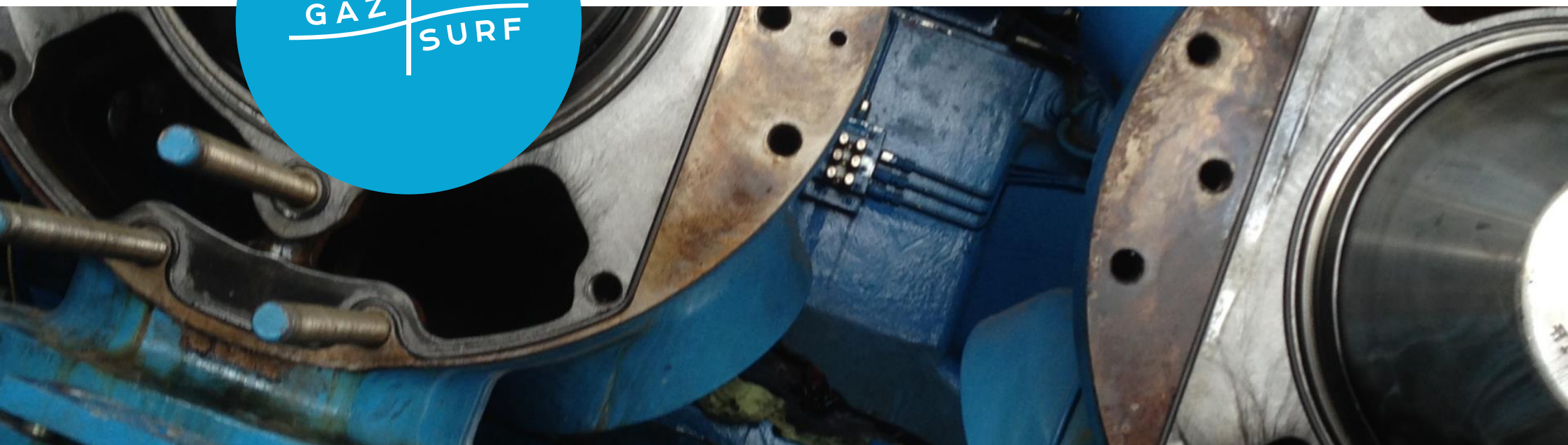
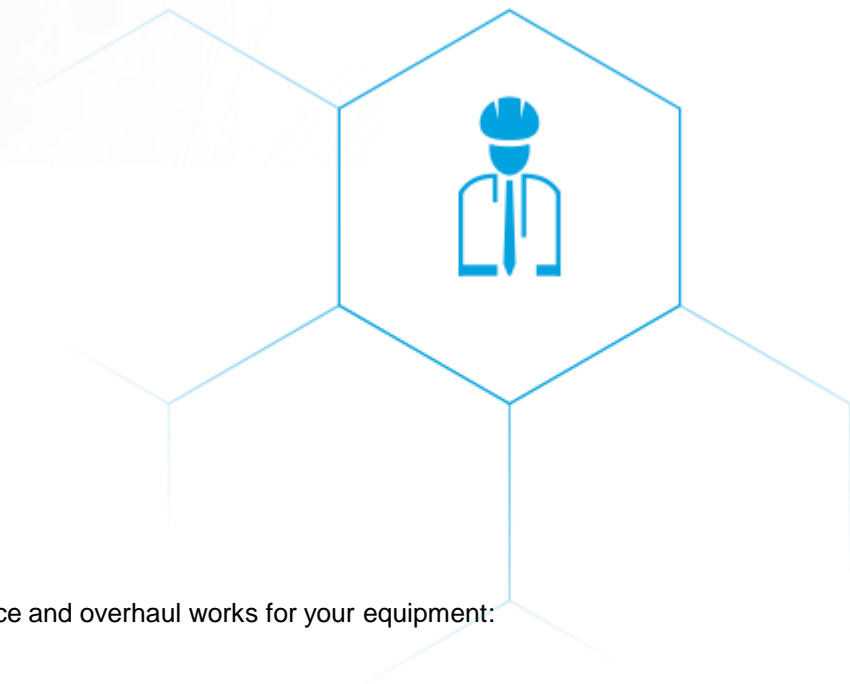


# SERVICE WORKS





## Scope of Service Works

A professional team of GazSurf field engineers is ready to provide a full scope of service, maintenance and overhaul works for your equipment:

- gas treatment and gas processing units
- air separation units and cryogenic equipment
- compressors and pumps

We've picked the most experienced field engineers for our service team. Each has serviced complex mechanical equipment, processing units and industrial plants for at least 10 years in different fields.

GazSurf is offering its servicing capabilities for customers in the field of oil and gas, energy and metallurgy industries as well as for process equipment in chemical, glass factories.

Our field technicians are licensed and certified to perform service works on equipment by largest vendors, Their knowledge is regularly renewed and kept up do date with the latest developments by attending training programs at the vendors workshops and facilities..

GazSurf specialists are experts when it comes to operating in different regions of Russia, CIS countries and abroad.





## Category Gas Processing

Gazsurf implements full range of service works for gas processing plants including supervision of installation, start up and commissioning, hot commissioning, supervision during initial operation and aftermarket servicing.

We offer the following :

- process analysis and optimization in the field
- vessels inspection
- pipeline inspection
- compressor equipment diagnostics
- instruments system inspection and diagnostics
- control system inspection and diagnostics (software and hardware)
- spare parts and consumables procurement
- customer staff training, including training at the vendors facilities

In addition to the above, GazSurf collaborates closely with the customer to work out the optimal way to procure and deliver spare parts and consumables both originally manufactured by vendor and local analogues when applicable.





## Category Air Separation

There is a separate division within GazSurf field service department responsible for specializing on air separation units and cryogenic equipment installation supervision, commissioning, maintenance and diagnostics works.

We offer the following :

- process analysis and optimization of air separation in the field
- chillers inspection and diagnostics
- purification unit inspection and diagnostics
- compressor equipment diagnostics
- turboexpander unit and lube oil system inspection and diagnostics
- cryogenic vessels and gasifiers inspection
- air separation column inspection
- cryogenic pumps inspection
- air and water cooling systems inspection and diagnostics
- instruments system inspection and diagnostics
- control system inspection and diagnostics (software and hardware)
- overhauls and maintenance supervision and implementation

In addition to the above, GazSurf procures and supplies all spare parts and consumables for the air separation units and related equipment.





## Category Compression

One of the leading categories of GazSurf service works is technical service of air and industrial gases compression.

We offer the following :

- procurement, spare parts and maintenance works choices for our customers compressors consultancy
- installation supervision, start up and commissioning works
- operation parameters fine tuning
- compressor diagnostics
- vibrations diagnostics and pneumatic testing
- warranty and aftermarket maintenance and service for compressors
- customer staff training

GazSurf also procures and supplies all spare parts and consumables for: Ajax, Ariel, Cameron, Sertco, GasJack, Caterpillar, Waukesha, Mitsui, Kaezer, Atlas Copco, Haffi, Sullair, LMF, Siemens compressor equipment.





## Category Spare Parts and Consumables Supply

Gazsurf is an official distributor of QB Johnson Manufacturing, Inc., Suzhou Oxygen Plant CO., LTD (SOPC) and Ingersoll Rand Cameron in Russia and CIS countries.

We offer:

- optimal prices
- flexible delivery terms
- trouble-free logistics
- warranty and aftermarket service
- spare parts and consumables from our Moscow warehouse



**GAZSURF ENGINEERING COMPANY**  
LATEST IN GAS PROCESSING

Supervision of installation | Startup | Scheduled Maintenance | Warranty and aftersales support  
Technical Audit and Diagnostics | Personnel Guidance and Training



## Start up works at Ken-Sary complex gas treatment unit

### Region

Republic of Kazakhstan

### Entity

150 mln scm per year complex gas treatment unit

### Customer

LLP «Ken-Sary» affiliate of Korean National Oil Corporation

### Year 2013

### Scope of works

Installation supervision, start up and commissioning; part of a turn-key project.

### Battery limits:

Compressor station including three (3) reciprocating Ariel compressors driven by 1253 kW Waukesha engines

Glycol regeneration skid

Chiller skid

Low-temperature separation skid

Fractioning column

Flare gas skid

NGL storage

Instrument air and nitrogen production skid

Control system





## GAS PROCESSING



### Modernization and technical servicing of Minnibay cryogenic unit

**Region**

Republic of Tatarstan

**Entity**

Cryogenic processing of dry stripped gas

**Customer**

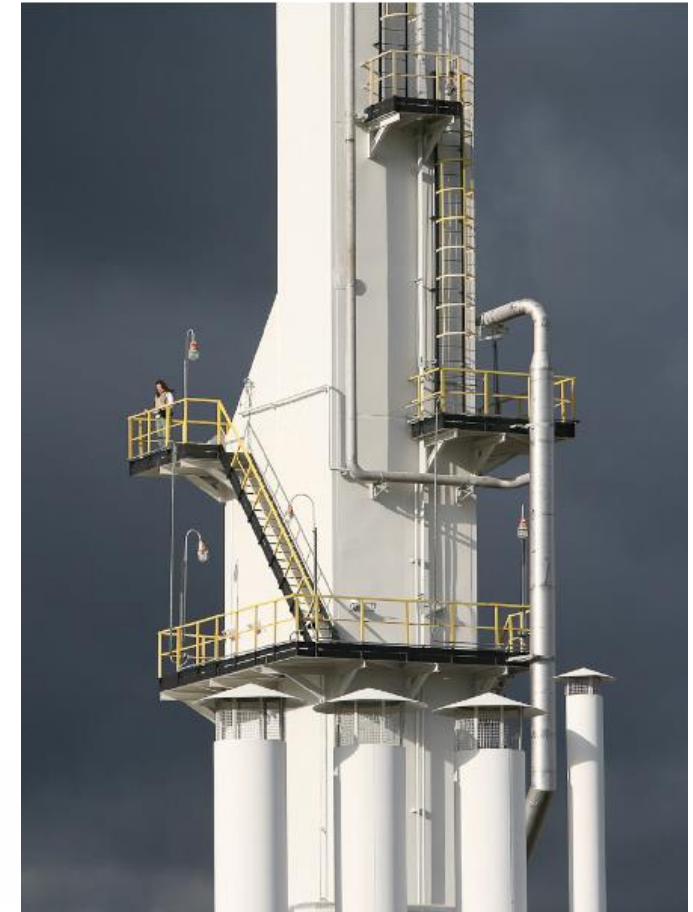
PAO «Tatneft»

Year 2014 – present

**Scope of works**

Annual scheduled maintenance of the unit, service and operational manuals revision, diagnostics of spare parts and consumables condition, procurement and supply of required spare parts and consumables.

The unit has been modernized in 2015 ethane production was boosted from 2948 kg/hour to 3836 kg/hour.







## «Kenlyk» complex gas treating unit service

### Region

Republic of Kazakhstan

### Entity

110 mkn scm per year complex gas treating unit

### Customer

LLP «South Oil»

Year 2012 – present

### Scope of works

Service and maintenance of the following equipment:

Inlet Separator

Compressor station based on two (2) integrated engine-compressors Ajax model DPC 2804 LE

Three-phase separator skid

Adsorption gas dryer skid

Low-temperature separation skid

Heat transfer media skid

De-ethanizer

De-butanizer

Fuel gas treatment skid

Instrument air treatment skid

Propane and light benzene storage

Complete control system





## «Baikonur» space launch facility air separation unit service

### Region

Republic of Kazakhstan

### Entity

Space launch air separation unit

### Customer

FGUP «ZENKI» - NPF «KOSMOTRANS»

Year 2016

### Scope of works

Annual scheduled maintenance on cryogenic air separation unit, manufactured by SOPC model KDON-1500 and Cameron centrifugal compressors TAE-50RC and TA6000 – one each.

Technical guidance and training of operation personnel at Customers request.





## Float Glass Factory air separation equipment servicing

### Region

Dagestan Republic

### Entity

Air separation unit of the Float Glass Factory

### Customer

AO «Caspian Flat Glass Factory»

### Year 2016

### Scope of works

Annual scheduled maintenance works on cryogenic air separation unit SOPC model KDN-2410/180Y, scheduled maintenance of purification unit, chillers, inter skid infrastructure, coolers, control system.

Technical guidance and training of operation personnel.





## «Nefteyuganskpromservice» air separation unit start up and commissioning works

### Region

Khanty-Mansiysk autonomous region

### Entity

Cryogenic air separation unit

### Customer

«Nefteyuganskpromservice» LLC

Year 2014 – present

### Scope of works

Startup and commissioning of air separation unit manufactured by SOPC model KDON and Cameron centrifugal turbo compressors model TA6000 (3 units) and TAE50 (1 unit).

Technical guidance and training of operation personnel.





## «NII KM» air separation unit start up and commissioning

**Region**

Moscow

**Entity**

Air Separation unit

**Customer**

«NII KM» ltd.

**Year** 2016

**Scope of works**

Startup and commissioning (including commissioning tests) of air separation unit manufactured by SOPC model KDON-750-800/30Y and Cameron compressor TA 6000.

Technical guidance and training of operation personnel.





COMPRESSION



## Minnibay Gas Processing Plant scheduled compressor maintenance

### Region

Republic Tatarstan

### Entity

Minnibay Gas Processing Plant

### Customer

PAO «Tatneft»

**Year** 2014 – present

### Scope of works

Annual scheduled maintenance of compressors, partial disassembly, spare parts procurement, supply and installation.

Compressor battery limit:

Ethane 3 stage horizontal six cylinders opposite compressors Superior RAM 54 of Cameron make driven by electric motors of 600 kW each. Two units.

3 stage horizontal six cylinders opposite compressors Superior WG 76 manufactured by Cameron driven by electric motors of 3500 kW each. Two units.



**GAZSURF ENGINEERING COMPANY**  
LATEST IN GAS PROCESSING

Supervision of installation | Startup | Scheduled Maintenance | Warranty and aftersales support  
Technical Audit and Diagnostics | Personnel Guidance and Training



COMPRESSION



## Technical maintenance of Adler Power Plant gas facilities.

### Region

Sochi

### Entity

Adler Power Plant

### Customer

PAO «OGK-2»

Year 2014 – present

### Scope of works

Annual scheduled maintenance of gas booster compressors and auxiliary equipment, spare parts and consumables supply and installation.

Maintenance battery limits:

Cameron gas booster compressors model 2R2MSGPB-3RC2G/30. Compression power 1300 kW each (4 units)

Instrument air station:

Gardner Denver screw type air compressors (4 units)

Gardner Denver compressed air dryers (2 units)

Gardner Denver filters(5 units)

INMATEC membrane nitrogen skid (2 units)

Gardner Denver Air-oil separator

Dearing methane-nitrogen screw compressor (2 units)



**GAZSURF ENGINEERING COMPANY**  
LATEST IN GAS PROCESSING

Supervision of installation | Startup | Scheduled Maintenance | Warranty and aftersales support  
Technical Audit and Diagnostics | Personnel Guidance and Training



COMPRESSION



## Turn-key servicing of gas compressor station for AO «NIS – Gasprom Neft»

**Region**  
Serbia

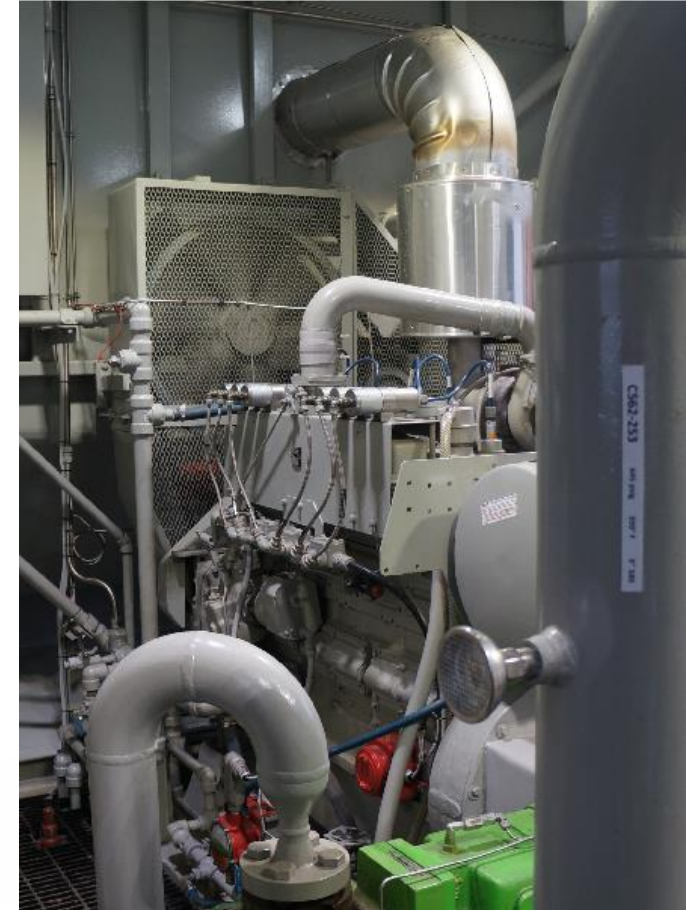
**Entity**  
Booster compression station for associated petroleum gas with high CO<sub>2</sub> content treating plant

**Customer**  
PAO «Gasprom neft» - NIS

**Year** 2014 – present

**Scope of works**  
Process equipment supply, supervision of installation, start up and commissioning, Technical guidance and training of operation personnel. Warranty and aftermarket service.

**Battery limits:**  
Compressor station based on 3 stage reciprocating Gimini compressor model H304 driven by Cummins GTA855 gas engine 286 h.p. @ 1800 rpm.



**GAZSURF ENGINEERING COMPANY**  
LATEST IN GAS PROCESSING

Supervision of installation | Startup | Scheduled Maintenance | Warranty and aftersales support  
Technical Audit and Diagnostics | Personnel Guidance and Training





## Startup and commissioning of gas lift compressor station at Keymir field

### Region

Turkmenistan

### Entity

Gas lift compressor station

### Customer

«Turkmenneft» state

### Year 2013

### Scope of works

Installation supervision, startup and commissioning, software development for logistics controllers MARK6.

Compressor station battery limits:

Three Nuovo Pignone centrifugal gas compressors driven by 25 000 kW GE gas turbine.





COMPRESSION



## «Kirishineftegasorgsinthez» commissioning

### Region

Kirishi city, Leningrad Region

### Entity

Oil processing unit

### Customer

«Kirishineftegasorgsinthez» LLC

### Year 2012

### Scope of works

De-conservation and inspection of 18 compressor units upon installation after arrival, unloaded start up, readiness for startup inspection and testing, 72-hour run test, commissioning.

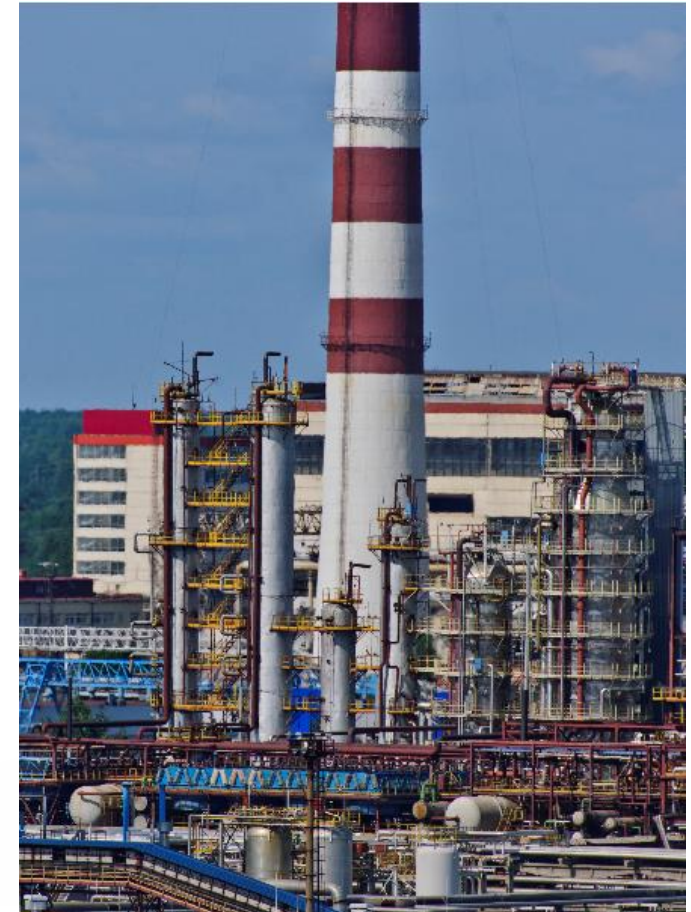
#### Compressor station battery limits

SIAD MI reciprocating gas compressor driven by a 450 kW electric motor

LMF reciprocating gas compressors driven by 15 to 300 kW electric motors (11 units)

Mitsui E&S reciprocating compressors driven by 970 kW electric motors (3 units)

Thomassen Compression Systems reciprocating compressors driven by 9 150 kW electric motor (3 units)



**GAZSURF ENGINEERING COMPANY**  
LATEST IN GAS PROCESSING

Supervision of installation | Startup | Scheduled Maintenance | Warranty and aftersales support  
Technical Audit and Diagnostics | Personnel Guidance and Training





## Startup and commissioning of the Air Separation compressor for «KasZink»

**Region**

Republic of Kazakhstan

**Entity**

Ust-Kamenogorsk metallurgic facility air separation unit

**Customer**

PAO «Cryogenmash»

**Year** 2015

**Scope of works**

Supervision of installation, startup and commissioning works on Cameron compressor model 3MSGEP - 16/15.

Technical guidance and training of operation personnel at Customers request.





COMPRESSION



## Startup and commissioning of the Air Separation pumps for «KasZink»

### Region

Republic of Kazakhstan

### Entity

Ust-Kamenogorsk metallurgic facility air separation unit

### Customer

PAO «Cryogenmash»

Year 2016

### Scope of works

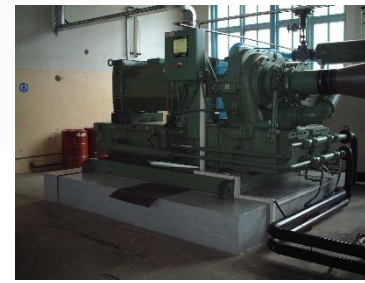
Supervision of installation, startup and commissioning works on centrifugal and reciprocating cryogenic pumps of liquid oxygen and argon (7 units).

Technical guidance and training of operation personnel at Customers request.



**GAZSURF ENGINEERING COMPANY**  
LATEST IN GAS PROCESSING

Supervision of installation | Startup | Scheduled Maintenance | Warranty and aftersales support  
Technical Audit and Diagnostics | Personnel Guidance and Training



## Annual scheduled maintenance on Kamyshinsky glass container factory

**Region**  
Kamyshin

**Entity**  
Glass container factory compressor station

**Customer**  
AO «Kamyshinsky glass container factory»

**Year** 2016

**Scope of works**

Annual scheduled maintenance of compressors and auxiliary equipment, spare parts and consumables supply and installation.

Compressor station battery limits:

- Cameron compressors model TA6000 (3 units)
- Cameron compressors model TA3000 (2 units).
- Evapco cooling towers (3 units)
- Compressed air chillers (5 units).





COMPRESSION



## «EVRAZ ZSMK» compressor scheduled annual maintenance

### Region

Novokuznetsk

### Entity

Oxygen plant of Novokuznetsk metallurgical plant

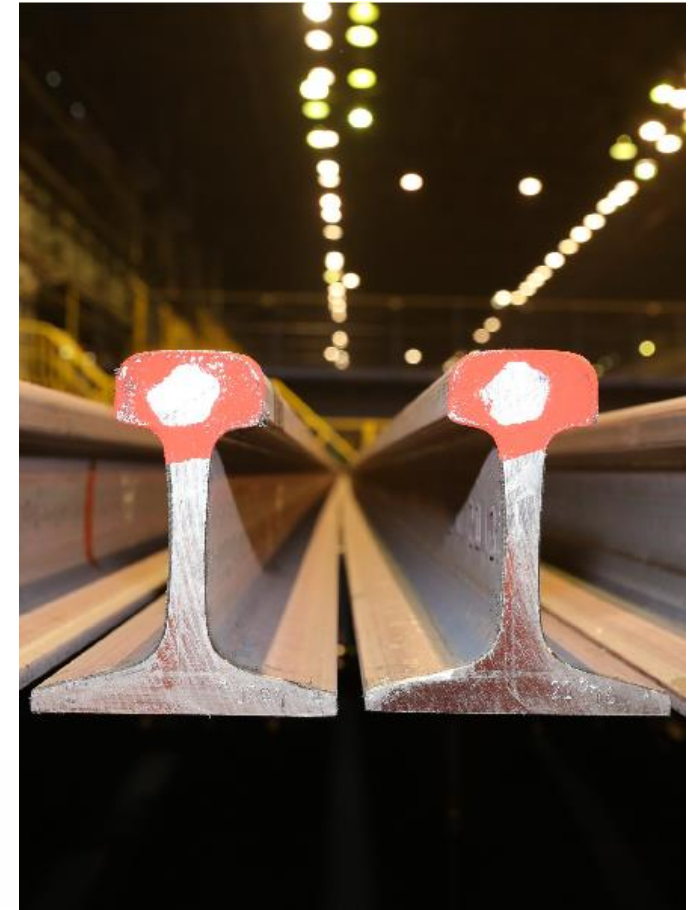
### Customer

PAO «EVRAZ ZSMK»

### Year 2013

### Scope of works

Annual scheduled maintenance of Cameron model 4R2MSGEP+3ARC/30 booster compressor and auxiliary equipment, spare parts and consumables supply and installation. Technical guidance and training of operation personnel at Customers request.



**GAZSURF ENGINEERING COMPANY**  
LATEST IN GAS PROCESSING

Supervision of installation | Startup | Scheduled Maintenance | Warranty and aftersales support  
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COMPRESSION



## «Irkutsk oil company» compressor station complex inspection

### Region

Irkutsk region

### Entity

Gas refill compressor station

### Customer

«Irkutsk Oil Company» LLC

### Year 2015

### Scope of works

Telemetric and supersonic inspections, NDT, compressor failure analysis.



**GAZSURF ENGINEERING COMPANY**  
LATEST IN GAS PROCESSING

Supervision of installation | Startup | Scheduled Maintenance | Warranty and aftersales support  
Technical Audit and Diagnostics | Personnel Guidance and Training



COMPRESSION



## Glass factory compressor station complete servicing

### Region

Seversk

### Entity

Glass factory compressor station

### Customer

«Seversk glass factory» LLC

Year 2014

### Scope of Works

Annual scheduled maintenance of compressor and auxiliary equipment, spare parts and consumables supply and installation. Technical guidance and training of operation personnel.

Compressor station battery limits :

Cameron centrifugal air compressors TA3000 (2 units), TA2000 (1 unit).

Hirose refrigerator dryer model QSR280.



**GAZSURF ENGINEERING COMPANY**  
LATEST IN GAS PROCESSING

Supervision of installation | Startup | Scheduled Maintenance | Warranty and aftersales support  
Technical Audit and Diagnostics | Personnel Guidance and Training





COMPRESSION



## Glass plant compressor station overhaul and maintenance

### Region

Tver

### Entity

Glass container plant compressor station

### Customer

«Tver glass container plant»

### Year 2013

### Scope of works

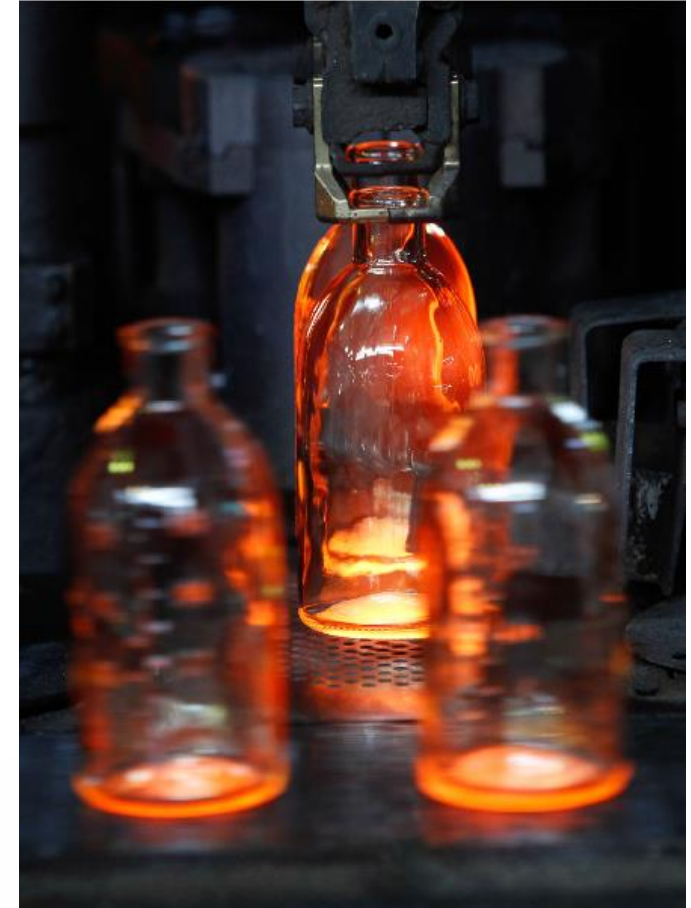
Annual scheduled maintenance of compressor and auxiliary equipment, spare parts and consumables supply and installation. Technical guidance and training of operation personnel.

Compressor station battery limits:

Cameron centrifugal air compressors Cameron TA3000 (3 units)

MTA refrigerator dryer model MG190W.

COES adsorption dryer model DRE/E750.



**GAZSURF ENGINEERING COMPANY**  
LATEST IN GAS PROCESSING

Supervision of installation | Startup | Scheduled Maintenance | Warranty and aftersales support  
Technical Audit and Diagnostics | Personnel Guidance and Training

THANK YOU FOR YOUR TIME!



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LATEST IN GAS PROCESSING