

T.GVELESIANI

**Monograph: "MODELING OF EXTREME HYDRODYNAMIC (WAVE) PROCESSES
IN HYDROWORKS RESERVOIRS AND PREVENTION OF IMPACT ON
ENVIRONMENT"**

Tbilisi. "Universal". 2010.

The presented work by Prof. T.Gvelesiani is a fundamental research of the important problem connected with mathematical analysis and prognosis of possible disturbance and catastrophe results of environment ecological balance of energy and other purpose hydroworks located in mountain regions with consideration of extreme hydro dynamic impact.

In this respect the book studies in detail hydro dynamic (wave) processes which are generated in reservoirs in such extreme conditions as powerful earthquakes, landslides, mud flows, floods, etc.

Numerical realization of new mathematical models elaborated by the author enable precise calculation of the intensity of hydro dynamic impact both on reservoir bank line and on a dam. In the latter case there is determined pulse wave load value on dam as well as are predicted the parameters of stream flow on its crest and are evaluated threats caused by this flow in downstream water.

The book proposes measures of avoiding or reduction of hydrodynamic impact threat in emergency situations including use of wave damping floating system.

The book consists of 10 chapters and contains 355 pages (including graphical material presented on 56 pages). Each chapter contains calculation examples. The book will be of great use for scientists, engineers and governmental organizations in provision of hydroworks security conditions in mountain regions and in solution of environmental problems, it will also be of interest for master and doctoral candidates.

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