



 **STEEL STRUCTURES**



STEEL STRUCTURES
SANDWICH PANELS
PREFABRICATED BUILDINGS



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FACTS AND FIGURES ABOUT US:



One of the leaders in the Russian construction industry in terms of **technical equipment and production capacity**



Steel structures manufacturing capacity: **1,500 tons per month**



Sandwich panels manufacturing capacity: **40,000 sq.m per month**



Total production area: **more than 10 hectares**



Optimization of metal consumption in the projects through the use of unique solutions based on **SIN-beam**

WHO WE ARE

A GRUPP Steel Structures is a modern production company who specializes in the manufacture of quality steel structures and sandwich panels, as well as the delivery of complete buildings made of components of its own manufacture. The Company is part of A GRUPP Corporation.

The A GRUPP Company started its activities more than 22 years ago and throughout the whole time it shows a positive development dynamics.

A GRUPP Corporation today:

- Sales of pipes and rolled stock;
- Design and commissioning of buildings and industrial facilities;
- Manufacture of steel structures and complete buildings;
- Development of business processes, regulations and regulatory frameworks for logistics complexes.



MISSION

Provide stakeholders in the construction industry with modern and efficient steel-frame based solutions using innovations in design and manufacturing. Manufacture products in accordance with high industry standards for quality and safety. Ensure open partnering relationships with customers at high level of collaboration satisfaction.

WE CARE ABOUT THE ENVIRONMENT

The Company's primary tasks:

- Protection of life and health of employees and environmental protection;
- Waste reduction through the introduction of modern technologies.

Occupational safety and environment policy is an integral part of sustainable development of the enterprise and is one of its priorities.

WE GUARANTEE THE QUALITY OF PRODUCTS

The Company implements a multi-stage Quality Control system at each stage of manufacturing through the use of specialized instrumentation, as well as Lean Manufacturing philosophy.

Performed works and manufactured construction materials and structures are provided with appropriate licenses and certificates, technical specifications.



Over 200 delivered facilities

Experience built in such large-scale projects as **Yamal LNG, ZapSibNeftekhim-2, Moscow Oil Refinery and others**

ENGINEERING

A GRUPP Steel Structures has its own design office, which takes advantage of BIM technologies to carry out construction designs and detail drawings using 3D technology.

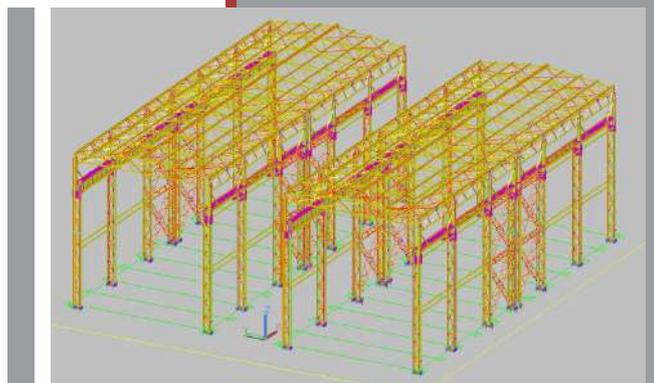
Design data come via network to production shops, which are equipped with CNC machines and directly manufacture building structures and materials.

At early stages of design the architectural planning decisions are brought into line with the structural features of applicable facade and roofing systems, as well as the regimen of load-bearing frame.

TEKLA 3D design software makes it possible to manage the site from FEED stage to the manufacture of structures.

Such approach yields visible results:

- No incoherence between the sections of the design;
- Automatic tagging of schemes and assemblies;
- Accurate determination of weight and dimensions of assembly parts;
- Full visualization of hookup diagrams and assemblies;
- High accuracy of elements match-up when hooking up.



In manufacturing of steel structures,
A GRUPP Steel Structures uses:



Automatic lines for cutting
and drilling of structural sections



Automatic sheet metal
cutting machines



Automated SIN-beam
production lines



Automatic line for shot blasting and painting
of welded structures, and other equipment

STEEL STRUCTURES

A distinctive feature of A GRUPP Steel Structures production is a high degree of automation of production processes, from planning and design to production itself. At present, all equipment and modern CNC machines are included into one automated local network for online transmission of large amount of graphic and design data from the design office to the equipment.

Programmable cutting and machining of holes in structural elements for subsequent assembly of beams at the construction site ensure high precision of building structures manufacture and high rate of construction and installation work progress.

The professionalism of certified professionals, who work with modern welding equipment and materials, as well as shot blasting of blanks are a guarantee of high quality welding and painting.

WELDED BEAM

In the manufacture of welded beams A GRUPP Steel Structures uses CORIMPEX line (manufactured in Italy). This equipment automatically welds the products and eliminates the beam's shrinkage distortion occurring when the metal is heated in the production process, which guarantees the correct geometry of finished product.

High quality of weld is ensured by the software control of welding process, as well as the use of ESAB brand professional welding materials.

The Company's production capacity allows manufacture of more than **600 tons of welded beams per month.**





SIN-BEAM

A GRUPP Steel Structures's factory of steel structures was the nation-first one to implement the manufacture of new type of innovative product: SIN-beam. SIN-beam is a light-weight welded steel structure made of carbon steel cold-rolled corrugated sheet welded to hot rolled steel flanges. This design solution endowed the product with a number of key competitive advantages:

1. Increased stiffness and stability

SIN-beams absorb more efficiently bending and static loads in comparison with I-beams.

2. Reduced metal consumption of a facility

SIN-beams manufacture requires less raw materials. Savings are 10 to 30% compared to hot-rolled I-beams.

3. Reduced assembly and installation cost and time

Specialized equipment ensures the speed of assembly and welding of steel structures and reduces the cost of manufacture. Also, when installing SIN-beams, additional angles and ties are not required.

4. They allow increasing the width of unsupported spans

SIN-beams produce less load on the structure due to lighter weight, and have increased stability in comparison with I-beams. Therefore, they are more appropriate in the construction of buildings with large spans.

5. Ease of delivery and savings on heating

Compared to trusses, SIN-beams are easier to deliver to the site, and they also save construction height, thereby reducing the heated volume of the building

CORROSION PROTECTION

A GRUPP Steel Structures provides comprehensive corrosion protection of products on an automated line for steel structures shot blasting and painting.

Key features of corrosion protection performed by the Company:

1. Finished structures, including the entire metal surface, as well as the surfaces of the welds and the heat-affected zone undergo cleaning process.

2. Time from cleaning to painting in the automatic line is 10–15 min.

3. Cleaning is carried out by 10 powerful turbines placed at various angles to ensure high quality of cleaning of all surfaces and high performance of structures cleaning process.

4. Painting is performed in an automated painting booth with a large number of spray guns located at different angles, which ensures high quality and performance of the painting process.

5. Automated line makes it possible to apply both primers and paints, ensuring the thickness of dry coating layer 20 microns and above.

6. Automated cleaning and painting line provides environmentally friendly structures shot blasting and painting processes that meets strict European and Russian environmental standards.

7. The number of employees who exercise control and operation of cleaning and painting line is kept to a minimum; dust and solvent cleaning processes are fully automated.

8. Steel structures shot blasting and painting line uses various schemes of anti-corrosion protection application.

9. The automation of processes and the possibility of using various schemes of primers and paints application ensure high quality of corrosion protection.



COMPLETE BUILDINGS

Production of complete buildings is a new target of A GRUPP Steel Structures development.

Types of manufactured complete buildings:

- on the basis of frame of joists;
- with use of SIN-beams.



Industrial production buildings



Terminals, warehousing and logistics complexes



Cultural and sports facilities



Administrative buildings and business centers



Shopping malls



Agricultural facilities



SANDWICH PANELS

Modern production and extensive experience in the manufacture of wall and roof sandwich panels allows the Company's specialists to offer consumers the highest quality products.

Production is based on Isowall and Hilleng fully automated high-performance lines. Innovative engineering solutions have significantly improved the products quality, and the production is absolutely environmentally friendly and does not harm the environment.

The use of software and hardware technologies makes it possible to automatically control the entire production process, track the main parameters of the line: speed, temperature in the working area, length of panels, number of panel within a single job, job number.

Sandwich panels manufactured by A GRUPP Steel Structures feature:

- optimal price-quality ratio;
- high degree of prefabrication;
- full set of construction object for installation;
- high quality of heat and noise insulation;
- increased fire resistance;
- resistant anti-corrosion coating;
- non-toxicity (compliance with food industry and medical facilities requirements);
- good elaboration of connections, joints and fasteners;
- elimination of thermal (cold) bridges.





SHAPED ELEMENTS, STRUCTURAL SECTIONS AND PARTS

The Company deals with a wide range of components used in the sandwich panels buildings and facilities construction. Main requirement for these structural elements is to ensure complete tightness of the joints and preserve the architectural integrity of the building appearance.

Assemblies comprise shaped components: zinc-coated cold-bent steel sections with polymer coating, which are manufactured by A GRUPP Steel Structures. Shaped elements configuration can suit almost any project requirement.

The Company also manufactures structural sections and parts with a thickness up to 3 mm and a length up to 6,200 mm.

Possible applications:

- load-bearing runs of enclosing structures;
- load-bearing purlins;
- frames for plasterboard;
- steel sections for cast-in-situ construction;
- parts for spacious steel structures (enclosures, cabinets, etc.) and other products.



FIRE DOORS

The Company manufactures both single-leaf and double-leaf doors. It is possible to manufacture doors with glass, which covers more than 25% of the door leaf.

Door leaf and frame are painted with any RAL color epoxy-polyester powder paint in Company's own painting booth.

Doors are made of zinc-coated sheet metal only, thus ensuring an unlimited service life of the doors.

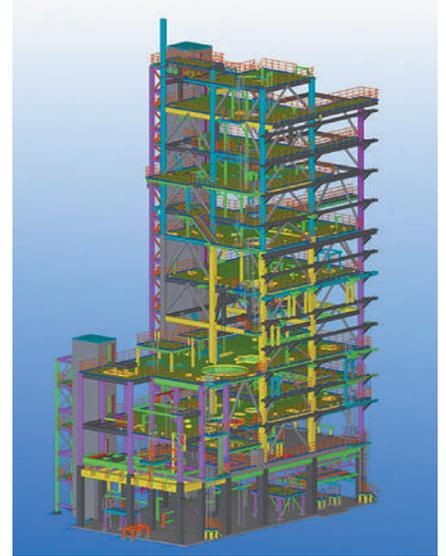
As a door leaf filler mineral wool mats ROCKWOOL (Poland) or PAROC Oy (Finland) are used to ensure high fire resistance



OUR PROJECTS

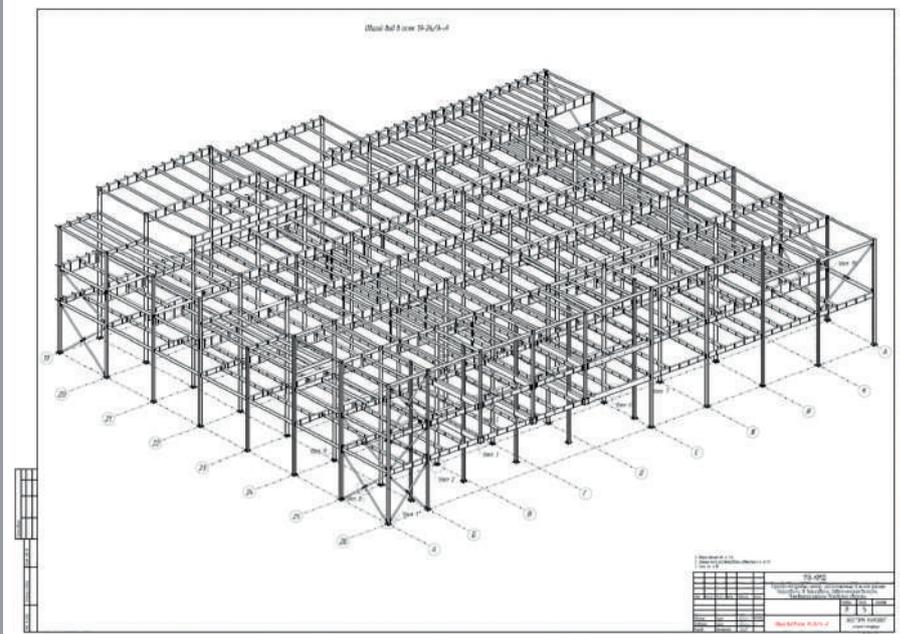
Type of facility:
polypropylene unit

Location:
West Siberian hydrocarbon
deep conversion complex,
Tyumen region, Tobolsk



Type of facility:
shopping and leisure center

Location:
residential area Borisovitchi,
village of Borisovitchi,
Zavelichenskaya volost,
Pskovski district,
Pskovskaya region

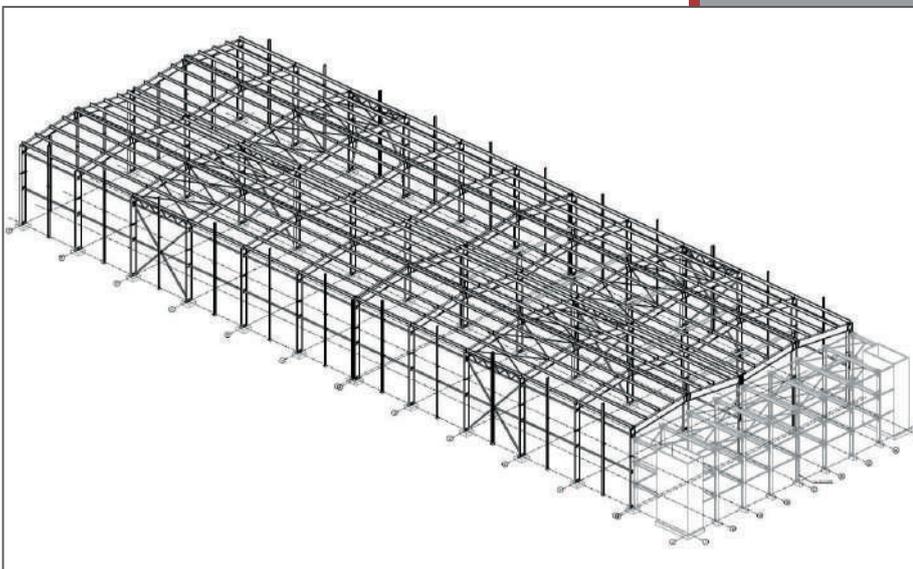


OUR PROJECTS



Type of facility:
production buildings

Location:
Admiralteiskie Verfi
enterprise premises,
Saint Petersburg

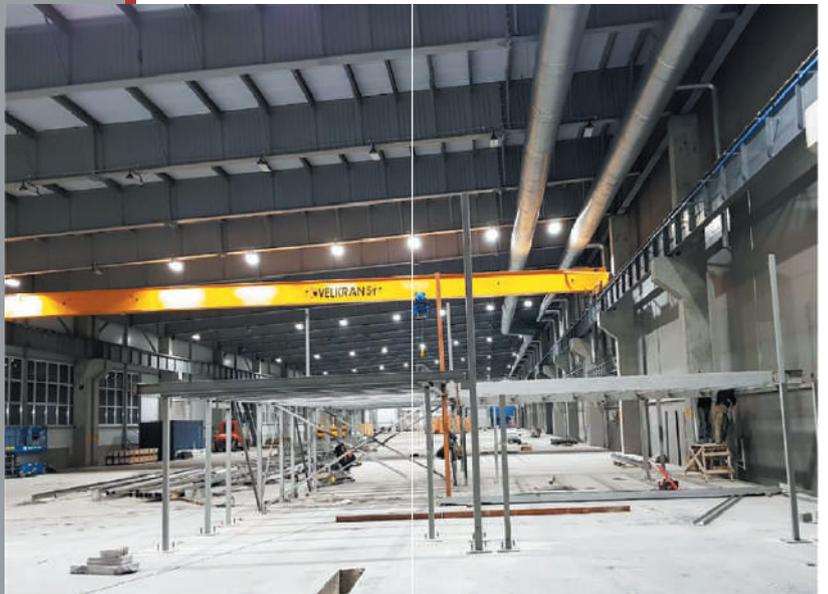
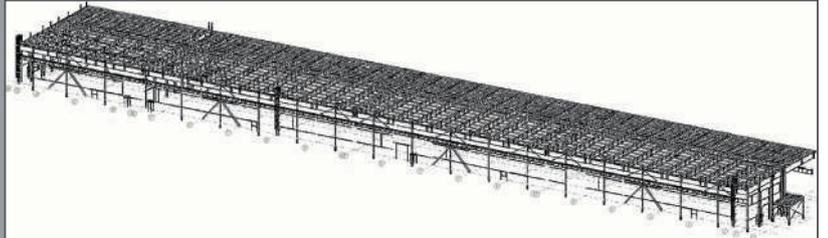


Type of facility:
pharmaceutical
production building

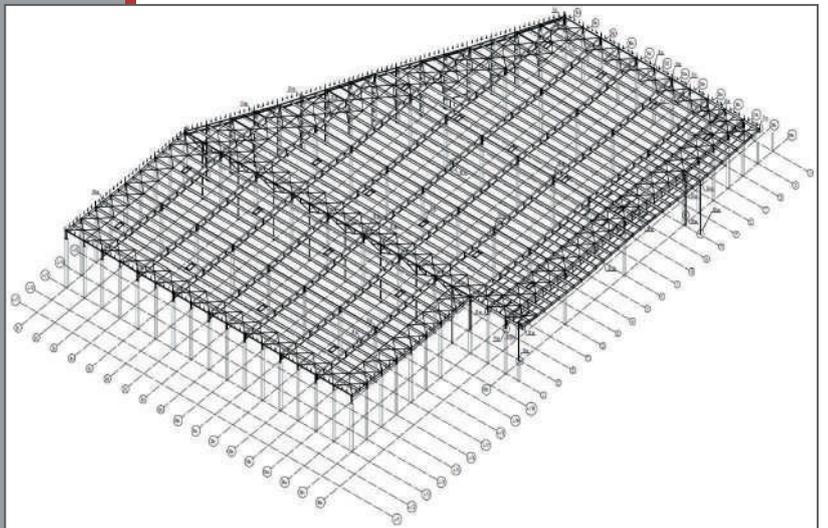
Location:
Togliatti

OUR PROJECTS

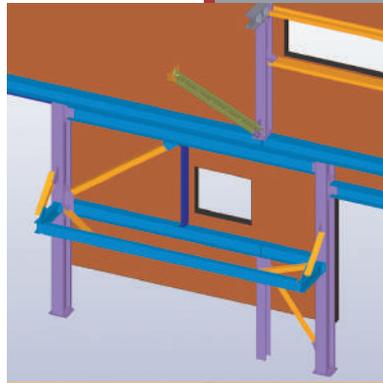
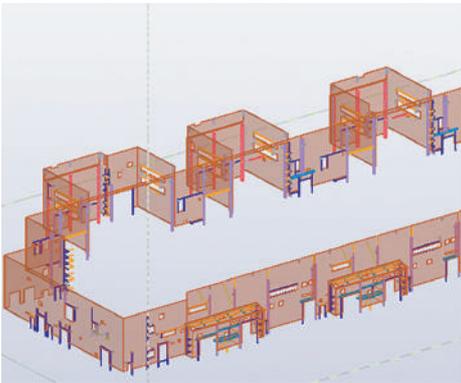
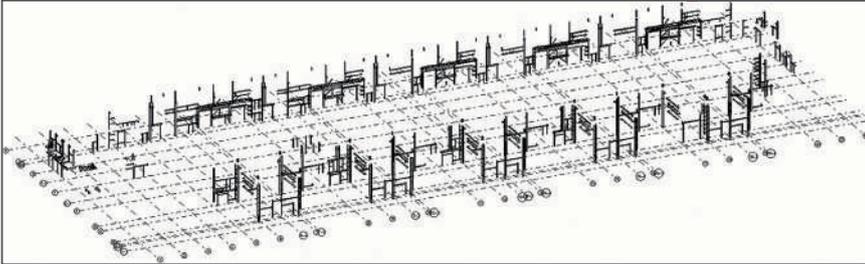
Type of facility:
building for magnetron
sputtering line with finished
products warehouse
and incoming utilities
Location:
Saratov



Type of facility:
warehouse building on the basis
of SIN-beam carcass
Location:
village of Fiodorovskoye,
Leningradskaya region

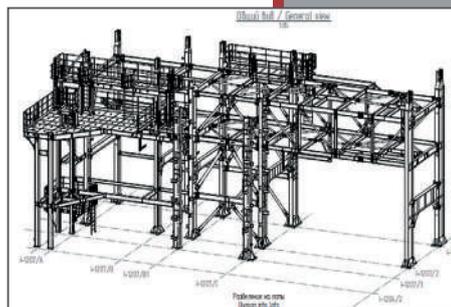
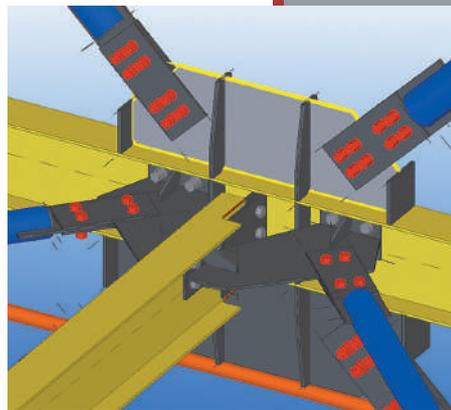
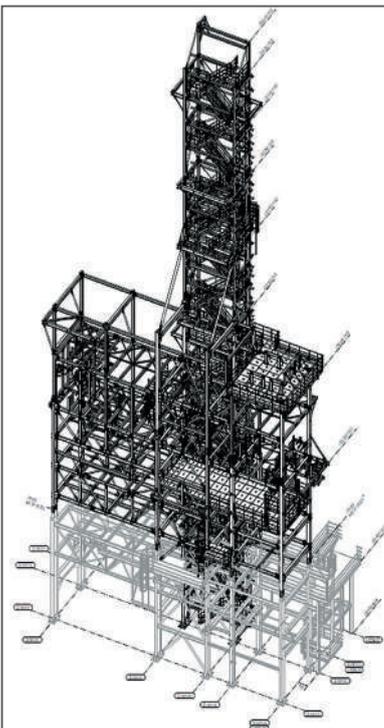


OUR PROJECTS



Type of facility:
polyethylene production building
Location:

West Siberian hydrocarbon
deep conversion complex,
Tyumen region, Tobolsk

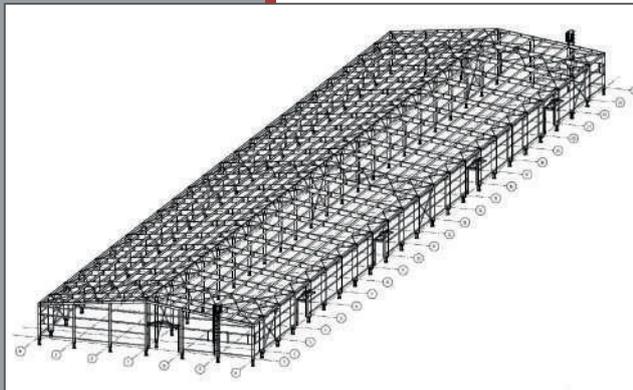


Type of facility:
independent stack-frame
for Moscow Oil Refinery
Location:

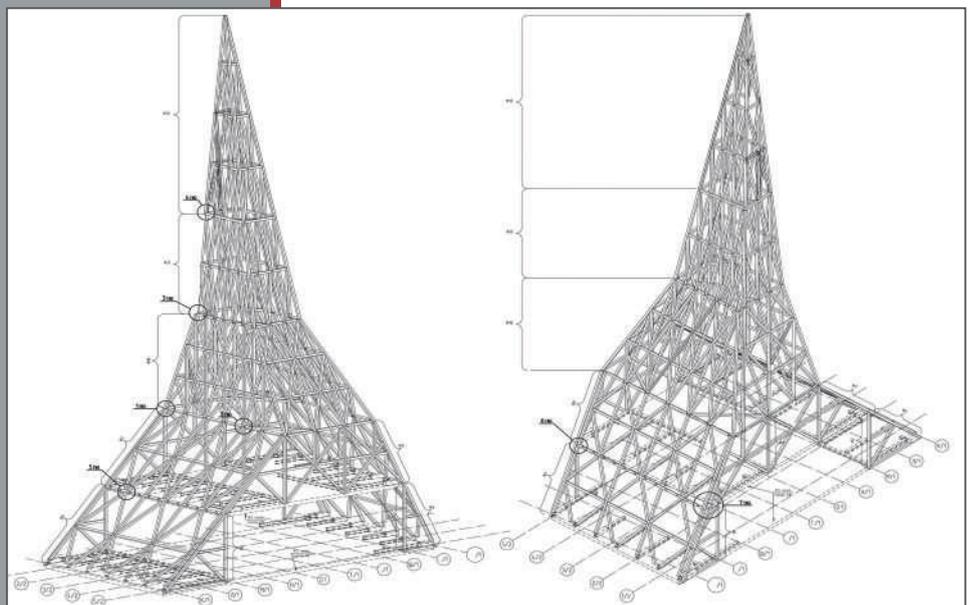
Moscow, Kapotnya

OUR PROJECTS

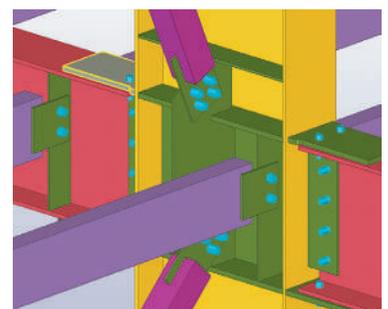
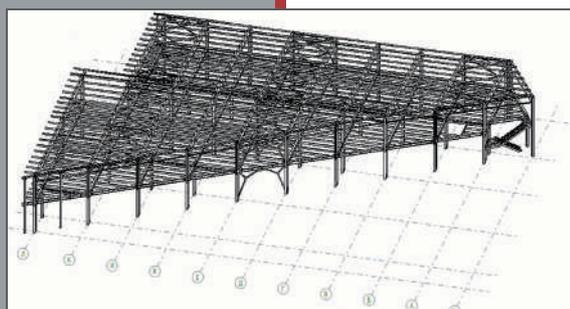
Type of facility:
warehouse building
on the basis
of SIN-beam carcass
Location:
Saratov



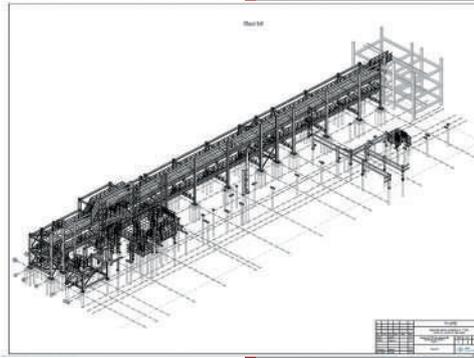
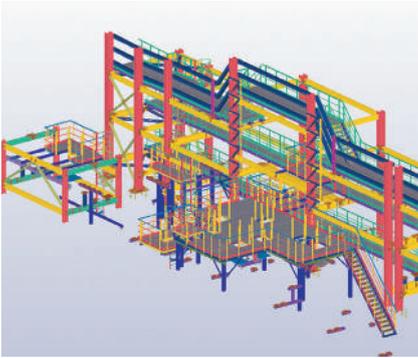
Type of facility:
spire for Golden City
residential complex
Location:
Saint Petersburg



Type of facility:
annex to production base
Location:
Samara



OUR PROJECTS

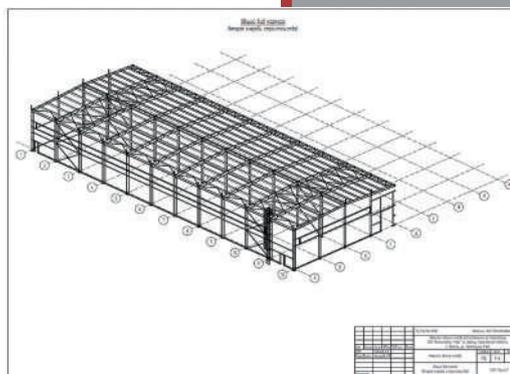
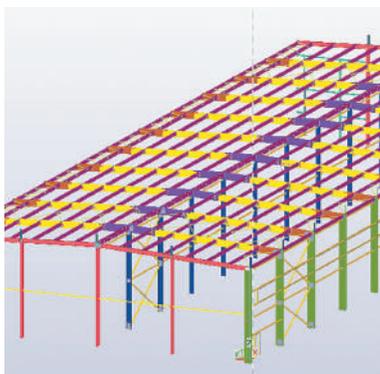


Type of facility:

oil field development
(trestlework)

Location:

R.Trebs oil field, Nenets
autonomous district

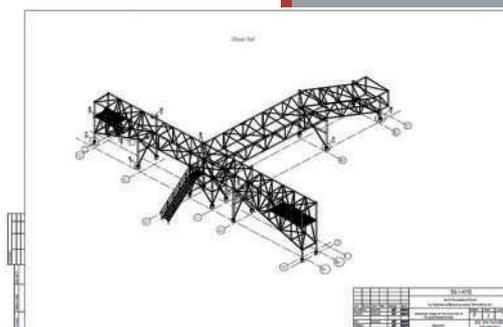
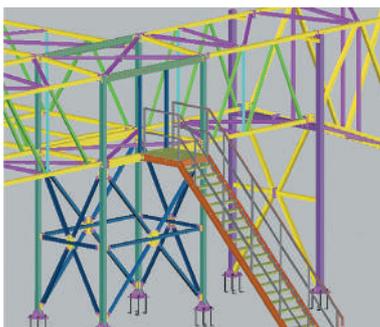


Type of facility:

warehouse building

Location:

Saratovskaya region, Volsk



Type of facility:

poultry farm
crossway connection

Location:

settlement of Pervomayskoye,
Vyborgsky district,
Leningradskaya region



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