

Researchers of Turin Polytechnic University in Tashkent study the seismic resistance of buildings and structures.

In accordance with paragraph № 7 of the Decree of the President of the Republic of Uzbekistan dated July 30, 2020 № PP-4794 “On measures to radically improve the system for ensuring seismic safety of the population and the territory of the Republic of Uzbekistan” at Turin Polytechnic University in Tashkent was created a scientific and technical laboratory for the experimental study of buildings and structures.

In accordance with the Decree of the Cabinet of Ministers of the Republic of Uzbekistan “On the introduction of system for assessing the seismic resistance of buildings and structures and formation of electronic technical passports” on December 4-6, 2021, professors, researchers and specialists of the university with the help of special equipment collected all the necessary data to assess the seismic resistance of a 13-story house located on Alisher Navoi Avenue in Andijan. At the same time, a digital model of the building was created using a German-made Faro Focus M70 laser scanner. Three-dimensional data of the structure were obtained, which will be used to create a digital model using a special computer program (Lira CAD) and an analysis of seismic resistance with the necessary loads and parameters.

To determine the building’s response to external vibrations, accelerometers were installed on each of the four floors to measure seismic vibrations along three axes. In this way, data were collected to study the response of the building to

certain vibrations and external dynamic vibrations. Special equipment Metal Detector, Hummer Schimdt, Profometer were used to collect such data as the thickness of the reinforcement used in the building foundation, the thickness of the concrete foundation, the concrete grade.

Currently, the collected data are being analyzed by professors and researchers of the Scientific and Technical Laboratory for Experimental Research of Buildings and Structures at Turin Polytechnic University in Tashkent.