Belarus

ACTIVITY REPORT 2014

Tunnelling Association of Belarus
13, Solomennya str. Minsk, 220088, Rep of Belarus

E-mail : metropr@metropr.by

JSC Minskmetroproject 2014

During 2014 the members of Belarussian Tunnelling Association actively participated in fulfilling project and building underground facilities in the Republic of Belarus and foreign countries.

On May 30th, 2014 one more section of Minsk Underground – an extension of First line from Petrovshcina to Malinovka station – was put into operation. General designer of this construction project is JSC Minskmetroproject, prime contractor is UE Minskmetrobuild, and the customer is UE Construction Directorate of the Minsk Underground.

The extension of this section includes one station and is 1853 meters long. After the launch of the section total length of Minsk Underground became 38 kilometres with the number of stations reaching 29. Currently Minsk metro system consists of two lines.

The construction of the newly built section of the First line of Minsk Underground took place during 2012-2014 in complex geological conditions:

- unstable sandy and clay soils (on the contact of sand with clay soils);
- boulders of various sizes;
- high groundwater level.

The new station was built by implementing cut and cover method with secant piles wall. Tunnel was built by using TBM.

Furthermore, in 2014 the construction of the third line of Minsk Underground was continued. Total length of this section is 4416 meters, including four stations. Preparatory works were conducted on the whole length of this section: relining of the communications out of the construction area, demolition of buildings, arrangement of construction site, organizing detour for city transport.

In addition, JSK "Minskmetroproject" made design documentation for underground construction in Moscow (Russian Federation) and Baku (Azerbaijan) terrestrial and underground facilities.

Educational activity

In 2013, a **new educational program** for students' training was adopted. This program aims at wider implementation of modern computer technology in educational and engineering processes.

Retraining of specialists. Engineers from JSK Minskmetroproject were the first employees of transport building organizations to successfully pass the training courses at Autodesk Revit. There were three groups, ten persons in each. Training was based in Educational centre Autodesk. The headmaster of this centre, Pastushkov V.G., is an associate professor at the Bridges and Tunnels Department of BSTU.

Master's degree students training. This activity is one of the highest priorities of the Bridges and Tunnels Department. 15-20 specialists graduate annually, many of whom work as engineers in tunnelling organizations.

Research & Development implementation

In cooperation with JSK Minskmetroproject, implementation of BIM technology in Tunnel design practice was started

R&D

Scientific support for designing the building constructed over operating tunnels on Smolenskaya STR.

Scientific support of designing the transport hub "Estimation of influence of transport hub on operating tunnels in the cross-section of the Nezavisimosti sq. and Filimonova STR."

Activity in the field of scientific and technological international cooperation.

The documents on cooperation with Russian company “Petrostroysistem” operating in the sphere of building, monitoring, and numerical modelling of transport facilities have been prepared and approved.

Also, the contracts and software license for the educational process and scientific activity with German company SOFiSTiK AG have been extended.

A programme for development of new technologies including elaboration of teaching materials for training and continuing education of specialist in construction sphere, using program complex Revit Structure Autodesk, Inc. USA, which manage live cycle of design process of construction (BIM technology), have been approved.