



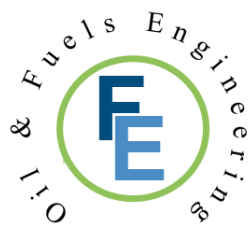
The Modular Refinery



Who we are, What we do

Oil & Fuels Engineering L.L.C-FZ

Business Center 1, M Floor, The Meydan Hotel, Nad Al Sheba, Dubai, U.A.E
License # 2306679 - Phone: +971 50 9173748 - e-mail: info@amgulf.me



Who we are

**Mr. Silvio Tozzoli,
CEO**

**Mr. Favasim
Mingazetdinov,
Director
Engineering**

Oil & Fuels Engineering is EPC company engaged in Engineering, procurement and construction of equipment, materials and components for oil refining and production of petroleum products.

Oil & Fuels Engineering L.L.C-FZ

Business Center 1, M Floor, The Meydan Hotel, Nad Al Sheba, Dubai, U.A.E
License # 2306679 - Phone: +971 50 9173748 - e-mail: info@amgulf.me



Mr. Favasim Mingazetdinov, Engineering Director

BORN on 11 September 1953 in Kazan.

STUDIES: Kazan Institute of Chemical Technology, Oil Department. Specialty engineer chemist - technologist. Graduated in 1978

He began his scientific career in 1987 at the Bugulma branch of the All-Russian Scientific Research Institute VNIIneft.

He worked at the Bugulma branch of VNIIneft, where he defended his thesis for the title of candidate of technical sciences. Until 2005, he headed the natural bitumen processing department.

He completed his postgraduate studies in 1997, successfully defended his dissertation in the title of candidate of technical sciences (PhD).

He has participated in various international scientific symposia and conferences on heavy oil processing technologies(Canada)

ACTIVITIES PERFORMED

1994-2002 work as the head of the department for processing natural bitumen and heavy oils.
2002-2008 work as a director at ZAO NPK Techno-TEK, Moscow. (2 founders)

From 2008 to the present, he is the CEO of the Scientific and Production Company Techno-TEK LLC (NPK Techno-TEK LLC)

(One founder)

Principal activity of NPK Techno-TEK LLC:

Research and development in the field of natural and technical sciences.

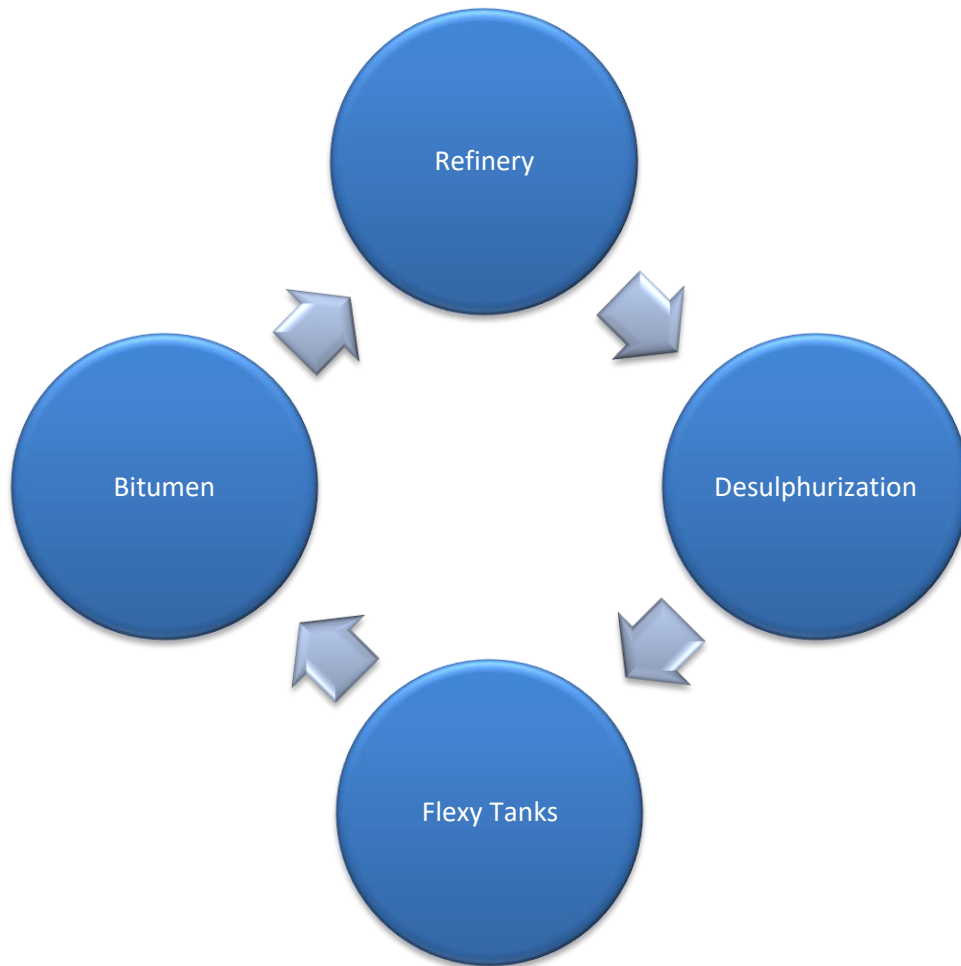
Development of projects for industrial processes and industries related to electrical engineering, electronic engineering, mining, chemical technology, mechanical engineering, as well as in the field of industrial construction.

Oil & Fuels Engineering L.L.C-FZ

Business Center 1, M Floor, The Meydan Hotel, Nad Al Sheba, Dubai, U.A.E
License # 2306679 - Phone: +971 50 9173748 - e-mail: info@amgulf.me

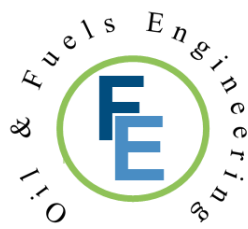


What we do



Oil & Fuels Engineering L.L.C-FZ

Business Center 1, M Floor, The Meydan Hotel, Nad Al Sheba, Dubai, U.A.E
License # 2306679 - Phone: +971 50 9173748 - e-mail: info@amgulf.me



OUR PRODUCTS

(Description)

About us

Oil & Fuels Engineering LLC is an Emirati Company that together with its Group has been designing, manufacturing, assembling, commissioning and starting "turnkey" modular refineries for over 20 years.

It also ensures and guarantees the training necessary for the management of the plant to its customers.

Oil & Fuels has built over 40 refineries operating in Eastern Europe and Asia on the basis of an innovative proprietary technology, covered by a patent.



Our 7 pillars

1. Refining of crude oil, using the "Vacuum" technology, which allows to obtain the fractionation of the various derivatives of crude oil with maximum temperatures of 100/120 °C using as fuel the gas produced by the same crude oil that must be refined.

Traditional "Fractionation Tower" or "Cracking" refining systems require temperatures ranging from 250/300/400/600 °C and use liquid fuels. Then they consume part of the fuels that are produced to power the process, reducing the percentage of outgoing carburant.

The plants, patented by us, are modular, with a distillation capacity ranging from 1/3/5/10,000 barrels/day up to 150,000 barrels/day (and more), to obtain the production of:

- a. Gas (which we use to produce the energy necessary for the operation of the plant).
In all plants in use today, the gas is released into the atmosphere and burned on torches, creating pollution. This is not the case with our plants, where the gas is recovered and used to produce the energy necessary for the process of refining.
- b. Diesel type Euro 4, 5, 6 (D 1 / D 2)
- c. Gasoline 98 octane and above, including the production of Gasoline-Aviation for piston aircraft engines

Oil & Fuels Engineering L.L.C-FZ

Business Center 1, M Floor, The Meydan Hotel, Nad Al Sheba, Dubai, U.A.E
License # 2306679 - Phone: +971 50 9173748 - e-mail: info@amgulf.me



- d. Kerosene (or white gasoline) for helicopters and, after desulphurization, JP Jet Propellant / Jet Fuels (JP5 / 8/54)
- e. Lubricating oils for engines
- f. Solvents for Industry
- g. Heavy Oil (Mazut) and, after desulphurization, fuels for ships, and fuel for generator sets for the production of electricity etc.
- h. Bitumen to produce asphalt and for waterproofing use

2. Plant for the production of Bitumen, patented by us, suitable for the construction of road asphalt and waterproofing;

3. Desulphurization plant to eliminate Sulphur according to Community legislation, to obtain high-octane gasoline; JP Jet-Fuel, Jet-Propellant; Fuels for ships desulphurizing the Mazut;

4. Flexy tanks made with High Resistance Polymers, equipped with pumps for filling and rapid emptying, suitable for the containment of carburant, drinking water, liquid food etc.

They can be placed above ground, under the ground (buried); under sea water; in the depths of ports to provide water or fuel to ships without occupying large outdoor spaces; secret and strategic reserves in the territory to supply the armed forces with fuels, water and lubricating oils; also placed under the bed of rivers and streams. They resist temperatures ranging from - 60 °C to + 90 °C.

They are protected externally by reflective material - reflector to repel the sun's rays. They are guaranteed for 25 years.

The capacity is 250,000 liters for each tank (250 cubic meters). They can be placed in large numbers to hold up to many million liters. They are equipped with pump groups for quick filling or emptying.

5. Other products

The refinery is also able to produce the following products:

- 1 - Fuel additives, including anti-knock agents;
- 2 - Lubricating oils for engines;
- 3 - Solvents for industries (paints, perfumes, etc.);
- 4 - Calcium sulphate.

6. Ecological process

Our refineries have a totally ecological process because they do not emit any emissions into the environment. The gas normally released into the environment or burned in a torch, the so-called "gas flaring" typical of traditional technology, if improperly managed can emit methane, sulfur dioxide, other sulfur compounds and other volatile organic compounds even to aromatic hydrocarbons (benzene, toluene, xylenes) and benzopyrene, known to be carcinogenic.

In our process, however, gas is used in boilers to power the refining process. No sulphur dioxide or hydrogen sulfide, which is aggressive to the environment and dangerous to



human health, is therefore emitted.

7. Fire risk prevention

The risk of fire is a fairly frequent event that affects and has affected refineries in almost all countries of the world. The risk is inherent in the production process and is determined by explosions and fireballs that normally destroy the entire refinery or a large part of it.

With our refineries this does not happen thanks to the modularity of the plant. Each module has a production of 1,000 barrels/day and is spaced away from any other module. In the unfortunate event of a fire, this is contained to the module and does not propagate to all the others.

Our refineries have highly competitive prices and fast delivery time.

For example, a refinery of 10,000 barrels/day is delivered in just 5 months from the signing of the contract and payment of the deposit.

The modularity of the refineries allows for rapid installations, start-ups differentiated over time and a rapid rotation in the reuse of profits obtained from the activity to increase production capacity or build new refineries in other locations.

All African countries depend on fuel imports from abroad, even those that have large productions of crude oil, such as South Sudan, Congo, Tanzania or countries such as Kenya or Ethiopia importing refined fuels from 3 to 5 billion dollars a year.

Having its own refinery means a minimum saving of 30%, if the country does not have its own oil fields. In the case of refining its crude oil, the savings can be up to 60%.



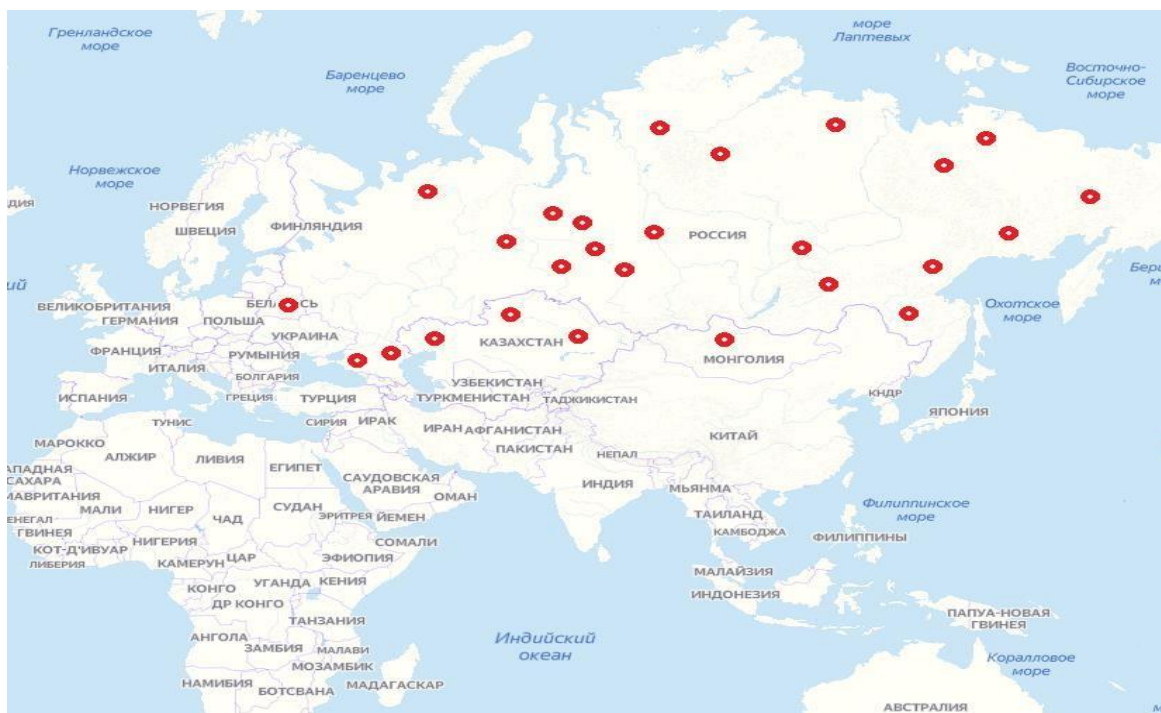
OUR PROCESS IS INNOVATIVE AND IS PATENTED

A distinctive feature of this technology is the ability to process hydrocarbon raw materials with an unlimited content of sulfur and sulfur compounds.

- The ideal raw material for processing and obtaining motor fuels are heavy gas condensates or light oils with a high content of light products. When using such raw materials, practically only high-quality motor fuels with high liquidity are obtained.
- At the same time, due to the same one-stage technology the composition of the refinery equipment and the capital costs for its commissioning is significantly reduced, this leads to the achievement of the most favorable economic indicators.

OUR FLEET

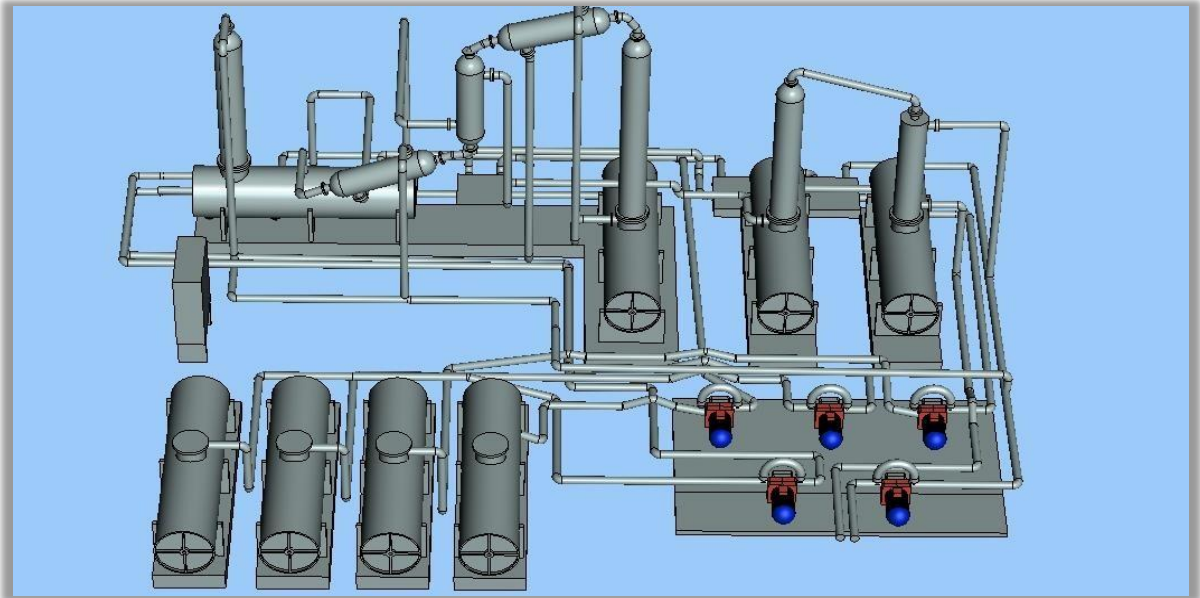
Oil refining plant for the production of finished products. Our modular fuel preparation units (MFPU) work in any climatic zone 80 MFPU per 20 years!



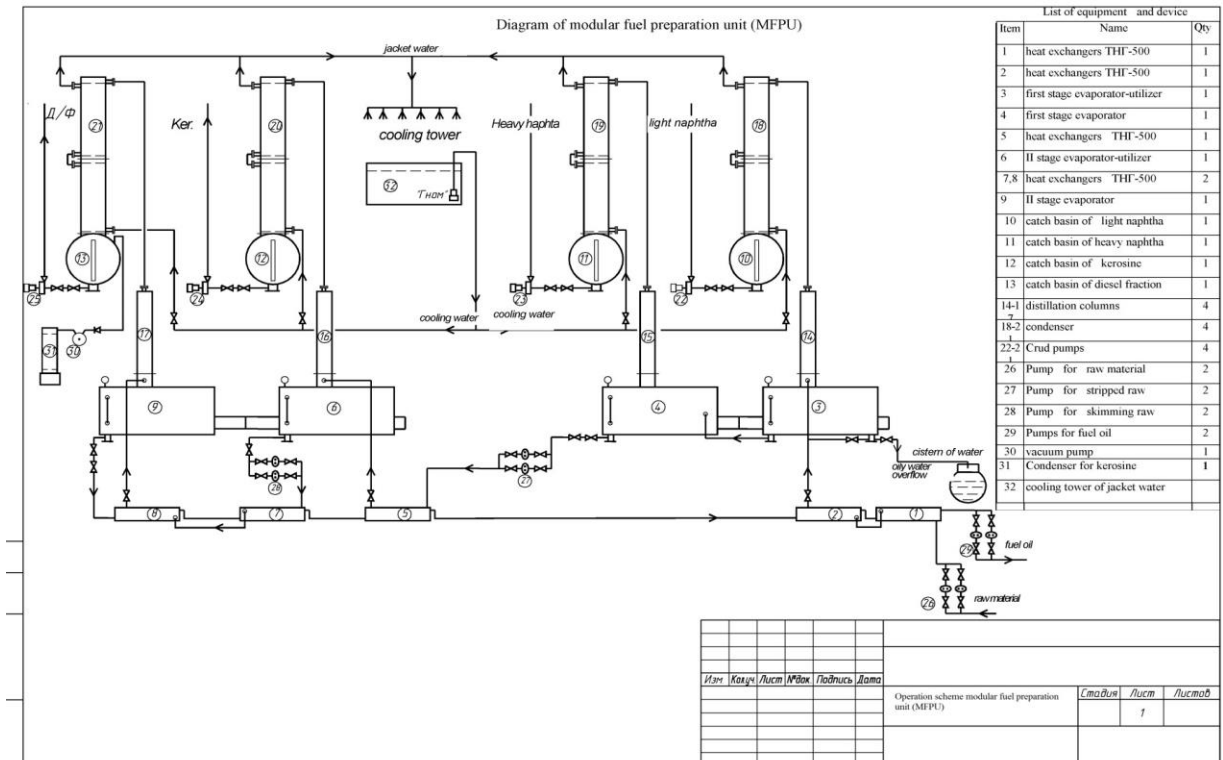
Oil & Fuels Engineering L.L.C-FZ

Business Center 1, M Floor, The Meydan Hotel, Nad Al Sheba, Dubai, U.A.E
License # 2306679 - Phone: +971 50 9173748 - e-mail: info@amgulf.me

Fractionation unit



Process flow diagram of modular fuel preparation unit (MFPU)





Description of the working system

- The feedstock - oil or gas condensate - is pumped from the feedstock tank under a pressure of 0.1 - 0.3 MPa into the tube space of a four-way heat exchanger, where it is heated to 60-80 °C with heating oil with a temperature of 150 -160 °C supplied from the tote tank. Further, the raw material heated to t 60-80 °C is fed into a distillation column with bubble cap trays. The distillation column is mounted on a horizontal tote tank, in which a heat exchange element is mounted for the final heating of raw materials in the bottom of the column. Heating is carried out by a moduled liquid-fuel burner capacity of 0.5 MW.
- The distillation column consists of cap-type trays. A reflux exchanger is built into the upper part of the distillation column. Cooling and condensation of gasoline vapors in the reflux condenser is carried out by the process water supplied to the reflux condenser. The column top temperature is controlled by changing the amount of water supplied to the fractional distillation tube of the distillation column, through a vapor line, connected to a heat exchanger by a condenser installed vertically on a gasoline collector. Gasoline vapors are cooled in a heat exchanger-condenser, condense and drain into the collection of gasoline, from where the gasoline fraction is subsequently pumped out into the gasoline tank. The remaining heavy fraction - the stabilized bottoms residue - is pumped out of the bottom tote tank by a pump, through a two-section heat exchanger in which it is cooled with water to a temperature of 60-70 C, into the furnace oil tank.
- Discharge of Bottom settlement water from a gasoline tank, as well as discharge of rainwater from the site of technological tanks is carried out into an underground tank, with subsequent removal by tank trucks. The installation meets all the requirements of sanitary standards for this equipment. The main source of harmful emissions into the atmosphere is a moduled liquid-fuel burner.

The advantages of the proposed system

- Absence of mother water..
- Reducing the content of oxygen in the air in oxidation gases.
- Increase in productivity on raw materials by 2-2.5 times.
- Reducing oxygen of air for oxidation by 25-30%.
- Reducing the output of black off-spec summer diesel.
- Reduced oxidation time
- Decrease in the temperature of the oxidation reaction 20-30 °C

Oil & Fuels Engineering L.L.C-FZ

Business Center 1, M Floor, The Meydan Hotel, Nad Al Sheba, Dubai, U.A.E
License # 2306679 - Phone: +971 50 9173748 - e-mail: info@amgulf.me

Storage, transportation of fuel in hot climate and sandy, rocky terrain

Problems

- Extreme temperature operation, ultra-high and low temperatures.
- Intense solar radiation. Maximum additional protection required for equipment and materials.
- Excessive irrigation leads to accumulation of salt in the soil.
- Complex logistics: deserted, waterless and off-road areas.
- Increased construction costs during the construction of stationary objects due to bulk sand or rocky soil.
- Increased wear and tear of equipment and materials
- Due to sand drills, additional protection of machines, equipment and mechanisms is required, as well as insulation coating
- Increased requirements for construction speed and organization

Solutions

Storage

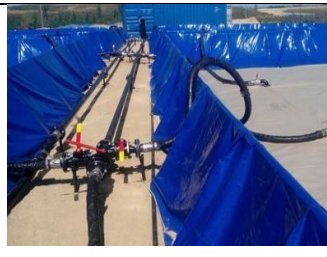
Polymer Elastic Tanks (PET)

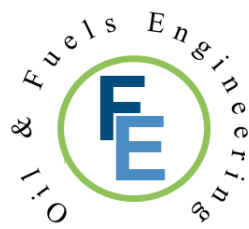
Acceptance, dispensing, storage of fuel and other liquids in the field based on polymer elastic PER tanks designed for high-temperature and extreme operating conditions.

Transportation

Flat hose main pipelines

Pipeline pumping of petroleum products, fuel and lubricants, water and technical liquids over long distances in the field in rough terrain using flat hose pipelines





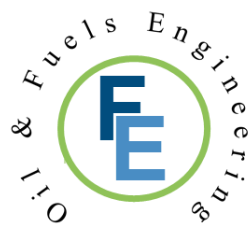
Benefits of these solutions

- 70% cost cap savings vs. traditional approaches
- Successful experience in hot climates
- Mobility and compactness (delivery of equipment by any mode of transport!)
- Reduction of construction cost and time
- Quick installation on unprepared surfaces
- 100% fuel polyurethane
- Extreme operation mode: from -50 to + 80,
- Corrosion and environmental protection. Abrasion resistant material, MIL-T compliant protection level (USA)
- Seismic stability
- Quality control ISO 9000
- Compliance with tactical and technical characteristics of NATO and US Military standards
- Re-use is provided
- Wide range of applications for all types of liquids, including drinking water



Oil & Fuels Engineering L.L.C-FZ

Business Center 1, M Floor, The Meydan Hotel, Nad Al Sheba, Dubai, U.A.E
License # 2306679 - Phone: +971 50 9173748 - e-mail: info@amgulf.me



Fuels Depot

Creation of operational fuel reserves, as well as their reception and shipment by all modes of transport (road, railway, water and pipeline).

Pump and dispenser
module

Tank farm

Piping arrangement

Fuel dispensing area



Loader

Fuel quality control laboratory

Storehouse

Oil & Fuels Engineering L.L.C-FZ

Business Center 1, M Floor, The Meydan Hotel, Nad Al Sheba, Dubai, U.A.E
License # 2306679 - Phone: +971 50 9173748 - e-mail: info@amgulf.me

Fuels Depot (more pictures)

