

# Health Safety Environment and Community



## CONTAINERIZED MOBILE FUEL STATION SAFETY AND REGULATION COMPLIANCE



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# Company Profile



## Cloritus at one glance,

- A Service and Technology Engineering company registered in Nigeria providing Innovative solutions within the Energy and Real Estate Sector
- Main customers, NPA, NIMASA, FAAN.
- We are the Sole distributor of the Neftgen containerized Mobile Fuel Station.
- Project Management Office
- HQ in Lagos and Abuja
- Operations in general contracting, warehousing, logistic and consulting



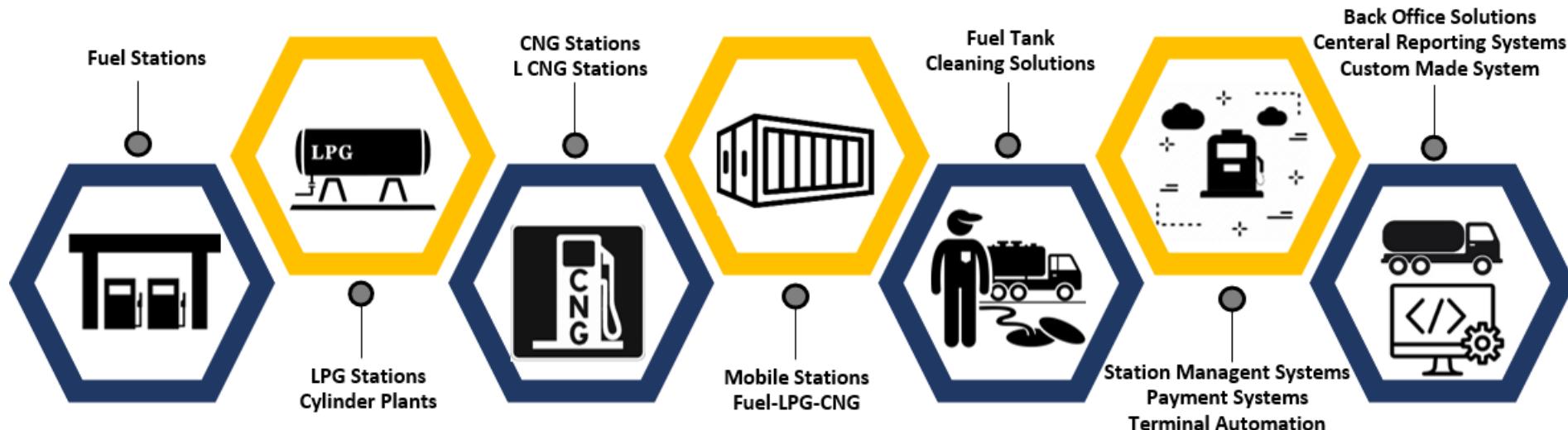
## Neftgen at one glance,

- Providing engineering solutions for Fuel and LPG Applications
- ISO 9001 Certified
- Main customers, Oil Companies, Fleets, Mining Companies, Data Centers, Telecom Companies, Factories, Ports, Service Companies etc.
- HQ in Turkey and local companies in Azerbaijan and Uzbekistan.
- Provides systems to several countries in Africa and Middle East
- 45+ employees incl. Mechanical, Electrical and Software Engineers and Technicians
- Management team average experience in Petroleum Sector, 15 years
- Products according to CE, EN, ATEX regulations.

# Neftgen ISO certification and client list



# Neftgen Products



Container Fuel Station



Skid LPG System



LPG Cylinder Plants



Varios Tank Production



Fuel Tank Cleaning System



Management-Reporting Systems

# Advantages of an Above Ground Storage Tank (AST) VS a Underground Storage Tank (UST)

- **Early detection of leaks** – Visual inspections are possible instantly. When an underground fuel storage tank leaks it can go undetected because it cannot be visually detected – usually the only way to detect a leaking underground fuel storage tanks LUSTs) when the ground is damp with oil or is emitting a smell at which point a significant amount of contamination has already occurred.
- **Less expensive clean-up costs** – Early detection and ease of access mean less expensive clean up costs if a leak occurs. When a storage tank leaks, the property owner is liable
- **Longer lifespan** – Underground storage tanks are more susceptible to corrosion (this process is sped up due to moisture in the soil and other factors
- **Cleaner fuel** – This is due to regular maintenance and fuel being inspected
- **Easy Relocation** – Above ground fuel storage tanks can be relocated to new sites and can be sometimes sold on to new landowners.
- **Government and Environment Regulations** prefer AST – Stringent regulations across Australia/NZ and many parts of the world condone the use of underground tanks due to the high-risk damage that can occur to the environment (soil, land, animals and drinking water).

# Introduction to Containerized Mobile Fuel Station (CMFS)

The Federal Republic of Nigeria Official Gazette published the Midstream and Downstream Petroleum Operation and Regulation 2023, on the 3rd March 2023.

The updated Regulation included the establishment of Containerized Mobile Fuel Station for both Industrial Purposes and for retail purposes

- - (q) establishment, construction, fabrication and operation of petroleum filling or service stations, floating filling stations, mobile containerised filling stations, operated for industrial use or storage and sales, riverine or marine filling station plants and associated infrastructure ;

Fabrication of mobile containerized filling stations

# Types of containerized mobile fuel station license

## 1) For Industrial and Private and Public Organization utilization

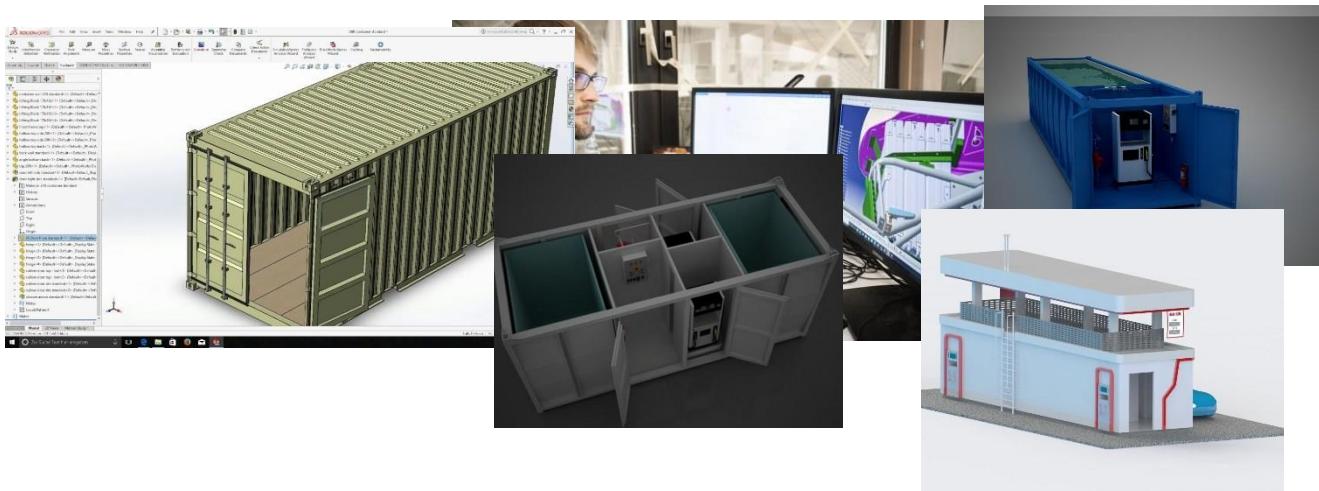
N. INDUSTRIAL PETROLEUM PRODUCTS STORAGE AND UTILIZATION			
1.	Licence to Operate Industrial Consumer Storage Facility	NGN 75,000.00 for the first 20,000 liters, subsequently each additional 20,000 liters attract NGN 10,000.00	NGN 50,000
2.	Licence to Operate Mobile Containerized Filling Station (For Industrial Consumer)	NGN 1,000,000	NGN 500,000
O. INDUSTRIAL GAS STORAGE AND UTILIZATION			

## 2) For Retail distribution/ filling station

13.	Licence to Operate Mobile Containerized Filling Station	NGN 1,000,000	NGN 500,000
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# CMFS sample design

## 3D DESIGN



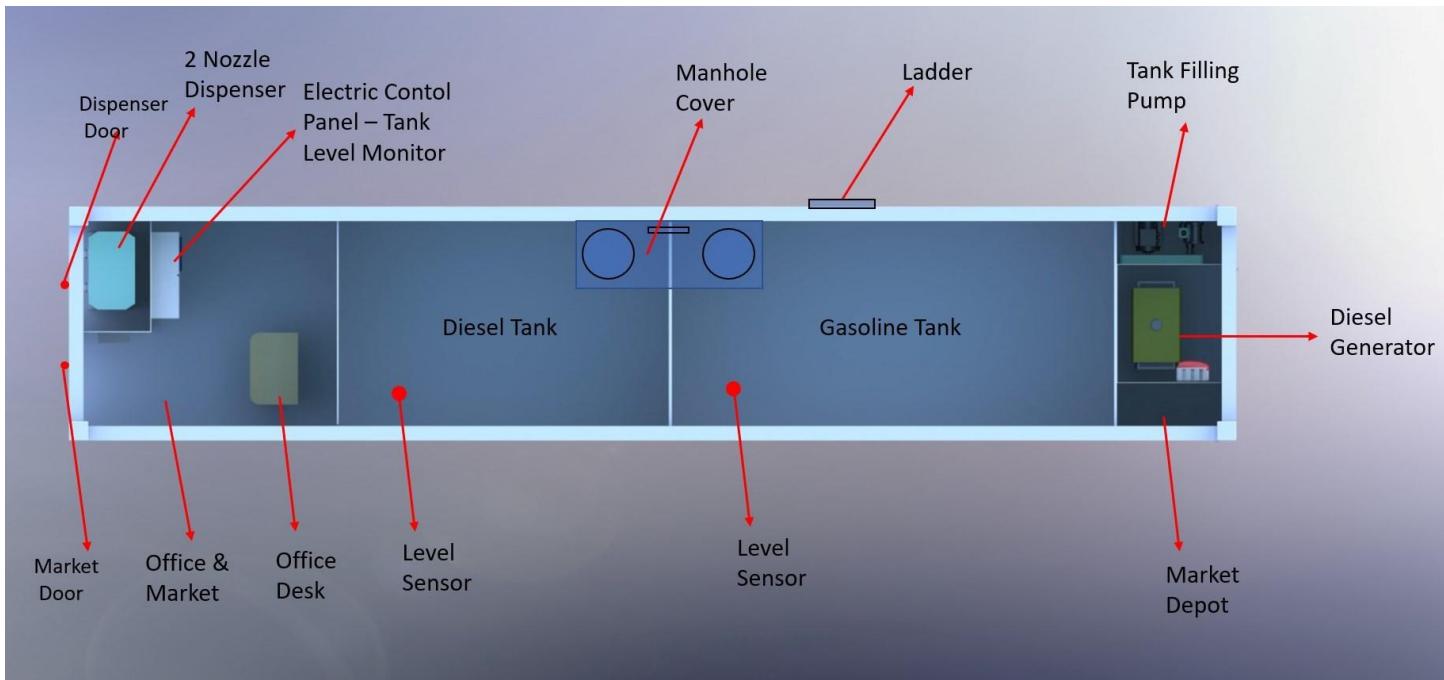
## PRODUCTION



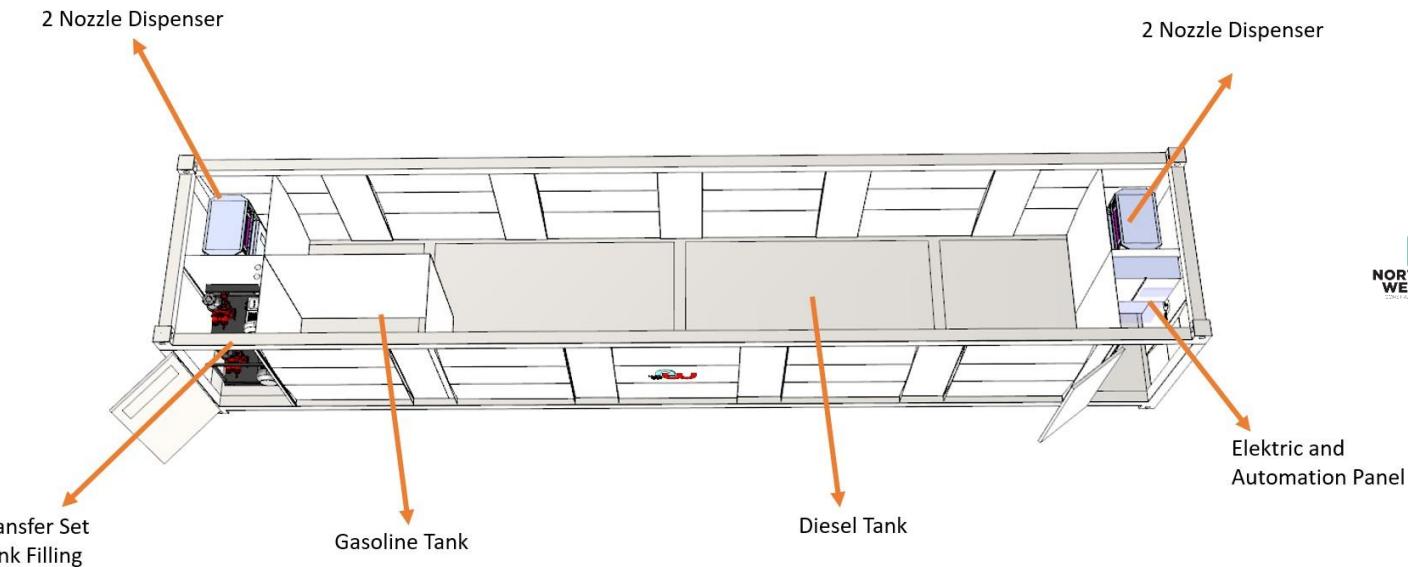
## CERTIFICATION



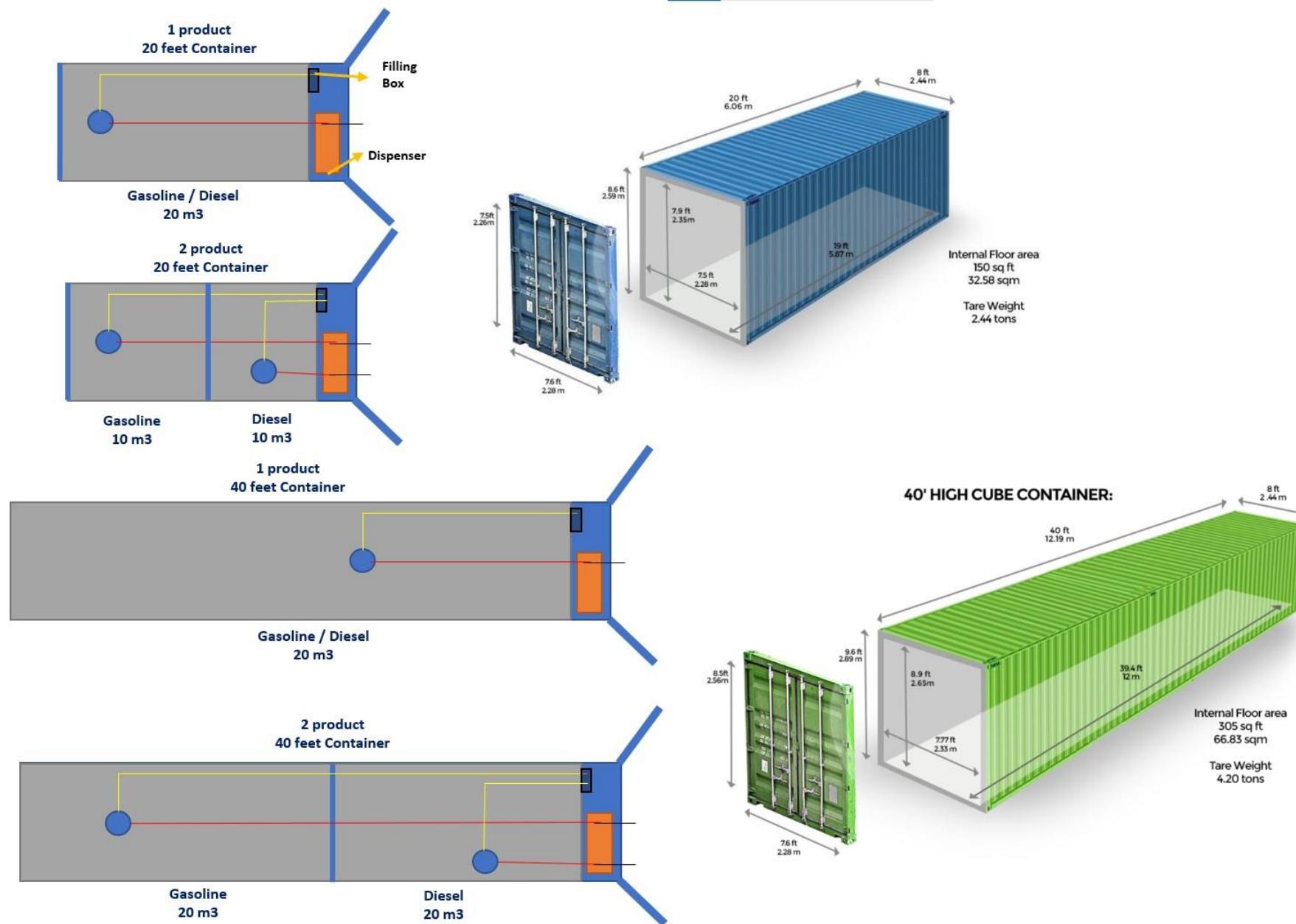
# CMFS Sample design



# CMFS sample design



# CMFS specification



# CMFS specification

- 20 feet – 40 feet Containers
- Single Wall or Double wall Containers
- Wall Thichkess: 6 mm for Single wall or 4mm+5mm for Double wall
- Capacities from 20.000 Liter to 60.000
- Several products / Compartments (AGO and PMS)
- 1-2-4 Dispensers (40-70-120 lpm High flow option)
- Tank Filling Pumps
- Various Designs
- Solar Powered Systems / Generator
- Tank and Pump Automation



# Types of CMFS - Private or Retail





Mobile Stations  
(Fuel-LPG-CNG)

# Containerized Mobile Fuel Station



Portable



European Standards



Fast Installation



Custom Design



# Industrial Utilization



# Global Safety Standards

In Neftgen products, equipment and materials are carefully selected and used in accordance with the following guidelines and directives in order to ensure and maintain the safety of the user, the people around and the environment.

EN Electrical Standards (*European Union*)

EN Fire Protection Standards (*European Union*)

TS Electrical Standards (*Turkish Standards*)

TS Fire Protection Standards (*Turkish Standards*)

ATEX Directive

(Appareils destinés à être utilisés en ATmosphères EXPlosives, Equipment for potentially explosive atmospheres )

CE Certification (*European Union*)

NFPA (National Fire Protection Association) (*USA*)

EPA (Environmental Protection Agency) (*USA*)

PEI (*Petroleum Equipment Institute*) (*USA*)

\*All of the equipment used in manufacturing meets at least one of the above standards.

Depending on the product feature, it does not mean that every component covers all the standards.

\*\*Following safety options are not standard for each Neftgen branded mobile fuel stations and they may vary depends customer demands and where final destination country the unit will be used.

# ATEX CERTIFIED EQUIPMENTS FOR MAX SAFETY



**ATEX certification means**  
*fully tested and approved to be safe to use in hazardous / explosive atmospheres...*



Fuel Dispenser



Electric Panel



Lighting



Tank Filling  
Pump



Level  
Probes



Safe Fuel  
Hoses

# CMFS SAFETY

## FIRE RESISTANT PAINTING



### Usage

Specially designed as a reactive fire protection system for steel constructions.

Suitable for structural steel exposed to internal environments up to corrosivity category C4 (ISO 12944-2), with a compatible topcoat.

### Approvals and certificates

*BS 476 part 20/21: Certifire CF 845*

*Cellular beams RT1356*

*Chinese GB14907:2018*

*ASTM E84: Class A*

# CMFS - SAFETY

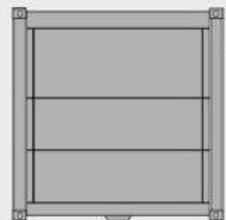
## CORROSION RESISTANT PAINTING

### FILLINGSTATION SAFETY CONCEPT

#### Corrosion Protection

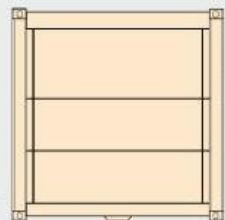
#### Corrosion protection condition outside

Sandblasting



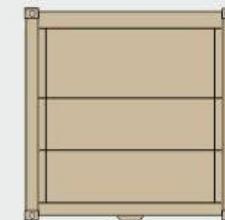
SA2,5

Grounding



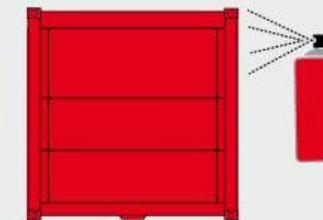
Coating thickness  
60my

2x intermediate coat



Coating thickness  
2 x 90my

Top coat



Coating thickness 80my  
AC-structure paint



**5 YEAR ANTI-CORROSION WARRANTY**

# CMFS - SAFETY

## FIRE EXTINGUISHING



Standard Fire Extinguisher

### Self-Activated Fire Extinguisher

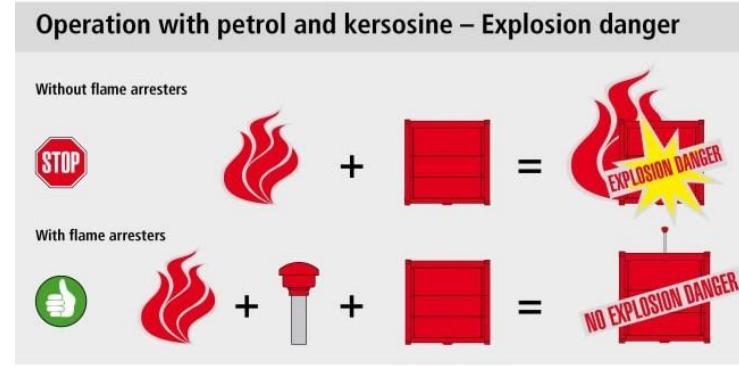
It is a self-pressurized modular system. It does not require any power supply. Automatically operates the Temperature Sensitive valve at 68°C.



Automatic Fire Extinguishing System

# CMFS - SAFETY

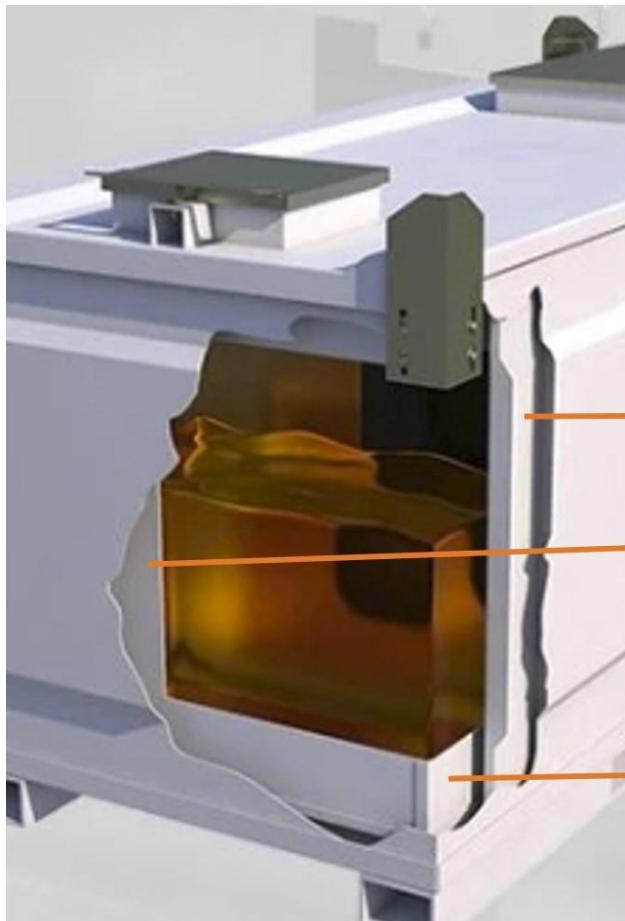
## VENT CAP – FLAME ARRESTER



End of line or vent-to-atmosphere flame arresters allow free venting in combination with flame protection for vertical vent applications. They prevent flame propagation by absorbing and dissipating heat using spiral wound crimped ribbon stainless steel flame cells. They keep the tanks from exploding when gas flowing from the vents is struck by lightning.



## DOUBLE WALL TANK DESIGN



### Double wall design

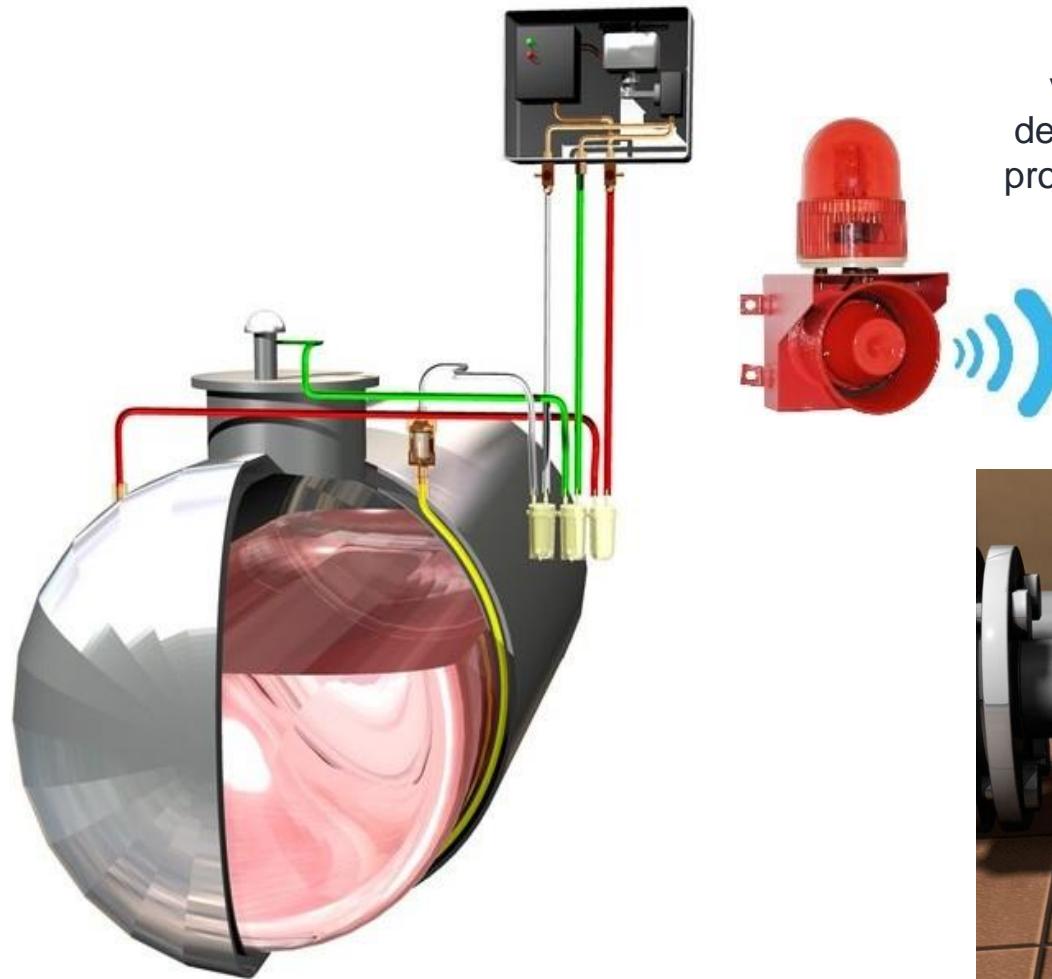
- *Protects the inner tank from physical damage and weather conditions*
- *Holds the fuel in case of any leak*
- *Heat isolation*

Outer cage – 4mm  
(Container)

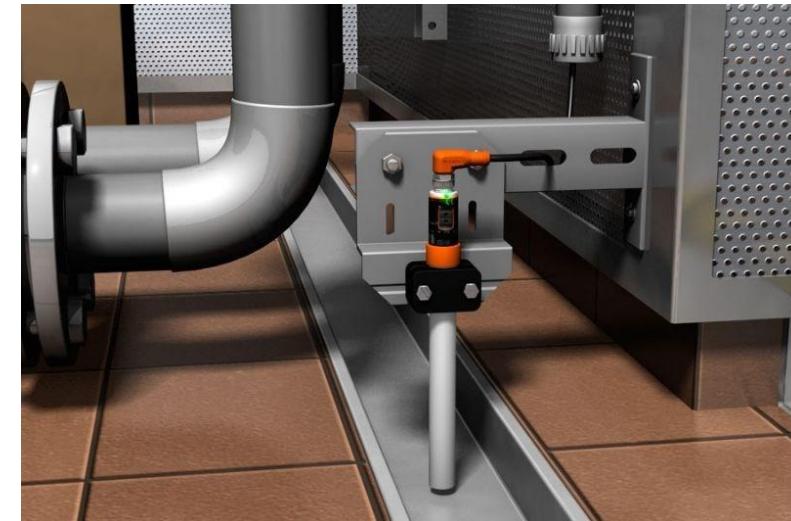
Isolation protection

Fuel tank - 6mm

## FUEL LEAK DETECTION SYSTEM



In monitoring double-walled tanks with a vacuum leak detector or a pressure leak detector to realise the highest environmental protection level in accordance with EN 13160. Leak detection systems provides alarm, in case of any leak on the tank.



# CMFS - SAFETY



Active Lightning Rod



Grounding Rod



Grounding Cable

*Mobile fuel station is protected by an active lightning rod and a grounding rod for cover lightning and static electricity risk which may cause possible reason for sparking.*

*During fuel filling process from fuel tanker to mobile fuel station, grounding cable shall be use for safe equipotential grounding.*

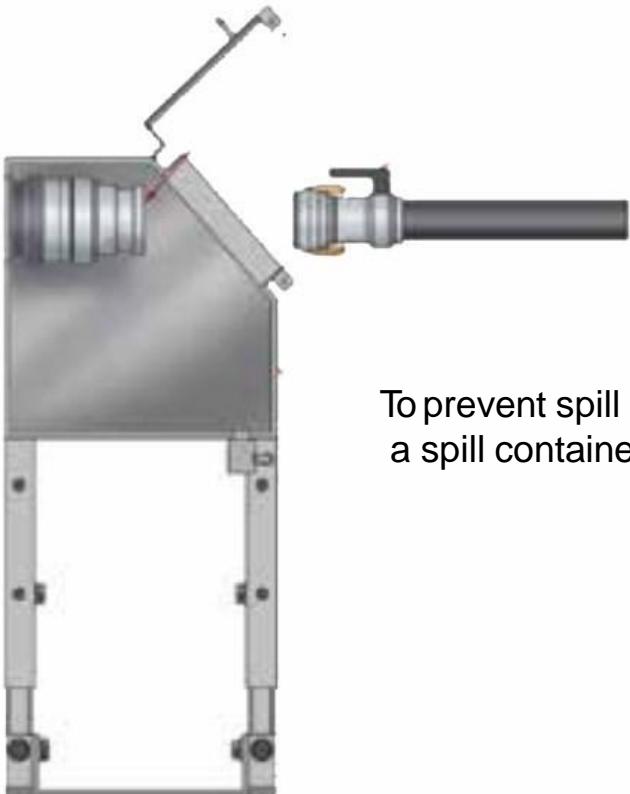


Halogen free flame retardant cables are used which is safe against to fire for cabling of equipments in Neftgen mobile fuel containers, due to flame retardant cables nature, can delay the flame spread during a fire that will occur in the unit, do not emit toxic and corrosive gas, and their smoke density is low.



*The unit is equipped with couple of emergency stop buttons to deactivate whole system in case of any dangerous situations.*

# CMFS - SAFETY



To prevent spill contamination during filling process of the mobile station ,  
a spill container with a drainage valve may use.

# CMFS - SAFETY

## LABOR SAFETY – WALK WAY



To provide safety environment during works at top, the unit is equipped with a walk way including side bars and anti slide walking surfaces.

# FUEL MANAGEMENT



# FUEL MANAGEMENT



Autoneft - Station  
Management & Reporting



Back Office  
Software



Tanker Automation



Bonus and Loyalty Software



Applications for  
IOS and Android



Filling Plant  
Automation



Legal Party Reporting



Payment Solutions



Custom Made  
Systems



CLOUD BASED



USER  
FRIENDLY



FLEXIBLE



FAST SET-UP



autoneft  
fuel automation



LASTEST TECHNOLOGIES

# CMFS - OPTIONS



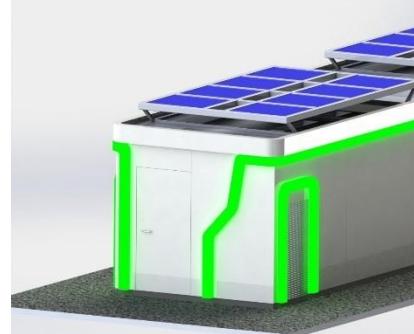
Tank Filling Pump



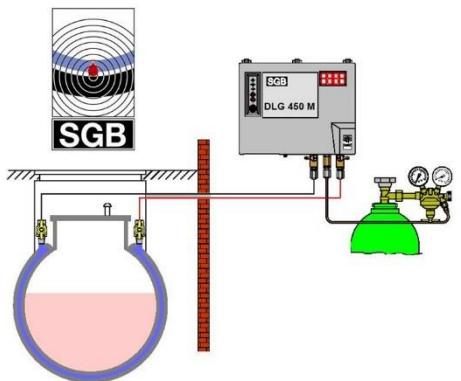
Submersible Pump



Diesel Generator



Solar Energy



Tank Leak Detector



Filtration System



Gas Detector



Heat Isolation

# SOME REFERENCES

Project:  
Mobile Fuel Station Afric Fuel - Congo



Project:  
Mobile Fuel Station  
Azpetrol - Azerbaijan



# Project: Mobile Fuel Station TOTAL Equatorial Guinea



# Project: Mobile Fuel Station Norht West - Azerbaijan



Project:  
Mobile Fuel Station  
SAMSUNG – Iraq - Algeria



# Project: Mobile Fuel Station Liberia Gold Mine



# Project: Mobile Fuel Station TOTAL SENEGAL

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# Project: Mobile Fuel Station Ghana - GOIL

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# Project: Mobile Fuel Station Kenya - LakeOil



# Project: Mobile Fuel Station Saudi Arabia



# Project: Mobile Fuel Station Socar - Azerbaijan



# Project: Mobile Fuel Station

World Petroleum Partnership -  
Dubai



# Project Mobile Fuel Station LUKOIL



# Project: Mobile Fuel Station Afroil - Tanzania

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# THANK YOU



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