QSSHE / TK-Quality Security Health & Environment  
Petrol Chemical Industry



**TechnoKontrol**  
WHERE YOUR SAFETY IS OUR PRIORITY



**QSSHE**

QUALITY SAFETY SECURITY HEALTH ENVIRONMENT

**2017**



**TechnoKontrol**  
WHERE YOUR SAFETY IS OUR PRIORITY

**QSSHE**  
QUALITY SAFETY SECURITY  
HEALTH ENVIRONMENT

**2017**

# Petrol Chemical Industry Compliance Certificate

TechnoKontrol has presented the new 2017 certificate, seal and logos for the TK-QSSHE Petrol Chemical certification, especially designed for the Petrol chemical, strategic, national security fuel-energy reserves and strategic infrastructures operators.

## TK-Quality Security Health & Environment Petrol Chemical Industry Compliance Certification

Due to the increase of the terrorist risk in strategic locations, pipelines, fuel storage facilities, refineries, power stations, airports, seaports, TechnoKontrol has reached an agreement with many of the top European Operators, Government authorities, insurers and the security services to begin the issuance of the new TK-QSSHE Certification Directive in which the incorporated corporations, operators, establishments have or are in the process of protecting their operational assets including fuel storage, power plants with the recommended safety and security technologies to guarantee the maximum levels of protection for their guests, clients, employees and corporate assets.

The terrorist risk levels ever increasing due to the simple physical accessibility, low levels of fixed security protection standards, fabrication simplicity of homemade explosive devices,(I.E.D) which can be made with gas cylinders, petrol bombs and easily planted, activated, ignited in any hotel, shopping mall, airport fuel storage installations, which are all 100% refueled by fuel, gas, LNG, truck tankers.

Any truck fuel tanker, commercial fuel gas tank, fuel deposit with a normal capacity of 30,000 liters of fuels, LNG, heating gas, having in the event of an ignition, spark, armed attack, bullet shot, accident, a thermal, blast, fire, explosive and destruction range/power of a 200,000 TNT explosive and even the simple 30kg home gas cylinder having over 200 kilos of TNT blast.







Technokontrol Safety &  
Certification

## COMPAN TK-QSSHE STANDARDS FOR P

Technokontrol certifies that the QSSHE Management System  
protected with the most advanced Quality, Safety, Security  
accordance of the Safety and Security

Location      **City, Country**

Date            **01 January 2017**

Expiry Date    **01 January 2018**

C.E

(This company has been fitted with the most advanced safety and security  
accidental, criminal/terrorist attacks in their fuel storage and operations  
(USA-National Fire Protection Association/ Standards)

**oKONTROL**  
SAFETY IS OUR PRIORITY

Security Technologies  
ifies

**COMPANY NAME**  
**TECHNOKONTROL CHEMICAL INDUSTRIES**

Systems and Directives have been assessed and having installed,  
Security, Health & Environment (QSSHE) Technologies with  
by Directives issued by Technokontrol.

S.O.

Chief Engineer

Security technologies to prevent the risk of energy, fuel, gas chemical,  
Industrial power installations in accordance with TK Safety and the NFPA  
(Standard of Explosion Prevention 2014) Directives).







As these storage installations, deposits, fuel tanks being mostly in open air locations and next to the cities, towns, transport networks, public locations and services, industries, commerce the need of anti-explosive protection being paramount and using TechnoKontrol Safety Technologies allowing the full deactivation, null ignition or even non-explosion of these petrol chemical, national strategic networks and infrastructures, storage facilities regardless of the amount, type of the stored, used fuels, thus rendering any accidental or intentional incident null and fully protecting the population, employees, environment and the operators asset/establishment against these types of incidents.

The issuance and the certification will only be issued with full TechnoKontrol technical compliance and following top global USA & EU Safety, security and protection directives as set out by the USA-NFPA (National Fire Protection Association Codes 2008/2014 for the Prevention of Explosion Acts). All installations, services, maintenance programs and products being fully insured by Zurich Insurance.

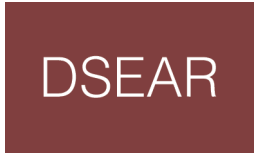
TK-QMSSHE/QSSHE GLOBAL CERTIFICATION  
PETROL CHEMICAL INDUSTRY





# Certificates





HAZLOC

**A**rchitects  
**E**ngineers  
**B**uilding  
**O**fficials  
**S**ection



SOUTHWEST



**National Fire Protection Association**  
The authority on fire, electrical and building safety

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WHERE YOUR SAFETY IS OUR PRIORITY

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