

Preparation of "as-built" documents according to the data of terrestrial laser scanning using PointCloud software in AutoCAD.



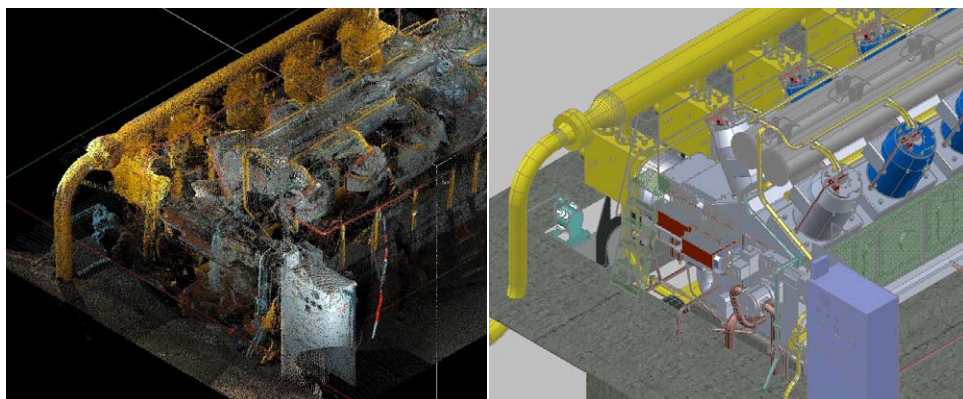
The technique of terrestrial laser scanning (TLS) was used for preparation of as-built documents of capital construction projects of OJSC "Gazprom". This technique is appreciably timesaving in terms of obtaining documents of "as-built" format. And the obtained 3D model can be used further in case of reconstruction, inventory procedures, land cadastre, monitoring and other tasks of information support of the whole life cycle of the projects.



Geodetic justification was created using GPS set of Trimble 5700 equipment. The scanning works were performed by means of 3D terrestrial laser scanner of Riegl LMS-Z210i series and digital camera NikonD100. To obtain complete information on the project, photo and video shooting was carried out.

Office processing of TLS data was carried out with the help of PointCloud Pro. Accuracy of decoding the digital model is ± 10 mm, grain size of an identified object – "up to an inch pipe". During creation of a digital model of the project, formation of parametric element base was carried out. This allowed saving time while decoding repeated elements of structures and equipment.

In the result of the office processing the following was obtained: 3D models of equipment, plot plan positions and the plot plan itself. The necessary documentation was prepared in compliance with the regulatory system.



PointCloud – easy-to-use device that ensures required accuracy of decoding being cost-effective.

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Task.

Preparation of "as-built" documents of capital construction projects of OJSC "Gazprom" to solve the tasks of management, expansion, reconstruction, inventory procedures, land cadastre monitoring and other tasks of information support of the whole life cycle of the projects.

Client / User

OJSC "VNIPGazdobycha", Russia
Website: www.vnipgaz.ru

Period

Beginning of field works –
March, 2007
Completion of the project –
August, 2007

Results

3D model of capital construction project was decoded. All the necessary documentation was prepared in compliance with the regulatory system.

Advantages:

- Integration with Autodesk applications.
- The product is easy to master.

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