

DEFORMATION OF BUILDINGS OF A COMPLEX REGISTAN IN SAMARKAND (EXPERIENCE OF STUDY AND FORECASTING)

MAVLYANOV N.G., TURSUNMETOV R.A. Institute of hydrogeology of engineering geology. Tashkent, Uzbekistan.

In 1992 year in medressa Tylla-Kari - world known complex Registan the cracks in western wall and domes were updated. To 1993 the disclosing of cracks has reached 3 sm. our geophysical researches have shown, that most deformed western part medressa is constructed on covered ravine in loess soils. A level of earth waters traced on depth 16 m. Deformations were caused by non-uniform subsidence of basement because of leakage of water from systems of the water drain and of atmospheric precipitation.

In the bottom part of a zone of deformation on depth from 6 up to 10 m soils are characterized by low specific electrical resistance, i.e. «by capillary superconductivity», at the expense of development of shift deformations. The application of our technique has allowed to look after buried paleo-relief and natural drains to define anomalies of a field of humid soils of the basement dynamics of its development to predict places where possible subsidence and to recommend measures on reduction of damage and prevention of destruction of an architectural monument.