



Specialists in Engineering Software

“Russian Oil giant saves engineering costs by using Plant-4D and 4D-Explorer Software”

Rosneft Oil Company, owned by the Russian State is a leading corporation in the Russian fuel and energy sector. The company's mission includes: prospecting and exploration of hydrocarbons, oil and gas extraction, crude oil refining, and marketing of gas and oil products in Russia and abroad. Rosneft Oil Company is one of the Russian State's main instruments regulating the national fuel and energy sector.

One of the company's research institutes Termnefteproject, is currently enjoying wide popularity. This institute specializes in the development of oil and gas fields, construction, reconstruction and technical refurbishment of industrial objects.



The Komsomolskoye field is a very interesting project developed by Termnefteproject research institute through using a 3D computer aided design system. It is situated in Yamal-Nenets Autonomous District where natural conditions



are extremely severe: permafrost, marshlands and an average winter temperature of -56°C .

The field is characterized by a unique geological texture - it is composed of 52 productive layers with 144 deposits. Ten layers contain gas, while the other 42 combine oil, gas and condensate. The oil-bearing stratum is 1,800 meters thick. There are no other fields in Russia with properties similar to those of Komsomolskoye.

Plans are to apply the most advanced development technologies at Komsomolskoye. They include, first and foremost, new drilling, casing and layer-stripping technologies, destined to provide higher yields. 30 Per cent of wells will be drilled horizontally, applying the gas-lift method of oil extraction, hydraulic layer-breaking with short and wide fractures and supporting internal layer pressure by synchronous/separated water pumping.

Termnefteproject research institute uses a computer-aided design system based on Autodesk, Consistent Software solutions and CEA Systems. This includes CEA's Plant-4D and 4D-Explorer Solutions Software.

The combination of CEA Systems, Autodesk, and Consistent Software solutions can be used for all design tasks, for example solving piping design in reference to the terrain model, or piping design inside buildings, etc...

Plant-4D is a unique data Object Oriented Plant design software tool, which can be operated without being restricted to a single CAD platform (works on AutoCAD/Microstation VR Viewers) or Database System (works on Oracle, SQL Server, Access).

The project documents schematics, drawings and bills of materials and also reports forms, which are produced automatically, based on CEA's Software. All the technical documentation is produced consistently and correctly. Clashing analyses and integrated calculation modules can produce better engineering solutions. All this improves the quality of engineering and design solutions in Rosneft's Termnefteproject research institute.



4D-Explorer is an asset management, data-mining tool accessing all plant information without the necessity of knowing the underlying data structure. It is the portal to all your projects and plant archives.



CEA Technology, a leading software developer in the field of engineering, construction and plant life cycle management, has successfully provided solutions globally to clients in the process and power industries. CEA develops applications, which will help you develop design information that is smarter, richer, and more interactive than ever.

Parts of this article are taken from the official website of Rosneft Oil Company: www.rosneft.ru



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