



#### ABOUT THE COMPANY

Today "Avangard Stroy Trest" works and develops successfully in the areas related to the design and construction of "turnkey" power facilities, power engineering, oil and gas, petrochemical and other industries, objects of civil and industrial infrastructure, as well as the manufacture and installation of equipment, metal costuctions, hardware.



During its acting more than 200 building objects were implemented successfully by the "Avangard Stroy Trest" Ltd. in the 6 Federal districts of the Russian Federation.

The company is engaged in construction of industrial and civil objects in various regions of the Russian Federation, including the north. "Avangard Stroy Trest" Ltd. has access to execution of design and construction and installation works on the most dangerous and technically complex capital construction.



### **SERVICES**

The company "Avangard Stroy Trest" is ready to offer cooperation in the following formats:



**GENERAL CONTRACTING** 



**DESIGN WORKS** 



**ENGINEERING SERVICES** 



CONSTRUCTION AND INSTALLATION WORKS



**COMMISSIONING WORKS** 



SERVICE MAINTENANCE



PROCUREMENT (SUPPLY OF MATERIALS AND EQUIPMENT)

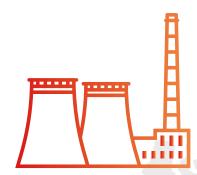


PROJECT MANAGEMENT



# CONSTRUCTION PROJECTS

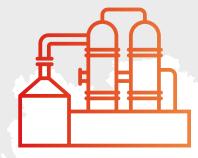




Heat power objects (stationary boilers, modular boilers of factory assembly, experimental mobile units, IHU, CHU)



Infrastructure objects of gas and oil refining



Manufacture and installation of equipment, metal structures, metal products for industrial and civil use



Engineering and technological networks,
process plants in the petrochemical and other
industries

# HEAT POWER CONSTRUCTION

The main feature of the heat power objects, which are built by "Avangard Stroy Trest" Ltd., is the high level of automation of control systems, due to which the economic effect is achieved.





Region: North-West Federal District, St. Petersburg, Leningrad Region Заказчик: "Peterburgteploenergo" Ltd.

For several years the company "Avangard Stroy Trest" participated in the Address city program on construction and reconstruction of of heat supply facilities in St. Petersburg, including the historic city center.

The complexity of the conduction of demolition, earthworks, installation works has been associated with the specific location of the heat sources, particularly in the area of dense historical buildings of the city. This situation required a maximum correctness in the choice of methods of execution of works to ensure the complete safety of the objects of cultural heritage. There is a large number of remarkable objects, noteworthy from the point of view of a particular arrangement of the production work areas, the uniqueness of the technical solutions in the construction, the situation of uncomfortable conditions for the execution of construction and installation works, as well as the difficulty of maintaining green spaces in the money box of the company's realized projects.

The company also participated in the realization of the Address construction program and reconstruction of the power system of the Ministry of Defense of the Russian Federation. The main goal of the program is the reconstruction of heat supply systems of buildings and structures belonging to the military units.

During the period of cooperation with "Peterburgteploenergo" "Avangard Stroy Truest" Ltd. sold more than 80 construction projects.













Region: North-West Federal District, Republic of Karelia

Customer: "Peterburgteploenergo" Ltd.

In 2013 the company "Avangard Stroy Trest" completed reconstruction and modernization of heat and power facility in the town of Sortavala Republic of Karelia, including the boiler, gas-fuel oil facilities, unloading and storage of heavy grades of oil. Also as part of the project the reconstruction of railway tracks and platforms for draining oil was produced.

The boiler's capacity is 45 MW. The object is operated on residual fuel oil M-100, the volume of the fuel economy is 1500 m3. When unloading the fuel the modern Russian system of the lower drain oil from the w / e tanks "Whirlwind" ("Virkhr"), which excludes the probability of a spil,l is used. At the facility installed local treatment facilities for surface cleaning oily water.



Object's location: Antarctica

Customer: CJSC "Construction and Installation Administration 2 of the Trust 16"

In 2010 the company made a number of works on designing, manufacturing and delivery of set of built-in automated equipment of diesel heat power source with the capacity of 2x200 kW for the Russian Antarctic station "Progress". The heat source is designed for use as a peak heat source for the consumer needs of Antarctic wintering complex "Progress".

The main source of electric heating of the facility is an existing automated DPP with heat recovery system. An additional heat source is designed for the reheating of the coolant when the heat from the waste heat exchangers DPP system is not enough to ensure an optimal temperature of the customer's heat supply.

Regulation of the heat source is carried out by an automation system, which uses the supplied Weather-compensated control algorithms controller. The heat source works in an automatic mode, the equipment operation data transmission is provided by an integrated security and an automation system of the heat source. Scheduling system allows to control the object's work from anywhere in the world.





Region: Yamalo-Nenets Autonomous District, pos. Sabetta

Customer: OJSC"Yamal LNG"

In 2016 the company "Avangard Stroy Trest" has completed the complex of works on creation of pilot heating plant and heated quay wall of Sabetta port. This project is the first unique experience in creation of the plant for the controlling the melting of ice in the area, located above the Arctic Circle.

The plant provides a set of measures to control the thickness of the ice at the berths OPP during construction LNG plant on the project: "The construction of a seaport objects near the settlement. Sabetta on the Yamal Peninsula, including the creation of a navigable approach channel to the Gulf of the river Ob," within the framework of development of the Yuzhno-Tambeyskoye condensate field.

The scope of works includes design works, manufacturing of an experimental mobile facility for heating the sea water on the basis of a semi-trailer, the installation of sea water intake system with the installation of undewater pipelines and the preparation of the site in berths coupling angle for the sea water heating unit in the territory of Sabetta port. The unit capacity is 3.5 MW. The installation works were carried out in the conditions of the Arctic climate zone, and in the conditions of permafrost seasonal thawing, where the duration of the ice period is more than 8 months. Installation of the underwater part of the mobile ice formation control system was carried out taking into account the intensive mooring of vessels to the berths. During the period of the experimental unit the studies and the measurements were carried out by the State Scientific Center of "Arctic and Antarctic Research Institute" and the French oil and gas company "Total" to create a model of the efficiency of the unit with the increased capacity of about 350 MW.





# ENGINEERING NETWORK

The company "Avangard Stroy Trest" has a serious experience in the design,, reconstruction, construction of such engineering networks and systems as:

- HEAT NETWORKS;
- WATER SUPPLY, SEWERAGE;
- ELECTRICAL NETWORKS
- WASTEWATER TREATMENT FACILITIES;
- PUMPING STATIONS;
- TECHNOLOGICAL PIPELINES.







Over the entire period of the "Avangard Stroy Trest"'s work more than 500 kilometers of various utilities at various sites were renovated and re-built.

So as part of the implementation of the heat supply object in Sortavala in the Republic of Karelia works on replacement of heating networks, which runs through the city were performed within 4 months. The total length of heating networks is 43 kilometers.

In 2015 the company completed the construction of in the territory of military units of the first state test cosmodrome "Plesetsk", located in Mirny in the Arkhangelsk region. The wastewater treatment facilities are the complex of engineering structures, process equipment and automation equipment in the sewage system, intended for the wastewater treatment from the pollution contained therein. Prior to construction many of the technical solutions that will do the job in a shorter time were optimized by the design department. Construction works were carried out without interfering into the household activities of military units.



Region: Khanty-Mansi Autonomous Okrug

Customer: OJSC «Surgutneftegas"

One of the first completed building projects is the construction of gas turbine power plants in Tyansk oil field located in the Khanty-Mansi Autonomous District of the Russian Federation.

The building of the energy complex for the independent power supply basing on the gas turbine principle solves several major problems. Firstly, it is the generation of electricity for their own needs and so for industrial ones. Secondly, it is the development of the waste heat for the heating of residential and technical buildings by the power plants. Third, it is the utilization of the associated gas during the oil production.

The gas turbine power plant is a high-tech facility for the production and supply of electricity and heat with the power of 19.5 MW. The plant is designed for the generation of 150 000 ths. KWh/year. Gas distribution and filtering system (natural and associated gas) allows minimizing of the critical parts and assemblies' wear. Automation and electronics allow the personnel of the plant to control all the processes occurring in the generator and in auxiliary buildings effectively.





Region: Southern Federal District, Taganrog

Customer: OJSC "Taganrog Shipyard"

For the needs of fuel oil transshipment terminal at the shipyard the company "Avangard Stroy Trest" completed the design, the construction and the commissioning of the boiler with the capacity of 30 tons of steam / hour (gas / fuel oil) and fuel oil facilities for the transshipment of fuel oil terminal in the territory of the shipyard. Automation of the boiler is made on the basis of freely programmable controllers, connected to a local network. Also the oil heating system was provided with an automatic return of the condensate in the framework of this project.







Region: North-West Federal District, Leningrad Oblast

Customer: "PO Kirishinefteorgsintez" Ltd.

Within the framework of the project on modernization of the heating system of the refinery the company carried out the works on the design, construction and commissioning works on the central heating unit "Sever" with the capacity of 30 MW.



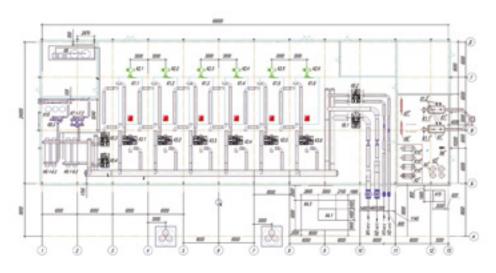


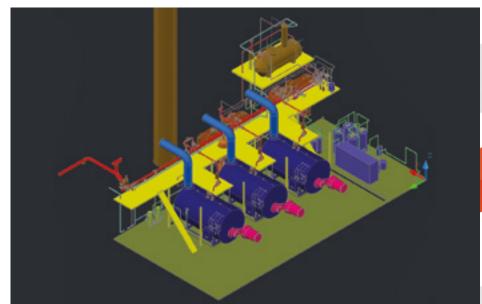


Region: North-West Federal District, Leningrad Oblast

Customer: OJSC "Nefthimproect"

In 2009 the company "Avangard Stroy Trest" performed the design work for the construction of thermal oil boiler with the engineering infrastructure and the installed capacity of 70 MW, intended for the technological needs of the Russian Marine Oil "Vistino" complex in the sea port of Ust-Luga. The boiler provides the heating of oil when draining from railway tanks to drain and loading racks, as well as for heating oil in the tank farm. The coolant is a thermal oil. The crude oil is used as the main fuel. The project has a positive opinion of the Moscow state examination.





# METAL CONSTRUCTIONS AND METALWARE FOR THE OBJECTS OF THE CIVIL AND INDUSTRIAL USE

The company has an opportunity to carry out manufacturing and installation of equipment, metal structures, metal products for various purposes on its own industrial base equipped with the necessary equipment and machinery.

The capacity of the metal processing workshop is up to 200 tons per month. The production area is equipped with two electric bridge cranes with the capacity of 20 tons each, lifting height is 12 meters. Also in the manufacturing workshop is equipped with machine-site, which allows to perform a variety of procurement operations, including cutting and bending of thick metal, drilling holes and rolling of sheet metal.

The "Avangard Stroy Trest" Ltd. company produces:

- flue pipes of different diameters;
- tanks, vats;
- a variety of metal constructions and metalware;
- large metal constructions.

The production of metal constructions and metalware is carried out as according to a customers' projects, and the company's projects, including the DD development.



## SPRAYING

Another company's business activity is spraying. This is an effective and progressive method of the deposition of one or more layers of concrete mortar or cement, sand and crushed stone or gravel and water onto the surface.

As a result of spraying of mortar or concrete onto the surface under the pressure the densified spraying layer properties of which differ from those of normal concrete or mortar is formed. Compared with conventional concrete spraying has a high mechanical strength, frost-resistance, water-resistance, better adhesion to the surface of the treated structure.

The spraying advantage over theother methods is the complete mechanization of the processes which typically require labor intensive, and the compound of transporting, placing and compacting of mortar or concrete in a single operation. This type of works "Avangard Stroy Trest" Ltd. performs at the facilities of SUE "Vodokanal of St. Petersburg".









"Avangard Stroy Trest" Ltd. is open to partnership proposals and is ready for a promising, mutually beneficial cooperation!



192012, 120, letter Б, Obukhovskoy Oborony Avenue, St. Petersburg Business centre "Novotroitskiy", offices 400-410



Phone: +7 (812) 380-8363 Fax: +7 (812) 380-8362



E-mail: reception@atrest.ru