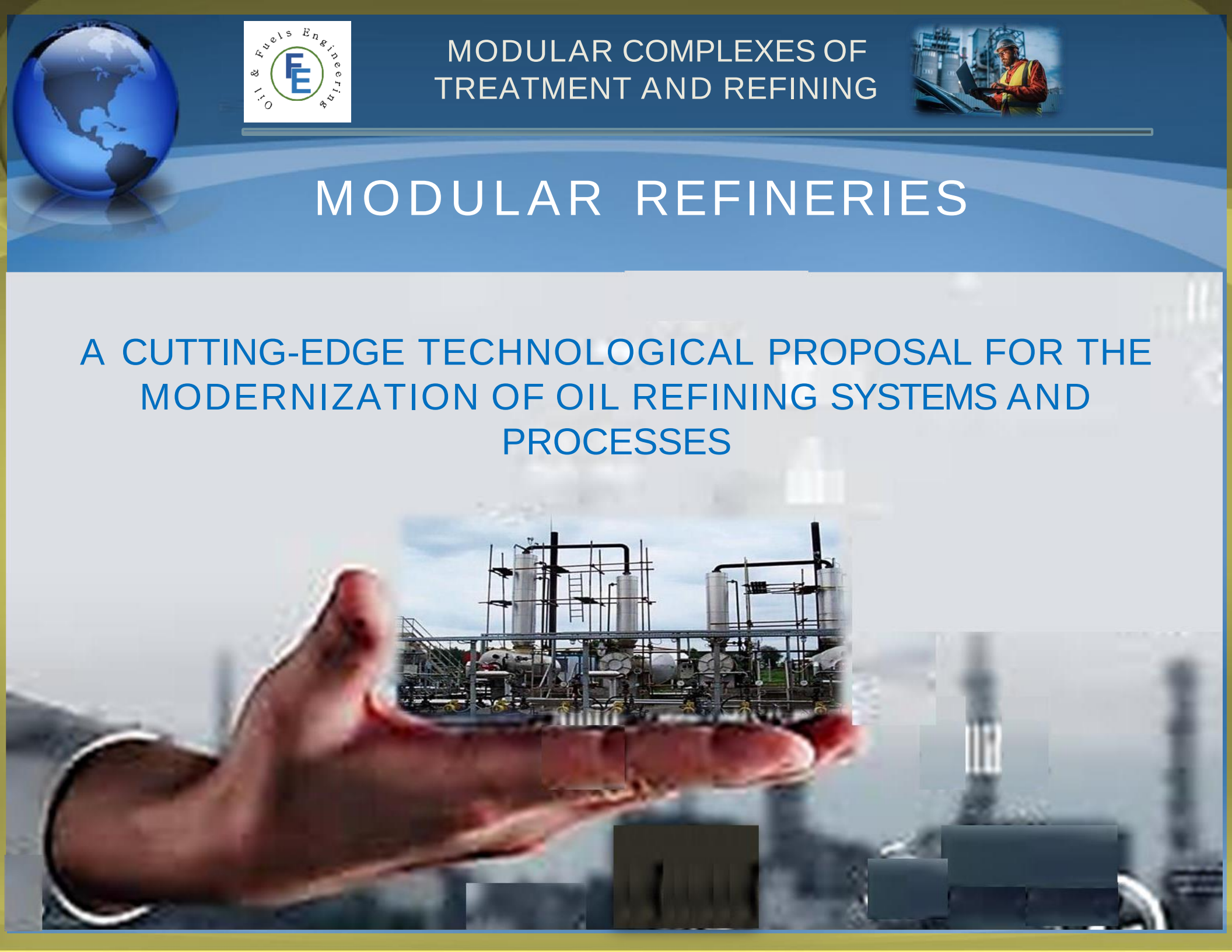




MODULAR COMPLEXES OF
TREATMENT AND REFINING



MODULAR REFINERIES

A CUTTING-EDGE TECHNOLOGICAL PROPOSAL FOR THE
MODERNIZATION OF OIL REFINING SYSTEMS AND
PROCESSES



MODULAR COMPLEXES OF TREATMENT AND REFINING



ABOUT US....

Oil & Fuels Engineering LLC is established and registered under the laws of the United Arab Emirates, with legal address: Meydan Grandstand, 6th floor, Meydan Road, Nad Al Sheba, Dubai, U.A.E.

License No. 2306679.01



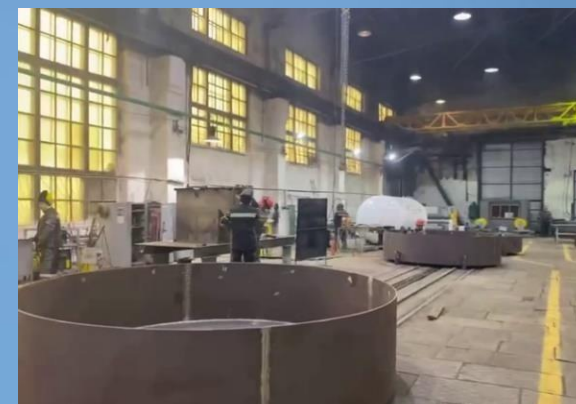
- Oil & Fuels Engineering LLC is an Emirati company that together with its group has been designing, manufacturing, assembling and commissioning turnkey modular refineries for more than 20 years.
- It also ensures and guarantees its clients the necessary training for plant management.
- Oil & Fuels has built more than 40 refineries operating in Eastern Europe and Asia based on innovative proprietary technology, covered by a patent.



MODULAR COMPLEXES OF TREATMENT AND REFINING



ABOUT US



“Oil and Fuel Engineering LLC” produces the following equipment:

- Hydrocarbon processing facilities (petroleum, gas condensate) with gasoline, diesel, bitumen, fuel oil;
- Facilities for the production of road and construction bitumen;
- Installations for the disposal of petroleum sludge;
- Blocks for mini-refinery (evaporators, stoves, columns, heat exchangers, recuperators, etc.);
- In addition, installation work of any complexity, repair work, commissioning and training of personnel.

Our professionals have developed more than three dozen unique projects for the oil and gas and chemical industries.



MODULAR COMPLEXES OF TREATMENT AND REFINING

ABOUT US



BUSINESS LICENSE
رخصة تجارية

License Number	2306679.01	رقم الرخصة
Company Name	OIL AND FUELS ENGINEERING L.L.C-FZ	اسم الشركة
Company Type	Limited Liability Company	هندسة النفط والوقود ع.م.م-منطقة حرة
Formation Number	2306679	الشكل القانوني
Address	Meydan Grandstand, 6th floor, Meydan Road, Nad Al Sheba, Dubai, U.A.E.	شركة ذات مسؤولية محدودة
Issue Date	23/02/2023	رقم التأسيس
Expiry Date	22/02/2025	المعنوان
Managers	Silvio Tozzoli	ميدان جرانديستاند، الطابق السادس، شارع الميدان، ند الشبا، دبي، الإمارات العربية المتحدة
Activities	Turnkey Projects Contracting	تاريخ الرخصة
	4540.97	تاريخ الانتهاء
		المديرين
		سيلفيو توزولي
		الأنشطة
		تجهيزات المنشآت العامة

Relevant authorities' approval must be obtained prior to conducting applicable business activities.

الحصول على موافقة السلطات المختصة لإتمام لممارسة الأعمال المرخصة.



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تم إصدار هذه الوثيقة طبقاً لوائح منطقة ميدان الحرة. هذه نسخة إلكترونية معتمدة، يتم إصدارها دون توقيع. للتحقق من صحة هذه الوثيقة يرجى مسح رمز الاستجابة السريعة.



BUSINESS LICENSE
رخصة تجارية

Activities	Code	الأنشطة
Industrial Plant Equipment & Spare Parts Trading	4773.41	تجارة معدات ومكانات تجهيز المصانع وقطع غيارها
Engineering Designing Instruments Trading	4773.b6	تجارة معدات الرسم الهندسي

Relevant authorities' approval must be obtained prior to conducting applicable business activities.

الحصول على موافقة السلطات المختصة لإتمام لممارسة الأعمال المرخصة.



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MODULAR COMPLEXES OF TREATMENT AND REFINING



CERTIFICATIONS (STANDARDS, NORMS AND RULES)

The modular fuel preparation unit MFPU is designed and manufactured in accordance with the rules and regulatory requirements that determine the safety conditions for the operation of the unit's equipment as part of an oil refinery complex, including but not limited to:

- ISO 24139-1:2022 Petroleum and natural gas industries. Elbows and fittings coated with corrosion-resistant alloys for pipeline transportation systems;
- ISO 8217:2017 Petroleum products. Fuels (class F). Marine fuel specifications;
- ISO 22854:2021(es) Liquid petroleum products. Determination of types of hydrocarbons and oxygenated compounds in gasoline for automobile engines and in ethanol (E85) fuel for automobiles. Multidimensional gas chromatography method.
- ISO 3405:2011 Petroleum products. Determination of distillation characteristics at atmospheric pressure.
- ISO 15550:2002 Internal combustion engines. Determination and method to measure engine power. General requirements;
- EN 228:2008 Automotive fuels. Unleaded petrol. Requirements and test methods.
- ISO 23932-1:2018 Fire safety engineering. General principles. Part 1: General;
- ISO 10721-1:1997(es) Steel structures. Part 1: Materials and design;
- ISO 13033:2013(es) Basis for the design of structures. Loads, forces and other actions.
- ISO 13702:2015(en) Petroleum and natural gas industries. Fire control and mitigation.
- ISO 23932-1:2018 Fire safety engineering. General principles. Part 1: General;
- IEC 60364-7-703:2004(MAIN) Electrical installations of buildings - Part 7-703:
- IEC 60364-1 Low voltage electrical installations –



MODULAR COMPLEXES OF TREATMENT AND REFINING



ABOUT US

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

**Mr. Silvio Tozzoli,
CEO**

**Mr. Favasim
Mingazetdinov,
Director of
Engineering .**

“Oil and Fuel Engineering LLC” was created thanks to the collaboration between engineers, chemists and oil refining specialists. Our cooperation started in 1996 and our team currently plans to enter the international market.

Technical Director: Mr. Mingazetdinov Favasim .



MODULAR COMPLEXES OF TREATMENT AND REFINING



ABOUT US

Mr. Favasim Mingazetdinov, Director of Engineering

BORN on September 11, 1953 in Kazan.

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

He began his scientific career in 1987 at the Bugulma branch of the All-Russian Scientific Research Institute VNIIneft . VNIIneft branch in Bugulma , 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 and successfully defended his thesis with the title of candidate of technical sciences (PhD).

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

PERFORMED ACTIVITIES

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

From 2008 to the present, he is the general director of the scientific and production company Techno-TEK LLC (NPK Techno-TEK LLC) (one of the founders)

Main 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.

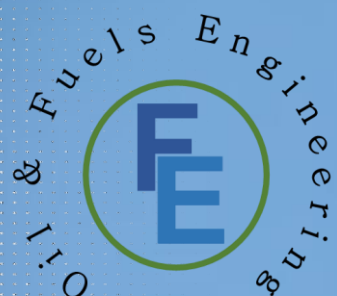


MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR STRENGTHS

- We are a versatile company that adapts the quality of our processes and products in accordance with the regulatory and market requirements of our clients.
- Our equipment has been designed and designed to process all types of hydrocarbons.
- Our goal is to increase the value of a barrel of crude oil by applying cutting-edge technology to obtain the highest performance from fuels, lubricants and other derivatives.
- Our equipment, due to its reliability, requires low maintenance costs.
- We guarantee immediate replacement of our equipment, components and consumables.
- Our processes are certified to guarantee an effective response to environmental challenges.



More than 50 years providing solutions to the world's energy needs.



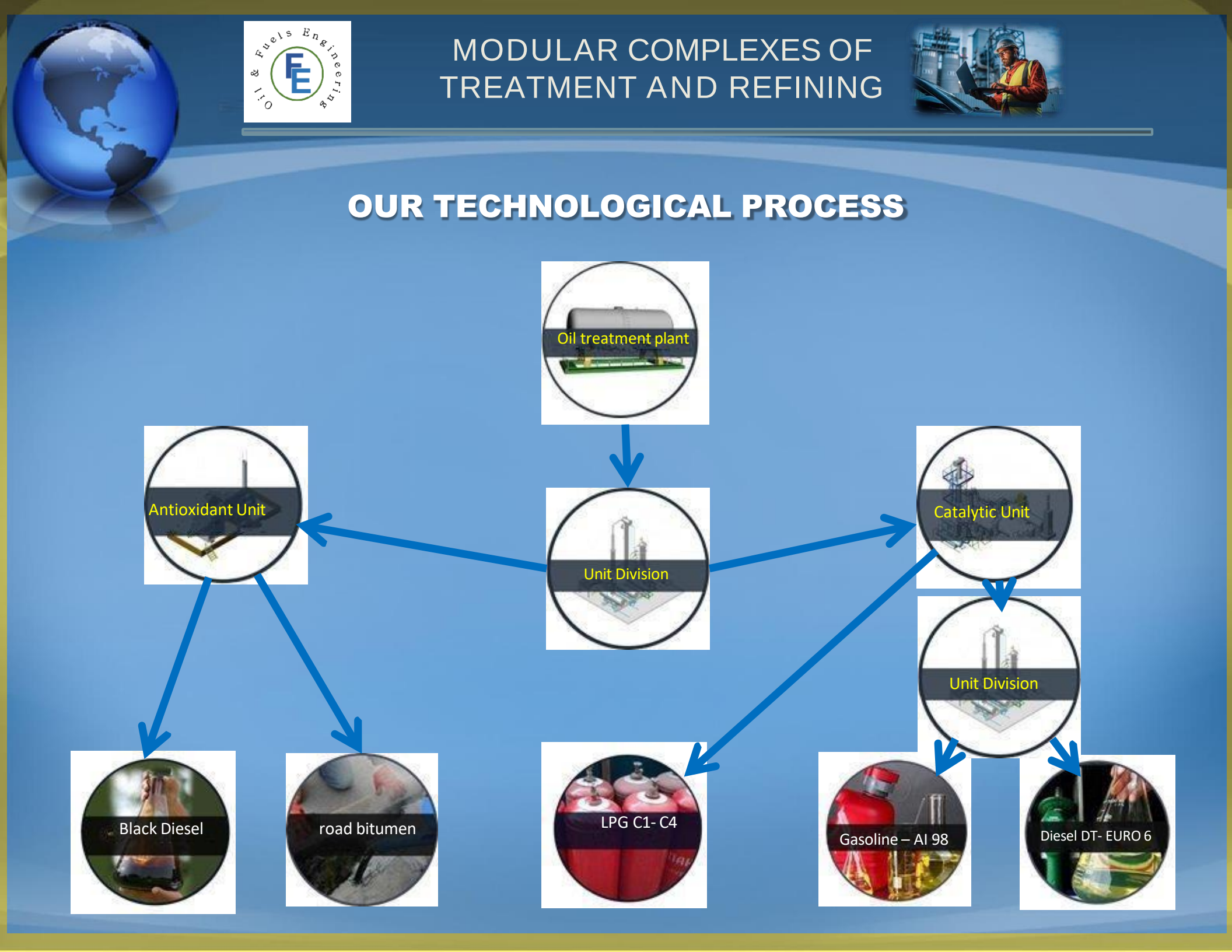
MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR TECHNOLOGICAL PROCESS

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

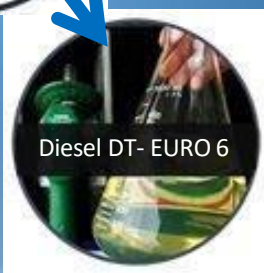
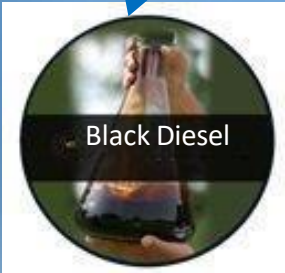
- The ideal raw material for processing and obtaining motor fuels is heavy gas condensates or light oils with a high content of light products. When using such raw materials, practically only high-quality and highly liquid motor fuels are obtained.
- At the same time, thanks to the same single-stage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



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR TECHNOLOGICAL PROCESS





MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

TECHNOLOGIES AT THE SERVICE OF ENERGY DEVELOPMENT

Oil refineries



Bitumen
production plants



Desulfurization
plants



Flexible deposits



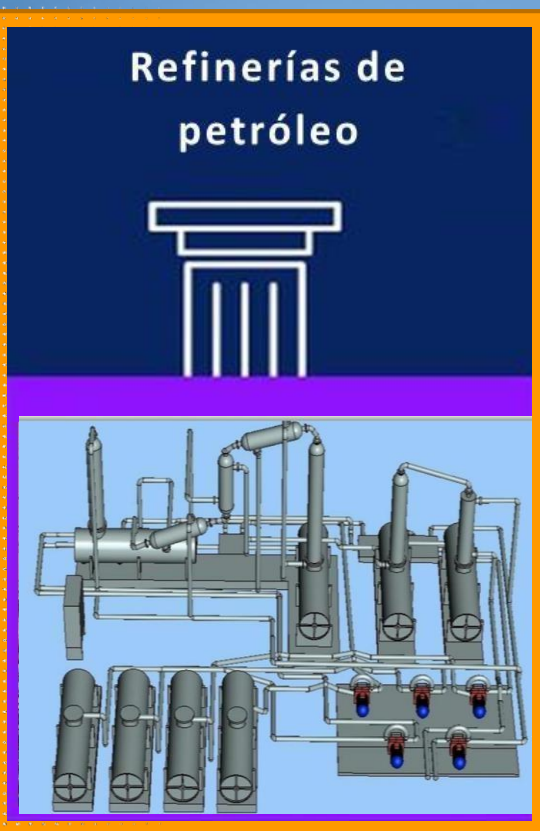


MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

THE MODULAR REFINING UNIT





MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

DESCRIPTION / DISTINCTIVE CHARACTERISTICS

Refinerías de
petróleo



PLANT OF REFINEMENT OF PETROLEUM FOR THE PRODUCTION OF PRODUCTS FINISHED.

Vacuum " technology allows us to obtain the fractionation of the different derivatives of crude oil, with maximum temperatures of 100/120 °C, using as fuel the gas produced by the same crude oil that is being refined.

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

Traditional "Fractionation Tower" or "Cracking" refining systems require temperatures ranging between 250/300/400/600 °C and use liquid fuels. They then consume part of the fuels produced to feed the process, reducing the percentage of fuel output.



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

DESCRIPTION / DISTINCTIVE CHARACTERISTICS

All OUR plants are patented, with a refining capacity that ranges from 1/3/5/10,000 barrels/day to 150,000 barrels/day (and more), to obtain the production of:

- a. **Gas** (Which produces the energy necessary for the operation of the plant).
- b. **Diesel** Type Euro 4, 5, 6 (D 1 / D 2)
- c. **Gasoline** of 98 octane and higher, including the production of Gasoline-Aviation piston aircraft engines.
- 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 desulfurization, fuel for ships and fuel for generating sets for the production of electricity, etc.
- h. **Bitumen** to produce asphalt and for waterproofing use.

Refinerías de petróleo





MODULAR COMPLEXES OF TREATMENT AND REFINING

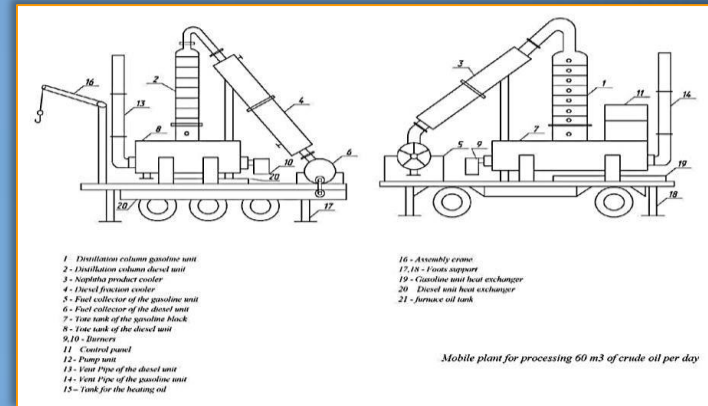
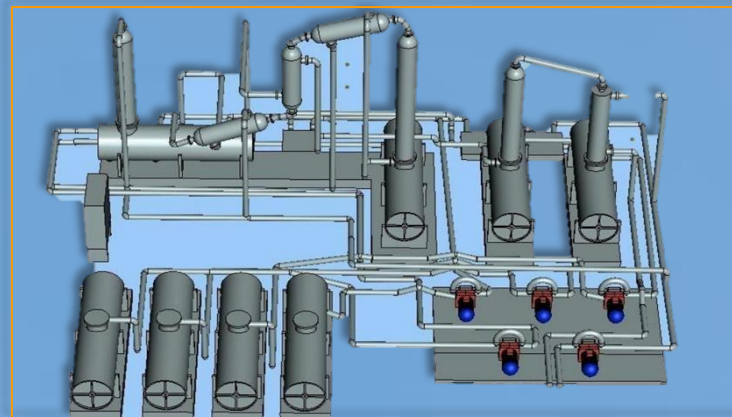


OUR EQUIPMENT

Refinerías de petróleo



SYSTEMS AND COMPONENTS



UNIT OF DIVISION

Raw material (oil or gas condensate) is pumped from the raw material tank at a pressure of 0.1 - 0.3 MPa into the tubular space of a four-way heat exchanger, where it is heated to 60-80 °C with diesel with a temperature of 150 -160 °C supplied from the totalizer tank. Further, the raw material is heated to a temperature of 60-80°C and fed to a distillation column with bubble bell plates. The distillation column is mounted on a total horizontal tank, in which a heat exchange element is mounted for the final heating of the crude oil. materials at the bottom of the column. Heating is carried out by a 0.5MW modular liquid fuel burner.



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

SYSTEMS AND COMPONENTS

OPERATION DIAGRAM OF THE FRACTIONATION UNIT

- The distillation column consists of cover plates. A reflux exchanger is integrated in the upper part of the distillation column. In the reflux condenser, the cooling and condensation of gasoline vapors occurs. of the process water supplied to the reflux condenser. The upper temperature of the column is controlled by changing the amount of water supplied to the fractional distillation tube of the distillation column, through a steam line, connected to a heat exchanger through a condenser installed vertically in a tank. gasoline, a collector. The gasoline vapors are cooled in a heat exchanger- condenser, condensed and discharged into the gasoline collector, from where the gasoline fraction is subsequently pumped to the gasoline tank and the remaining heavy fraction, the stabilized bottom residue, It is pumped from the bottom vessel to the tank by pump, through a two-section heat exchanger in which it is cooled with water at a temperature of 60-70 C, to the furnace oil tank
- Discharge of sediment water from the bottom of a gasoline tank, as well as discharge of rainwater. The placement of the technological tanks is carried out in an underground tank, with subsequent extraction by tanker from the truck. The installation meets all the requirements of sanitary standards for this equipment. The main source of harmful emissions into the atmosphere is a modular liquid fuel burner.

Refinerías de petróleo





MODULAR COMPLEXES OF TREATMENT AND REFINING



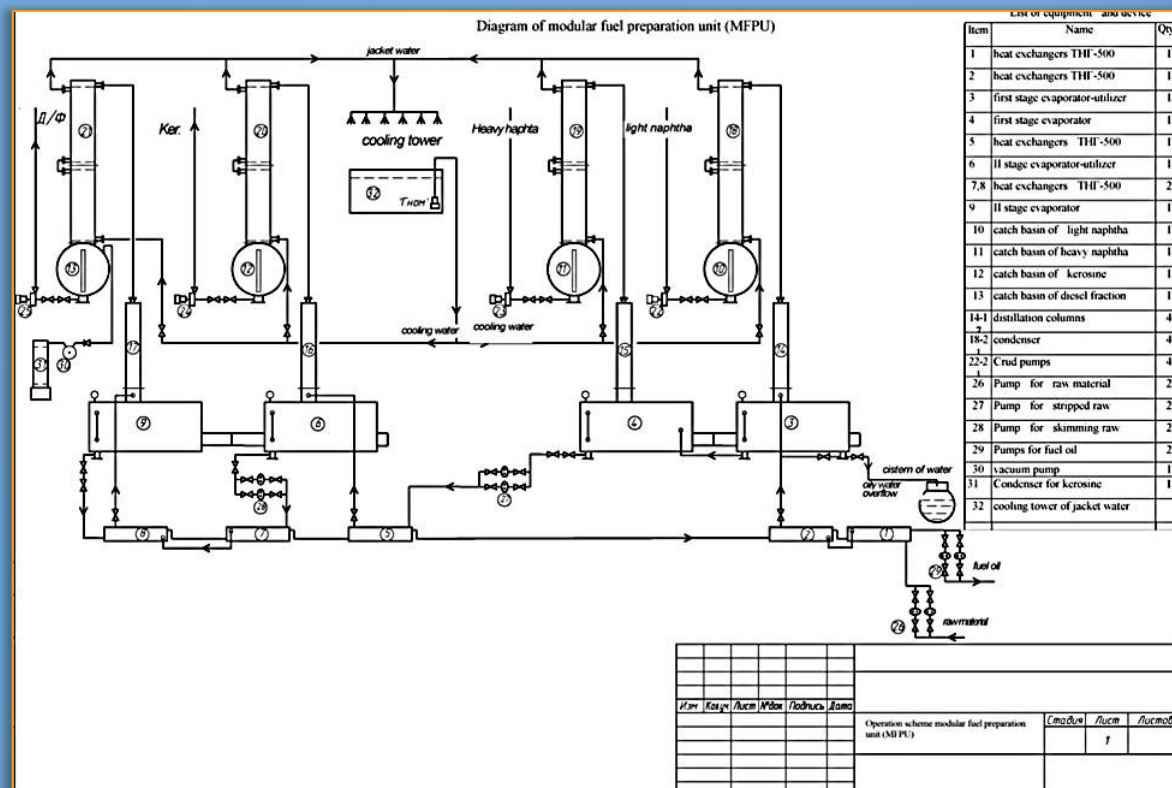
OUR EQUIPMENT

Refinerías de
petróleo



SYSTEMS AND COMPONENTS

MODULAR FUEL PREPARATION UNIT (MFPU) PROCESS FLOW DIAGRAM





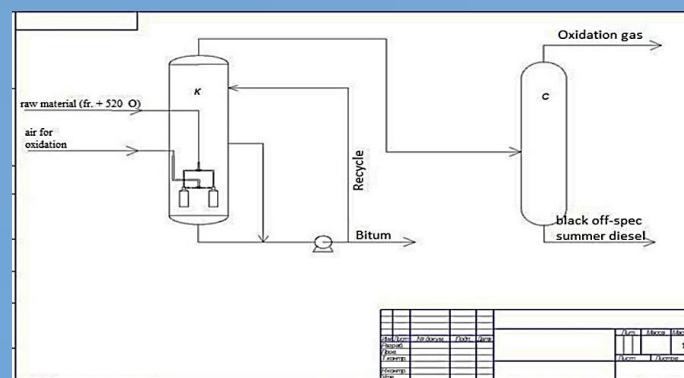
MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT



SYSTEMS AND COMPONENTS



UNIT OF OXIDATION

- The raw materials are pumped in two streams to columns K-1 and K-2, where they are heated to 60 °C. The light fractions are fed through a heat exchanger to the base product park to mix them with the gasoline that comes out of the K-3 column (we obtain AI-92).
- The heavy residue of the bottom oil fraction of columns K-1 and K-2 enters the vertical furnace P-1, where it is heated to 350 °C. The mixture of steam and then gas enters the reactor R - 1, where the catalyst is located.
- From the reactor, the mixture cooled in the heat exchanger enters the C-1 separator to separate the light gases (C1 and C2), which are burned in the furnace nozzles.
- The mixture then enters column K-3, where the gasoline is stabilized. The light hydrocarbon, propane-butane mixture is removed from separator C-2 and the heavy part at the bottom of the column is mixed in the warehouse.



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

BITUMEN PRODUCTION PLANT

Plantas de producción
de Bitumen





MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

Plantas de producción de Bitumen



DESCRIPTION / DISTINCTIVE CHARACTERISTICS

The bitumen production unit is designed to produce specific quality bitumen by direct oxidation of tar from the fuel oil vacuum distillation unit.

The capacity of the bitumen production unit of the fuel oil vacuum distillation unit is defined in the specifications and is equal to 100,000 tons of bitumen per year. With a certain number of working hours per year – (24 h * 365 days = 8,760 hours) the estimated nominal bitumen capacity of the plant will be 10,416 tons of bitumen per hour.

The bitumen production module works in two ways:

- Production of road bitumen BND 90/130 (100/130);

The plant capacity range for raw materials should be between 50 and 110% of nominal.

The operating mode of the fuel oil vacuum distillation unit is continuous. The unit review period is 24 months.



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

Plantas de producción de Bitumen



DESCRIPTION / DISTINCTIVE CHARACTERISTICS

MATERIALS BALANCE

The synthetic material balance of the bitumen production module is shown in the following Table:

Name of raw materials , products petroleum .	Delivery % mass of crude materials	Consumption t/hour	Amount t /day
Input			
to tar	89.41	11,581	277.9
to ria technique	10.59	1,371	32.9
Total:	100.00	12,952	310.8
Production			
bitumen	88.14	11,416	274.0
Gas of oxidation	11.30	1,463	35.1
Black solar oil (when burned)	0.56	0.073	1.7
Total:	100.00	12,952	310.8



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

Plantas de producción de Bitumen



DESCRIPTION / DISTINCTIVE CHARACTERISTICS

CONSUMPTION COEFFICIENTS OF RAW AND AUXILIARY MATERIALS.

Raw material of oxidation unit of vacuum distillation unit for fuel oil - tar in oxidation The process is almost completely processed to obtain the specified target products.

The consumption coefficients are taken based on the productivity of the bituminous block of the fuel oil vacuum distillation unit: 11,416 t/h (100,000 tons per year) of oxidized bitumen.

Name of the subjects cousins and materials	Coefficient of consumption	Note
Tar	1,014 t/t	material for bitumen. module of production
Air technical	100 nm3/t	Air for bitumen oxidation.
Air according to measurement and instrument of control	0.876* nm3/t	DCS and ESD operationactuators
Gas inert	1,051* nm3/t	For nitrogen suppression and purging of devices before repair
Gas fuel	3,503* nm3/t	For afterburners of a mazut vacuum distillation unit
Oil of the transformer	0.876* t/t	For devices of heating and pipes.

- The coefficients of consumption of materials auxiliary and energy resources are determined during the design process when choosing the main equipment and assistant.



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

DESULFURATION PLANT

Plantas de
desulfuración





MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

FUNDAMENTAL CONSIDERATIONS

EXISTING TECHNOLOGIES

Plantas de desulfuración



Methods to Remove Sulfur:

Hydrotherapy. The method is based on the treatment of lubricating oils and liquid paraffins with H_2 , at a pressure of 4-5 MPa hydrogen (or hydrogen-containing gas), at a temperature of 200-325 °C, in the presence of a catalyst. The gas/supply ratio is 300:1. Gas consumption: 0.2-0.3% of the total mass. As a result, H_2S , NH_3 , H_2O and N_2 are released.

Hydrocracking . When this method is used, the raw material is also treated with hydrogen (or hydrogen- containing gas), but at an elevated temperature and pressure of 300-450 °C and 5-30 MPa respectively, in the presence of a catalyst. High-boiling oil fractions are processed, mainly vacuum distilled with a boiling point of 300-540 °C.

Hydrodesulfurization . They are used to remove sulfur from high boiling fractions (boiling point 540-580°C) of tar, fuel oil and deasphalted oil . The process is carried out at 360 - 430°C and a pressure of 10-20 MPa, the gas-raw material ratio (600-1000):1.



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

FUNDAMENTAL CONSIDERATIONS

EXISTING TECHNOLOGIES

Plantas de desulfuración



The technological schemes of the processes are very similar: heating of the components, mixing and processing in the reactor, cooling of the hydrogenated product, separation of gases containing hydrogen and hydrocarbons respectively in high and low pressure separators, followed by distillation to the target products, gas purification from H_2S , NH_3 and H_2O .

The great excess of gas and its very low use in hydrogenation reactions, typical of heterogeneous processes, is striking.

The activation of processes in all cases is indicated by heating and is enhanced by catalytic reactions. (Note that the presence of sulfur, metals and aromatic hydrocarbons leads to rapid passivation of catalysts.)

hydrogenolysis reactions occur, that is, the bonds of carbon with sulfur, metals, oxygen and nitrogen are broken. Under

conditions of excess hydrogen, H_2S , NH_3 and H_2O , etc. are formed.

Purification of petroleum products from sulfur is also carried out by treatment with acids, alkalis and other reagents.



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

FUNDAMENTAL CONSIDERATIONS

DISADVANTAGES OF THESE CONVENTIONAL TECHNOLOGIES

The disadvantages of these methods include:

- High power consumption,
- Complexity of instrumentation,
- Unrecoverable losses of expensive catalysts,
- Complexity of the system and selectivity of the methods in relation to the sulfur compounds removed,
- Greater explosiveness, environmental toxicity, environmental risk, etc.

NEED FOR A NEW PROPOSAL

In the modern oil refining industry, in conditions of strict requirements for the quality of petroleum products and the depletion of reserves of liquid hydrocarbons of "light" quality, new promising and energy-efficient systems are required that can provide:

- processing of petroleum products without the use of expensive catalysts, increased depth of processing of liquid petroleum products,
- reduction of the content of harmful impurities,
- improvement of the quality of the final product.

Plantas de desulfuración





MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

FUNDAMENTAL CONSIDERATIONS

OUR PROPOSAL

A method is proposed for the oxidation of sulfur-containing compounds in the reaction zone with a mixture of ozone and oxygen from the air.

The method is based on an important property of saturated sulfur-containing organic compounds: they are oxidized much faster than hydrocarbons, which is explained by their lower thermodynamic strength.

(For example, for thiophene, ΔH°_f is 19.6 kcal/mol, while for SO_2 it is 70.96 kcal/mol.).

The treatment of petroleum products containing sulfur with a dosed mixture of ozone and air ensures the complete elimination of the sulfur itself, without affecting, in practice, other hydrocarbons.

This circumstance allows its application in technologies for the processing of petroleum products.

The main advantage that draws the attention of national and foreign scientists is the possibility, with a fairly simple design, of carrying out the processes of mixing, dispersion and activation of liquid substances, creating a significant energy density per group of working volume.

Plantas de desulfuración





MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

Plantas de desulfuración



FUNDAMENTAL CONSIDERATIONS

ADVANTAGE OF THE PROPOSED METHOD

The use of our method allows the complete removal of sulfur and sulfur compounds in petroleum products.

The quality of the crude oil desulfurization process in an electromechanical converter with a discrete secondary part was determined by sampling the oil that had been processed in the device every 10 seconds. To find the optimal processing parameters (time) during the desulfurization process, dependencies of the amount of sulfur removed on the processing time were obtained.

The quantitative sulfur content of petroleum products was determined by energy-dispersive X-ray fluorescence spectrometry.

The range of variation in desulfurization efficiency in the experiments was up to 97%, depending on the processing time.

Based on the effectiveness of the presented technological process, we proposed options for the implementation of technology at production facilities. The **PSAF-4** facility was developed and tested .



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

FUNDAMENTAL CONSIDERATIONS

GENERAL INFORMATION ABOUT THE "PASF-4/5" INSTALLATION AND ITS PURPOSE

The installation is a set of blocks, each of which performs a specific function.

- Raw material preparation equipment, (Reactor N°1, Reactor N°2)
 - Raw material oxidation group.
 - Separation group,
 - Additives preparation group,
 - blocking the separation and removal of sulfur
 - Fine purification group for impurities and sulfur residues.
 - Automation and control lock

Technical data and characteristics of the system.

- The working pressure of the installation does not exceed - 0.6 MPa. The continuous operating time of the filter is 24 hours.

A feature of the design of PASF-4/5 filters is the presence of an automatic regeneration system. The inner blocks are made of stainless steel.

Plantas de desulfuración





MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

SYSTEMS AND COMPONENTS

Plantas de desulfuración



	Descripción	Cantidad
1	1 PASF-4/5	PC 1.
2	2 kits de automatización	PC 1.
3	3 kits de repuestos	PC 1.
4	4Pasaporte y manual de instrucciones	PC 1.
5	5 Certificado de instalación	PC 1.



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

SYSTEMS AND COMPONENTS

UNIT OPERATION DIAGRAM OF DIVISION

Plantas de desulfuración



The PASF-4/5 facility can accept fuel oil from both stationary tanks and tank trucks. The temperature of the incoming product (fuel oil) must be at least 50 degrees. The temperature is automatically measured in the suction pipe when the oily product enters the group with the help of a pump.

If the temperature is below 50 degrees, the unit does not start and the fuel oil supply stops. The pump will operate in a reverse cycle.

If the temperature corresponds to the technological one, the Group starts operating. At the inlet, the petroleum product together with the air from the compressor enters Reactor 1, Reactor 2 and then the Mixing and Oxidation Group with an ozone-air mixture. Furthermore, the petroleum product is separated from air and sulfur in the "Separation Group". The petroleum product enters "Separator 1" and "Separator 2", where the sulfur compounds interact with the additive. The resulting gypsum sinks to the bottom and the oil.

The product rises upwards due to the different densities.

The gypsum from "Separator 1" and "Separator 2" is discharged by a pump into the gypsum collection hopper. The

processed petroleum product enters the Fine Purification Group and from there to the Finished Product Group.

OUR EQUIPMENT

PER-N ELASTIC TANKS

Depósitos flexibles





MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

DESCRIPTION / DISTINCTIVE CHARACTERISTICS

Depósitos flexibles



Polymer elastic tanks are intended for the storage and transportation of jet fuel, aviation kerosene, diesel fuel, gasoline, motor oils and crude oil in the field. conditions, at ambient temperatures from minus 60 °C. Height of the polymer elastic tanks are 1.70

The closed shells of the elastic tanks are manufactured from durable ballistic woven polyester fabric with double- sided polyurethane (TPU) or special polyvinyl chloride (PVC+TPU).

The strength of the casing is close to the breaking loads of slings and loading straps.

OUR EQUIPMENT

DESCRIPTION / DISTINCTIVE CHARACTERISTICS

Depósitos flexibles



Fuel storage farms are located underground





MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

Depósitos flexibles



BENEFITS OF PER-N ELASTIC TANKS

Radical investment savings

The total capital savings in the construction of the fuel storage facility (shipping, installation and maintenance costs) is up to 70%, compared to the installation of traditional type metal and plastic tanks.

The cost of elastic polymer tanks is several times lower

The tanks and elastic High Mobility can be delivered to the place of operation by any means of transportation (land, air and water) in the most remote regions of the country.

The compactness of the elastic tanks allows a fuel store to be placed complete with a nominal capacity of up to 1,000 cubic meters in a standard 20-foot container.

Versatility.

Elastic tanks as part of mobile fuel storage facilities are designed to operate in a wide variety of climatic zones, their shell material has a wide range of operating temperatures - from -60°C to + 80°C.



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

Depósitos flexibles



BENEFITS OF PER-N ELASTIC TANKS

Hassle-free operation

The tanks are not subject to corrosion.

Military grade reliability

The useful life of mobile fuel storage facilities is 12 years. Elastic tanks are designed for multiple application cycles.

Quick and easy installation

The average installation time is 6 days. During unfolding and folding at a temperature not lower than -50°C , the tanks do not require additional heating. Soft tanks used in PSGs, unlike standard RGS and RVS tanks, do not require base preparation. Elastic tanks can be placed on unprepared surfaces: soil, snow, swamps, ravines, trenches, etc.



MODULAR COMPLEXES OF TREATMENT AND REFINING



OUR EQUIPMENT

Depósitos flexibles



BENEFITS OF PER-N ELASTIC TANKS

Ecological Safety

The PSG are not subject to corrosion or adverse environmental effects. Once the work is completed, there are no tanks or half-full barrels left on site, which are a dangerous source of man-made pollution. No land reclamation is necessary after the PSG operation.



- PVC material, density 630 g/m².
- Operating temperature : de-60 °C at +70 °C

Anti-filtration canopy (PFP) for warehouse with a total volume of 35,000 m³ for the ground beam:

COMPLEJOS MODULARES DE TRATAMIENTO Y REFINACIÓN



GENERAL MAP OF LOCATIONS OF INSTALLED REFINERIES





COMPLEJOS MODULARES DE TRATAMIENTO Y REFINACIÓN



GENERAL MAP OF LOCATIONS OF INSTALLED REFINERIES



Capacity: 5,000 barrels/day

Date of buys: February of 2020

Commissioning date: November 2020



NYAGAN, RU

« CRASNOLENINSKI NPS »



COMPLEJOS MODULARES DE TRATAMIENTO Y REFINACIÓN



GENERAL MAP OF LOCATIONS OF INSTALLED REFINERIES

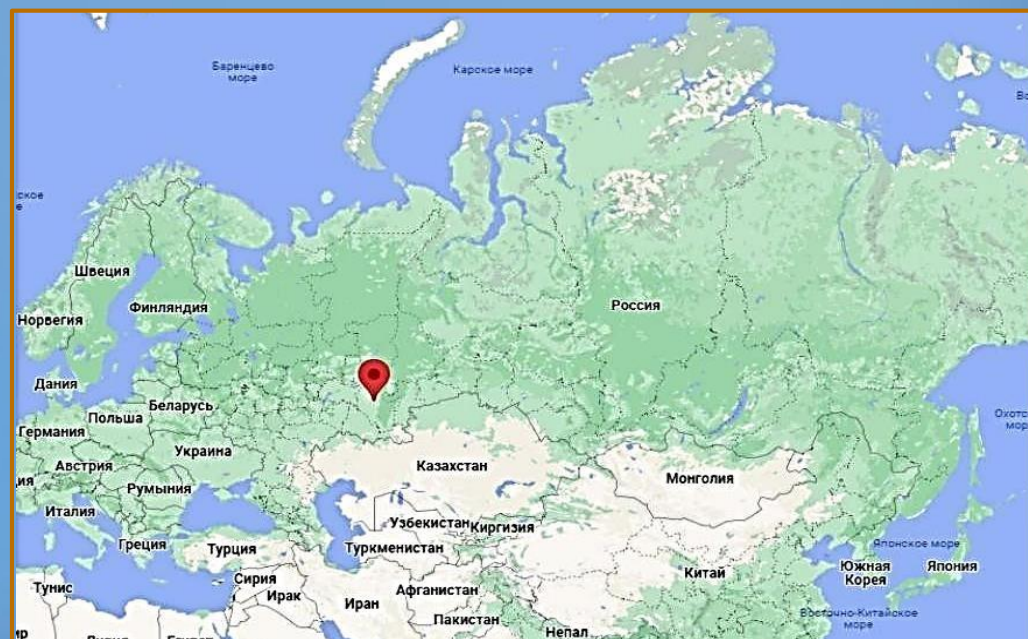


Capacity: 3000 barrels/day

Purchase date: March 2021

Commissioning date: December 2021

**UFA, RUSSIA
SENAM SERVICE .**





COMPLEJOS MODULARES DE TRATAMIENTO Y REFINACIÓN



GENERAL MAP OF LOCATIONS OF INSTALLED REFINERIES



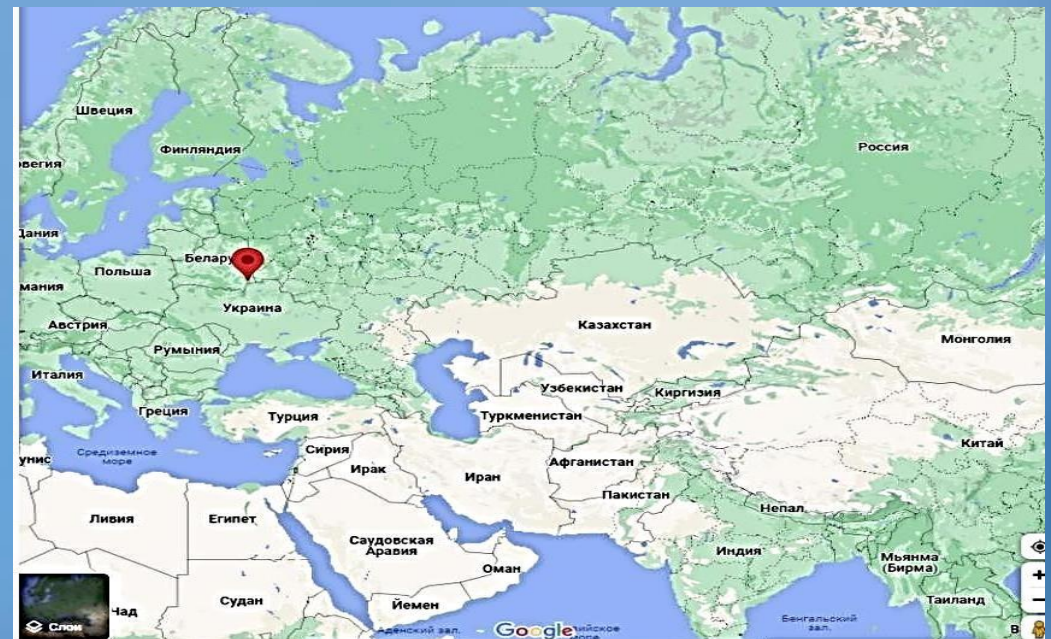
Capacity: 10,000 barrels/day

Purchase date: August 2021

Commissioning date: April 2022.



KOLEINA, MINSK REGION, BELARUS ТОП “НЕФТЕБИТУМНИЙ ЗАВОД”





COMPLEJOS MODULARES DE TRATAMIENTO Y REFINACIÓN



GENERAL MAP OF LOCATIONS OF INSTALLED REFINERIES



City or region	Country	Years	Productive capacity barrel/day
Nyagan	Russia	2020	5000
Blazovetchensk	Russia	2021	5000
Ufa	Russia	2021	3000
Koleina	Belorussia	2022	300 000 tons of bitumen per day
Koleina	Belorussia	2022	10000
Petropavlovsk-Kamchatsky	Russia	2019	2000
Petropavlovsk-Kamchatsky	Russia	2020	1000
Irkutsk	Russia	2011	5000
Kostanay	Kazakhstan	2009	2000
Kostanay	Kazakhstan	2011	4000
Chelyabinsk	Russia	2017	4000
Chelyabinsk	Russia	2017	100 000 tons of bitumen per day+ desulfurizer 5t/h
Samara	Russia	2013	1000
Samara	Russia	2015	2000
Yaroslavl	Russia	2014	2000
Yaroslavl	Russia	2016	3000

COMPLEJOS MODULARES DE TRATAMIENTO Y REFINACIÓN



GENERAL MAP OF LOCATIONS OF INSTALLED REFINERIES



City or region	Country	Years	Productive capacity barrel/day
Rostov	Russia	2014	4000
Krasnodar	Russia	2015	1000
Krasnodar	Russia	2019	2000
Krasnodar	Russia	2020	2000
Azov	Russia	2017	4000
Azov	Russia	2018	2000
Saratov	Russia	2019	4000
Saratov	Russia	2017	2000
Astrakhan'	Russia	2012	1000
Astrakhan'	Russia	2019	5000
Astrakhan'	Russia	2020	6000
Astrakhan'	Russia	2020	100 000 tons of bitumen per day
Erevan	Armenia	2018	5000
Erevan	Armenia	2019	200 000 tons of bitumen per day
Tbilisi	Georgia	2010	3000
Khankh	Mongolia	2011	3000
Khankh	Mongolia	2017	100 000 tons of bitumen per day
Zanzibar	Zanzibar	2024	6000 per day + 200 000 tons of bitumen per day + desulfurizer 10t/h



MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

in addition, we offer:

- Exclusive complex of ultradisperse antiknock additives containing oxygen based on reverse synthesis.
- Production of ECO gasoline from our ECO additives. Gasolines are obtained from ECO EURO 4-6 standards.
- Biochemical catalyst for the production of ecological fuel.

SAVE ENVIRONMENTAL AND SAVE FUEL TOGETHER
WITH US!



MODULAR COMPLEXES OF TREATMENT AND REFINING



**“BEING ABLE TO SERVE YOU IS AN HONOR THAT WE SUPPORT WITH
COMMITMENT AND DELIVERY”**

**SILVIO TOZZOLI
CEO**

OUR ADDRESS

ADDRESS: Meydan Grandstand, 6th floor, Meydan Road, Nad
Al Sheba, Dubai, U.A.E.

WEBSITE: www.oilandfuels.me

PHONES: +971 509173748

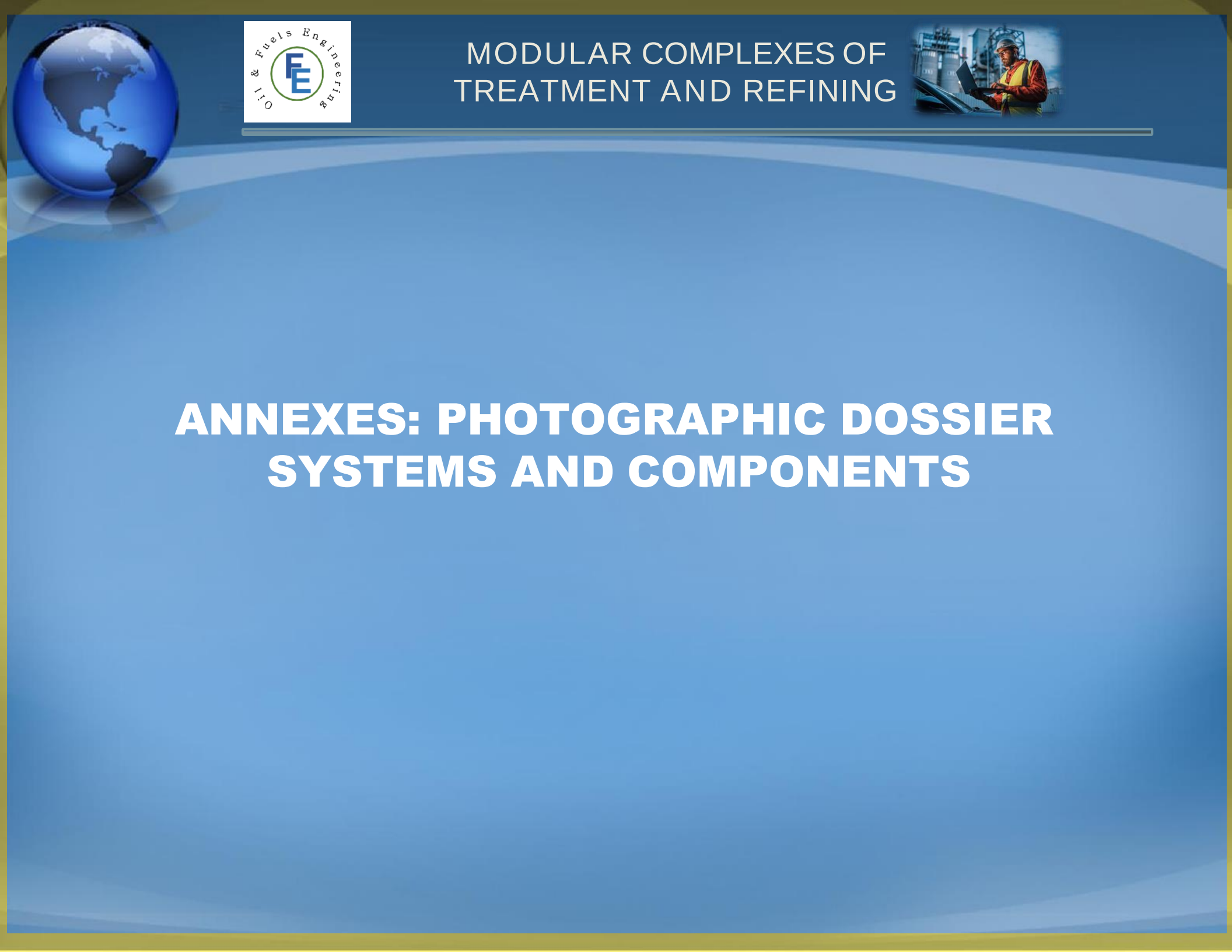
MAIL: info@oilandfuels.me



MODULAR COMPLEXES OF TREATMENT AND REFINING



THANK YOU FOR YOUR TIME



MODULAR COMPLEXES OF TREATMENT AND REFINING



ANNEXES: PHOTOGRAPHIC DOSSIER SYSTEMS AND COMPONENTS



MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

MODULAR REFINERY





MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

MODULAR REFINERY





MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

MODULAR REFINERY





MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

DESULFURATION PLANT





MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS CONTROL SYSTEMS

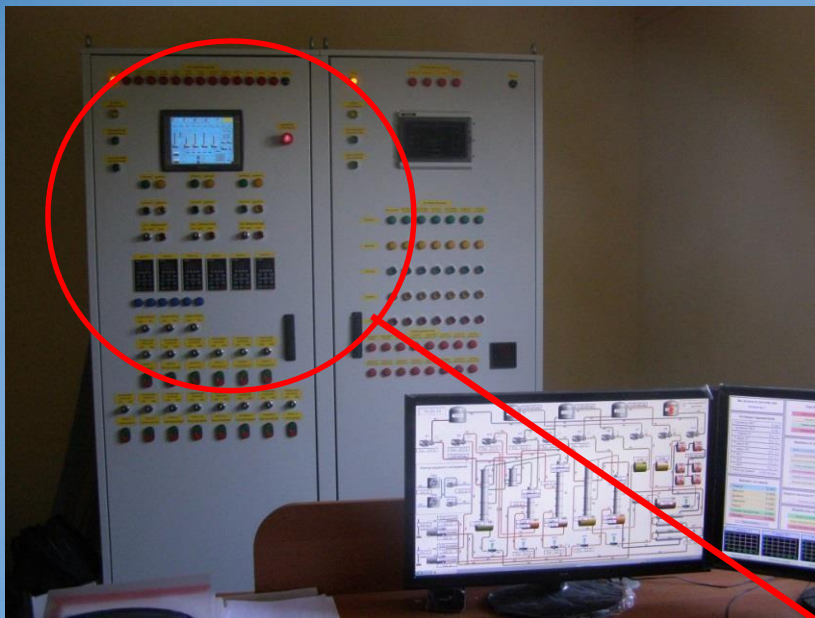




MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS CONTROL SYSTEMS



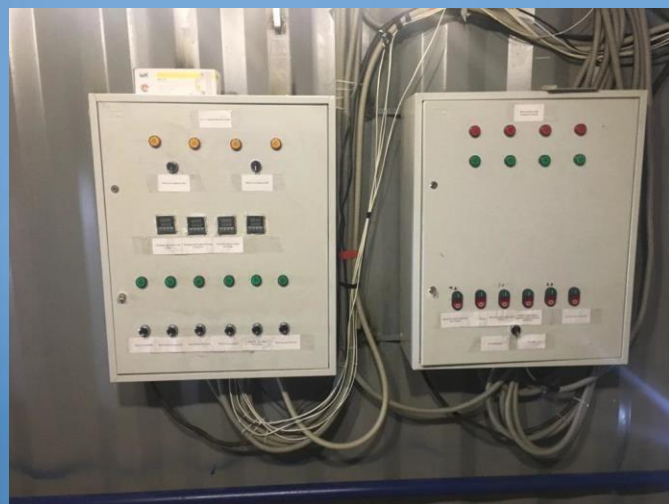


MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

CONTROL SYSTEMS





MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

CHEMICAL ANALYSIS LABORATORY



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

Pump and
dispenser module.

tank yard

Pipe
arrangemen
t

Fuel Dispensing
Area



Charger

Fuel quality control
laboratory.

Store



MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

MAIN ELEMENTS OF THE FUEL TANK.

tank yard



Pump and dispenser
module.



Pipe layout



Fuel dispatch



Fuel quality control laboratory



Charger





MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS FUEL TANK.





MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

OIL TREATMENT EQUIPMENT.





MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

Extractant for the purification and removal of sulfur, resin, metals and odors from petroleum products.

Work is done on all petroleum products in order to identify the effectiveness of the extractant , to eliminate sulfur, resin, water and other impurities contained in the product.

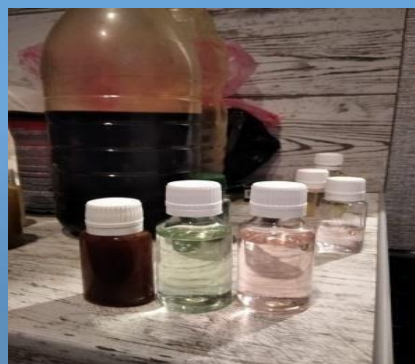
1 We take diesel for heating.
Add extractant



2. After mixing and adding
the extractant .



3 Sediment precipitates immediately in the
heating oil, in the form of dirty precipitates.





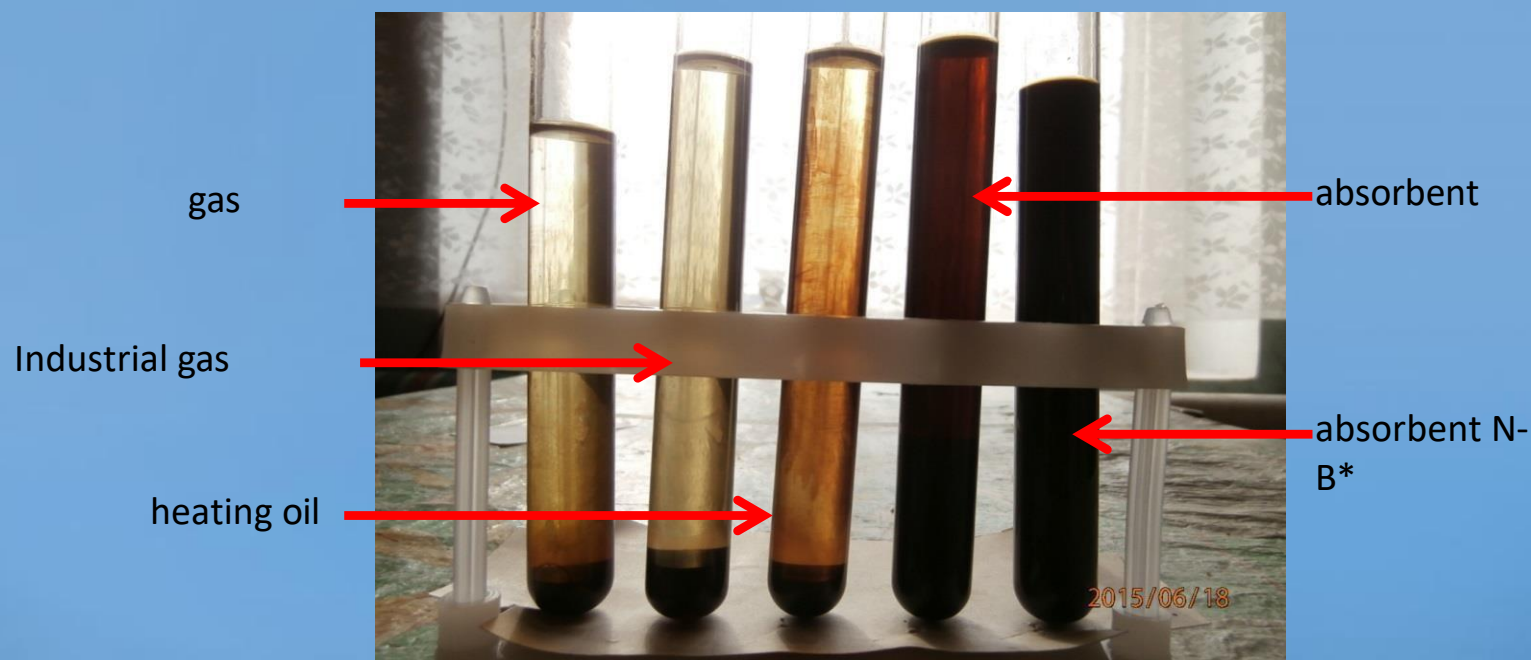
MODULAR COMPLEXES OF TREATMENT AND REFINING



DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

Extractant for the purification and removal of sulfur, resin, metals and odors from petroleum products.

Petroleum products after adding the extractant



Samples of petroleum products treated with an extractant . In all test tubes we see that a precipitate has formed. The product in the first 3 test tubes became light in color and the odor decreased.

*NB absorbent is mainly used as a solvent in the petrochemical and oil extraction industry.



MODULAR COMPLEXES OF TREATMENT AND REFINING

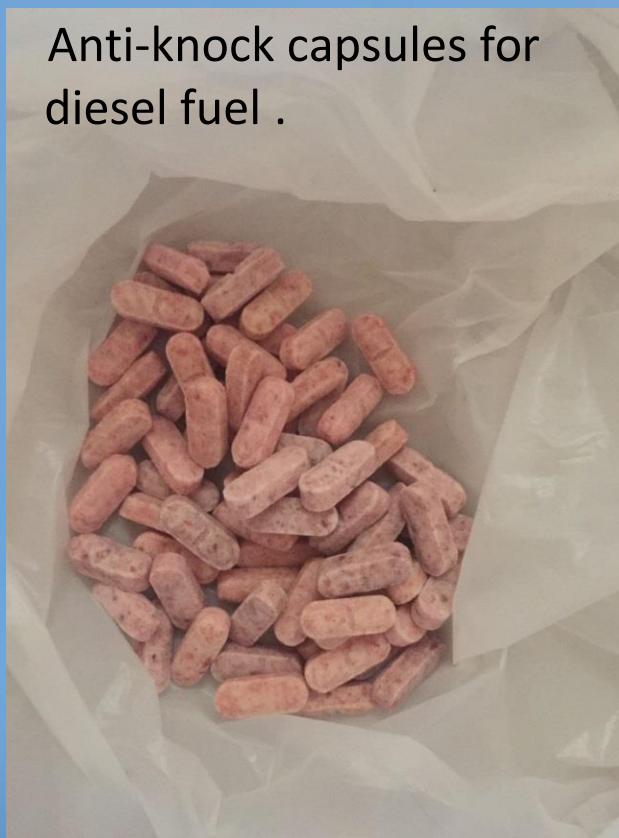


DOSSIER OF SYSTEMS, EQUIPMENT AND COMPONENTS

Fuel supplements



Anti-knock capsules for
diesel fuel .



Capsules to increase
gasoline octane

