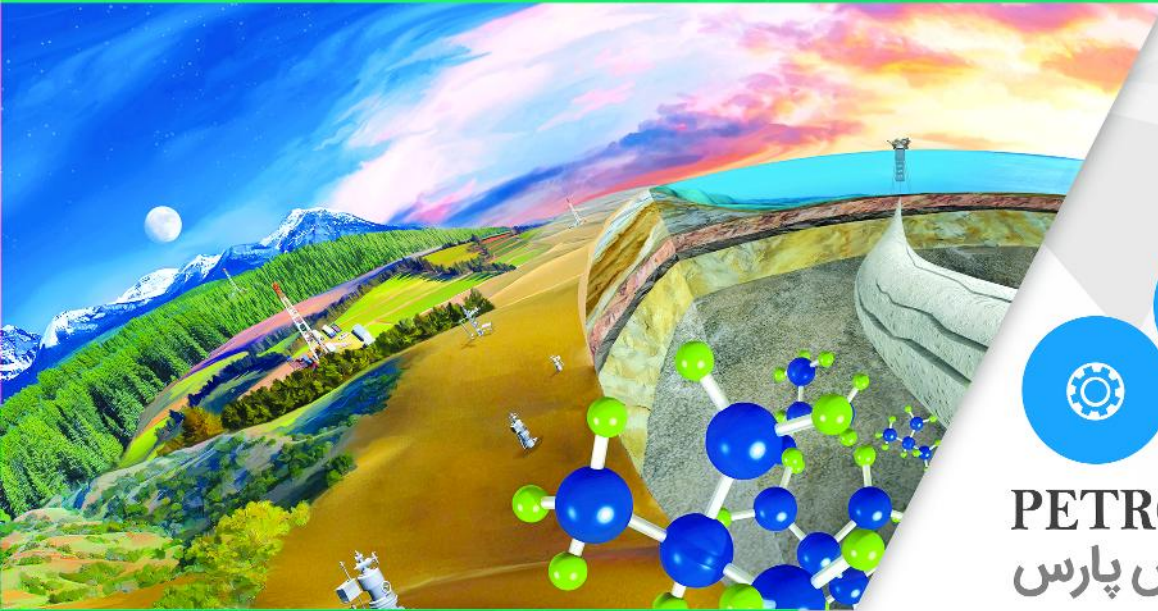


Petro Yas Pars Co.



PETRO YAS PARS
شرکت پترو یاس پارس

N₂ Services
Onsite Nitrogen Generating

MOT Services
Mobile Oil Treatment

earth is ours



Introduction

PETROYAS PARS COMPANY is located in Ahwaz, the heart of Iran's southern oil fields, where daily more than 3 million barrels of oil is produced. This company at the beginning, established to supply petroleum industry equipment and spare parts and now it is concentrated on the **ONSITE NITROGEN GENERATOR** and **MOBILE OIL TREATMENT** services.

There are many big cities and a lot of population living near the oil fields at south of Iran. MOT services by means of new technology helping to eliminate environmental hazards associated with burning of contaminated oil and gas in the well sites after acidizing, well repairing, well testing and etc.

Nitrogen is a safe, affordable alternative for unloading and cleaning out wells. Nitrogen is used extensively for the drilling, completion, dewatering and workover of oil and gas wells. Trailer mounted nitrogen generating units are best used for remote locations where the cost of delivered liquid nitrogen (LN) is high, when the scheduling and delivery of nitrogen takes a long time.

This company intends to provide continuous and comprehensive services to production companies by increasing Nitrogen and MOT units up to 3 of each within the next two years.

معرفی شرکت

شرکت پترو یاس پارس در شهر اهواز، پایتخت نفتی ایران، جایی که بیش از ۳ میلیون بشکه نفت در روز تولید می شود، مستقر می باشد. در ابتدا، این شرکت به منظور تامین تجهیزات و قطعات یدکی مورد نیاز صنایع نفت و گاز تاسیس گردید و هم اکنون بر ارائه خدمات تولید نیتروژن در محل و همچنین **فراورش سیار نفت و گاز** متمرکز گردیده است.

از آنجا که در مناطق نفتی جنوب ایران، شهر های بزرگ زیادی با جمعیت فراوان وجود دارند، خدمات فراورش سیار نفت و گاز با بهره گیری از فناوری های نوین، خطرات زیست محیطی ناشی از سوزاندن نفت و گاز آلوده چاه ها بعد از عملیات تعمیر، اسید زنی، چاه آزمایشی و ... را از بین می برد.

نیتروژن جایگزینی ایمن، مقرون به صرفه برای تخلیه و انگیزش چاه های نفت و گاز است، نیتروژن به صورت گسترده ای در عملیات حفاری و تعمیرات چاه های نفت و گاز بکار می رود. یونیت های تولید نیتروژن نصب شده روی تریلر بهترین گزینه برای استفاده در محل هایی هستند که از نظر هزینه و زمان، انتقال نیتروژن مایع به آنجا به صرفه نباشد.

در راستای ارائه خدمات جامع و گسترده به شرکت های بهره برداری، این شرکت طی برنامه ای دو ساله در نظر دارد تعداد یونیت های تولید نیتروژن و فراورش سیار خود را تا سه واحد از هر کدام افزایش دهد.

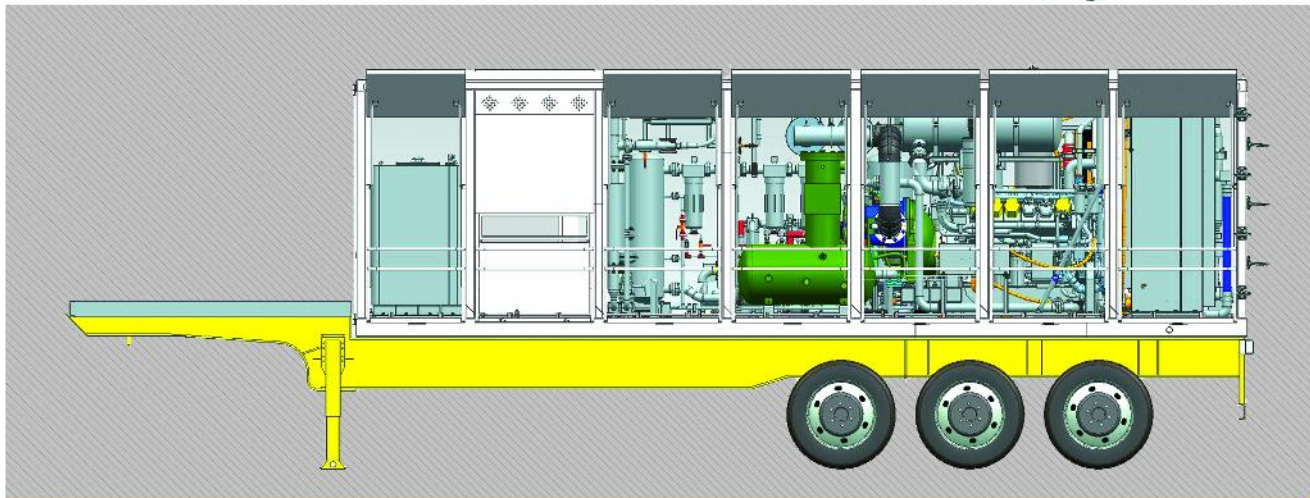
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ONSITE NITROGEN GENERATING SERVICES

The unit consists of :

- Diesel engine derived air compressor unit
- Air treatment unit
- Membrane nitrogen generator unit
- Booster



MAIN PARAMETERS

Nitrogen Purity	90 to 99.99% (Adjustable)
Max. Nitrogen Rate	1200 Nm³/h @95% purity
Max. Working Pressure	35 MPa (5000 Psi)
Nitrogen Discharge Temperature	Ambient Temperature +10~15°C
Nitrogen Generation Time	≤10 min

Nitrogen can be generated onsite at high pressures and low oxygen and moisture levels to safely prevent ignition of flammable gases or to protect oil field tubular from downhole corrosion.

At higher pressures, it can be used on its own to unload a well around the end of the tubing. Nitrogen's inert properties make it an excellent choice for clean out of sand, scale and other production inhibiting materials.

Trailer mounted nitrogen generating units are best used for remote locations where the cost of delivered liquid nitrogen (LN) is high, when the scheduling and delivery of nitrogen takes a long time, or when the requirement calls for continuous mobility. Whether kicking off a new drill or unloading an existing well for short or long period, our units offers unrivaled fluid recovery rates. Quickly and conveniently dispatched right to your site.

Generated nitrogen can be used in many oil & gas applications:

DRILLING SUPPORT

- Underbalanced Drilling (UBD)
- UBD surface equipment inerting
- BOP closure device/heave compensators
- Instrument panel inerting
- Dry air supply for engine starters, controls, dry bulk transfer, and hoisting systems
- Pressure systems purging and testing

WORKOVER & COMPLETION

- Displacement of well fluids to initiate flow
- Nitrogen supply for Well Stimulation
- Tubular and well head testing

OIL & GAS PRODUCTION

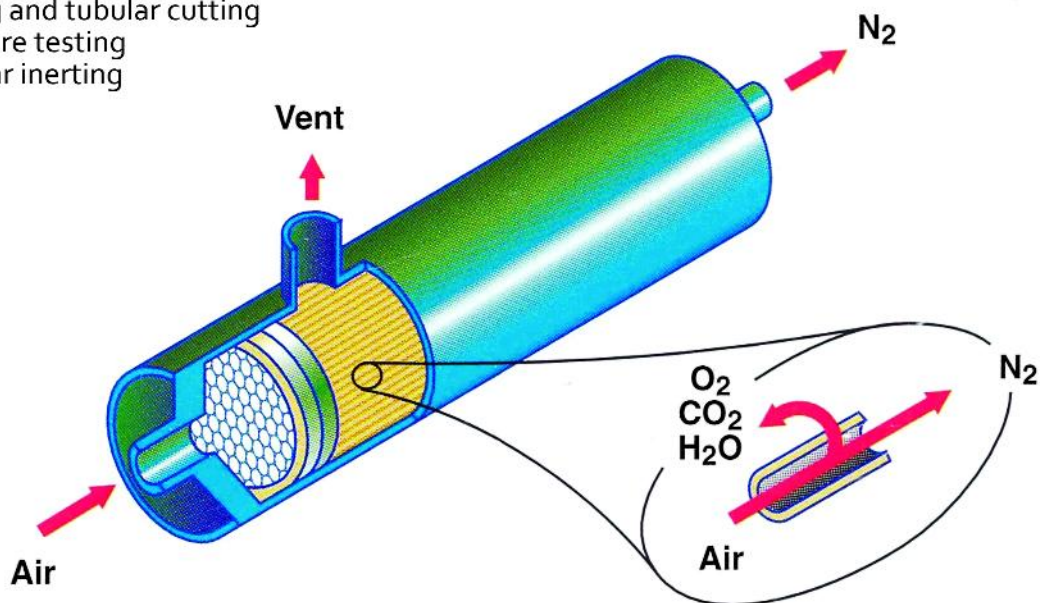
- Injection and pressure testing
- Reservoir pressure maintenance
- Gas Lifting using Nitrogen as a supply gas
- Plunger lifting
- Jet pump
- Displacement of well fluids to initiate flow
- Coal bed methane well bore cleaning

OIL & GAS TRANSPORTATION

- Pigging and purging pipelines
- Inerting storage facilities
- Blanketing storage tanks

PLUG & ABANDONMENT

- Casing and tubular cutting
- Pressure testing
- Tubular inerting

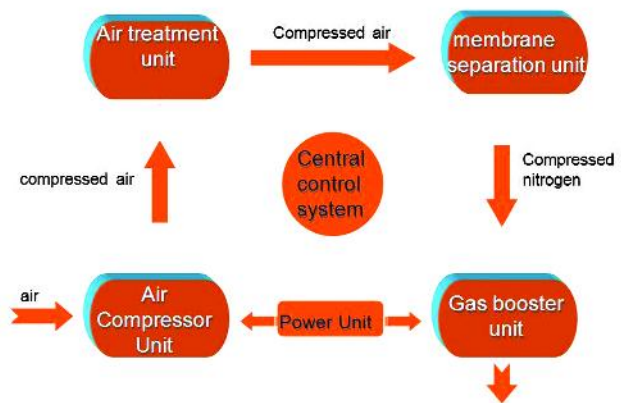


The operation of membrane systems is based on the principle of differential velocity with which various gas mixture components permeate membrane substance.

NITROGEN GENERATOR SYSTEM



The diesel engine drives the screw air compressor to compress the air. Then the compressed air will go to the air treatment unit after it goes through the cooler and air stabilization tank. The treatment unit consists of the air filter and air temperature regulating device. The dry, pure and thermostatic compressed air will enter the membrane system for nitrogen-oxygen separation. The separated oxygen-enriched air will be discharged to the atmosphere, while the nitrogen of required purity will be transferred to the nitrogen booster and then to the wellhead after its pressure can meet the working requirements.



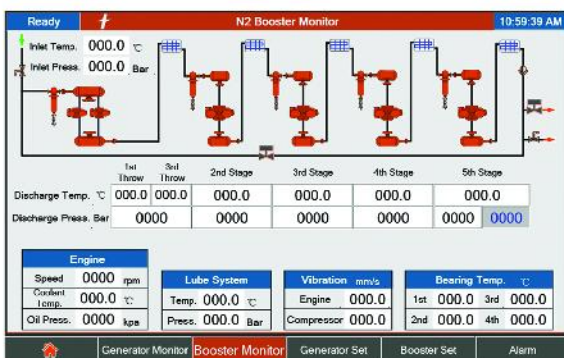
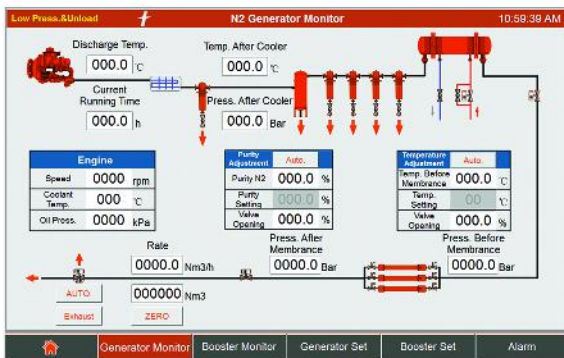
Nitrogen Generator Monitoring System

- Set such parameters as nitrogen purity, opening time of drain valve and interval and regulate the warning value.
- Oxygen detection.
- Flow monitoring.
- Pressure monitoring.
- Autoalarm protection system functions Of the membrane.
- Autoalarm system functions Of the product gas fails meeting the desirable standard.

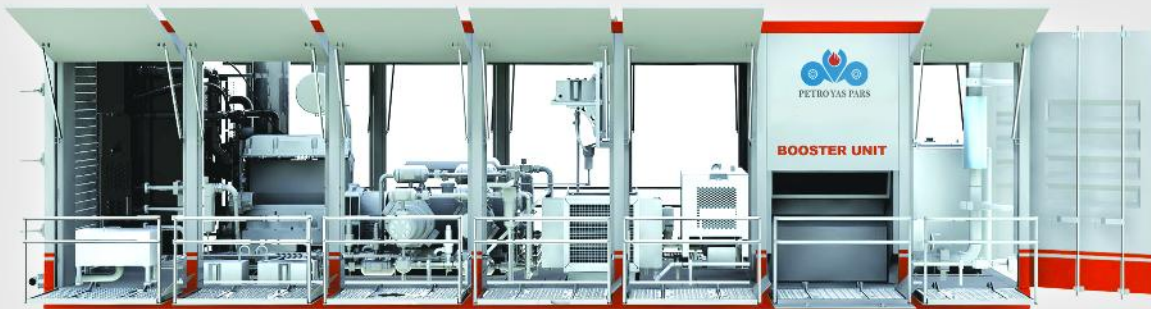
- Functions of recording, storing, exporting and viewing operational parameters

Nitrogen Boosting Monitoring System

- System startup and stop.
- Setting of parameters and adjustment of alarm value.
- Alarm protection of low process gas intake pressure.
- Autoalarm protection of high exhaust pressure and temperature of process gas.
- Detection and alarm protection of compressor every-stage exhaust temperature and pressure.
- Detection and alarm protection and stop of lube oil temperature and pressure.
- Functions of recording, storing, exporting and viewing operational parameters.

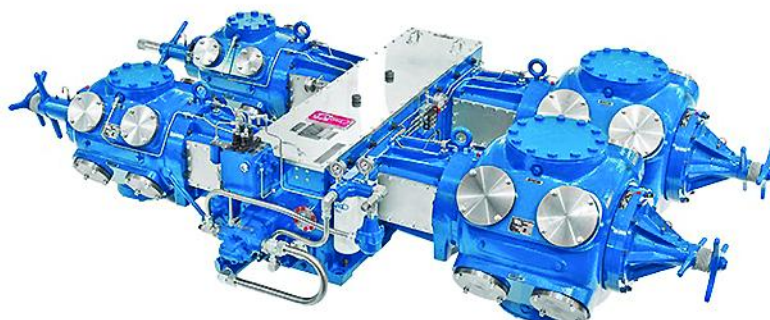


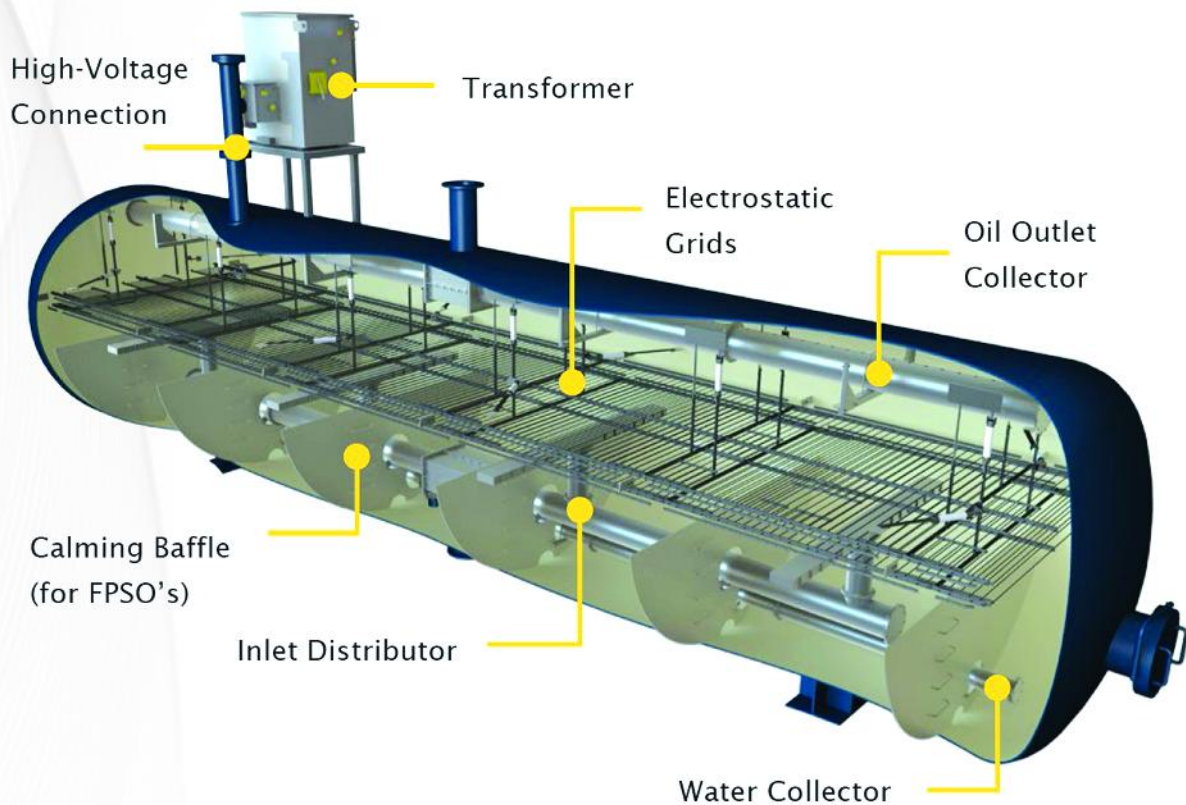
NITROGEN BOOSTER SYSTEM



The unit uses Ariel compressor with opposed multistage cylinders and it is driven by the engine directly.

Description	Max.	Min.	Design Point
Intake Pressure MPa	2.0	1.6	1.8
Intake Temperature °C	60		40
Discharge Pressure MPa		-	35
Nitrogen Temperature °C	≤Max. ambient Temperature+15°C		
Rate under Design Conditions m ³ /h			1200
Altitude m	1000		500
Ambient Temperature °C	+55	-10	45
Gaseous Medium	Nitrogen		
Stroke in	3.0		
Compression	4-stage		
Designed Speed	1800RPM		
Cooling Method	Air cooling		





MOBILE OIL TREATMENT(MOT)

MOT services used for eliminating :

- ACID
- GAS
- WATER
- SALT
- SAND
- SILT

From crude oil and pumping it to the pipeline during the drilling, repairing, acidizing and testing of oil wells.

PROCESS EQUIPMENT UNITS

- Desander & Slurry Tank (for Sand particles removal)
- 3-Phase Separator
- Desilter (for sediment particles removal)
- Choke Manifold
- Surge Drum
- Oil Transfer Pumps

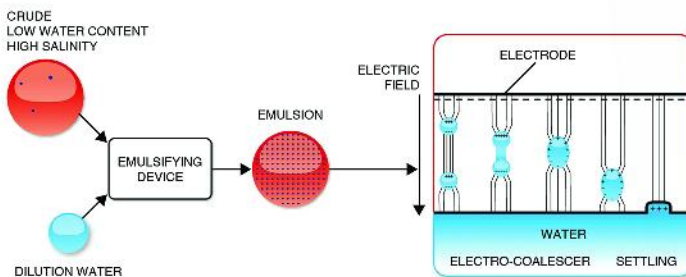
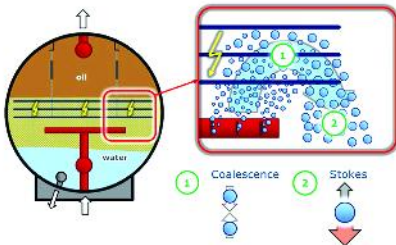


UTILITY UNIT

- Instrument Air Package
- Diesel Generators
- Gas Oil Storage Tank
- Gas Oil Pump
- Nitrogen Package
- Control Panel

INJECTION UNITS

- Caustic soda, to control oil PH and neutralize of the residual acid in oil
- Xylene, to dissolve asphaltenes
- Demulsifier, to separate water from oil
- Corrosion inhibitor



DE-SALTER UNIT

- Separating dissolved salts
- Separating principally chlorides of sodium
- Separating calcium, and magnesium



PETRO YAS PARS

A Solution for the Earth Pollution