METHOD OF METROLOGICAL INSPECTION OF GNSS RECEIVERS OF A HIGH-CONNECTOR HEPS MONITORING SYSTEM

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The article presents a methodology for the metrological verification of GNSS receivers of a satellite geodesic monitoring system for a high-pressure hydroelectric station. The essence of the technique is as follows. At a distance of 3–10 km from the dam, a reference spatial basis is established, consisting of at least 5 points. Basis lines are measured by GNSS reference equipment. Then, in the static mode, the basis lines formed by the points of the basis and the verified equipment of the monitoring system are measured. A comparison is made between the calculated and reference values of distances and elevations of the spatial basis.

According to the results of the metrological verification of the GNSS receivers of the satellite geodetic monitoring system of a high-pressure hydroelectric station, the equipment errors within the tolerance. The proposed method for the verification of GNSS receivers of a satellite monitoring system for a high-pressure hydroelectric station can be used for metrological verification of GNSS receivers in monitoring systems for deformations of unique buildings and structures, as well as in networks of permanent operating base stations.

Key words: Global Navigation Satellite Systems (GNSS), metrological verification, verification technique, high-pressure hydroelectric power station, deformation monitoring, automated monitoring, reference space basis.

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