



GAZPROM NEFTECHIM SALAVAT, RUSSIA

Key Facts

Company: Gazprom Neftekhim Salavat Design Institute

Website: www.sgnhp.ru

Industry: Industrial plant design, engineering, IT

Country: Russia

Products Used:

- Intergraph Smart® 3D
- Intergraph Smart Review
- Intergraph Smart Interop Publisher

The Gazprom Neftekhim Salavat Design Institute is a subsidiary of a JSC “Gazprom Neftekhim Salavat.” Once formed, the Design Institute took on the projects of the parent company. The key to success was the competence of the team, which hosted professionals with significant design experience. Due to the proactive attitude of the Institute head, all team members are constantly learning to work with new technologies, such as 3D design and process simulation technology.

GAZPROM NEFTECHIM SALAVAT CREATES A 3D PRODUCTION MODEL WITH THE HELP OF HEXAGON PPM TECHNOLOGIES

Gazprom Neftekhim Salavat Design Institute provides design for industrial and civil projects, engineering consulting, operational documentation development, and operation and construction support.

IDENTIFYING GOALS

JSC “Gazprom Neftekhim Salavat” has, for the Design Institute, set the goal of creating a 3D model of the production process. In addition, the Institute was expected to:

- Create a 3D model of the production process using Intergraph Smart® 3D technology, involving all design lines in order to gain as much information as possible
- Identify collisions
- Produce reports from the 3D model
- Create emergency simulators based on the 3D model

The Design Team had limited time to acquire the license, go through training, and implement the Smart 3D system. Bureau ESG, a systems integrator company, helped by providing a range of specialists to assist in the project.

OVERCOMING CHALLENGES

Recovering thousands of drawings and as-built documentation from the plants posed a challenge to engineers and other specialists from partner companies, such as NEOLANT and Hexagon PPM. The lack of an application among SmartPlant® Enterprise solutions for creating a general plot plan (a diagram which shows the buildings, utility runs, engineering, equipment layout, and other constructions of a project site) was challenging, because other 2D and 3D CAD tools had to be brought in and an interface with SmartPlant Foundation was created.



The isolated location of some objects and some nuclear power plant's (NPP) staff members' preoccupation with other duties also posed some challenges that were overcome with a holistic change in management and a multi-discipline collaboration approach.

REALIZING RESULTS

In less than two years the following tasks were completed:

- An expert group was formed at the Design Institute, which consisted of six different design specialists
- The team from Bureau ESG trained 20 Design Institute employees
- The Bureau ESG team initiated the task of establishing classrooms in order to have space for ventilation design and P&ID design
- Data migration from Tekla Structures with transforming ASCII code to UTF-8 was performed
- The process of 3D data migration from other Smart 3D models and PDMS with the use of technology Reference 3D was completed
- TX and OB reports were set up: P&ID drawings, bills of materials, pipe catalogues, isometric drawing and progress charts

The main goal was to implement the Smart 3D system, which helped to improve overall design quality as well as improve the quality of data exchange between the Design Institute and the customer. The customer had access to the 3D models in Smart Review format already at the design stage of the project, which helped coordinate wise technical decisions and decrease the error of risk at the stage of construction.

MOVING FORWARD

The Design Institute Deputy Head of Information Technologies, Olga Mehova, said, "Thanks to the support of Bureau ESG specialists we managed to complete the course on Intergraph Smart P&ID, Smart 3D and Smart Review products. We will continue to work with Bureau ESG as an Intergraph technologies integrator to achieve better information management for petrochemical and oil refinery plants at all stages of lifecycle."



ABOUT HEXAGON

Hexagon is a global leader in digital solutions that create Autonomous Connected Ecosystems (ACE). Our industry-specific solutions create smart digital realities that improve productivity and quality across manufacturing, infrastructure, safety and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at hexagon.com and follow us @HexagonAB.