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NEW SEISMIC MONITORING SYSTEM FOR HYDROTECHNICAL CONSTRUCTIONS

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Abstract. We present methods and equipment for HPP safety control: seismic monitoring in the HPP area, dam state inspection, and turbine vibration control. The technical solution used have no analogues in the world. For the first time, the system allows combining these different observation kinds. The system is implemented at the Chirkeyskaya HPP (Caucasus). It provides a more economical and rational use of sensors in combination with new monitoring capabilities. As an illustration, we demonstrate a possibility of finding dangerous hydrodynamic phenomena in a remote hydroelectric turbine at an early stage.

Keywords: hydrotechnical constructions, hydroelectric dam, turbine, seismic monitoring, cavitation.