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The project "A concept for constructing metrological infrastructure in underwater acoustics area at the Central Office of Measures" — assumptions and scope of the project tasks

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Abstract

The paper deals with the preparatory study concerning the project devoted to a constructing metrological infrastructure in the Central Office of Measures (GUM) underwater acoustic area. The results of the considered project planning stage, that is experiment planning and research and administrative activities are presented. These results which determines the possibility of further research on the reported topic and contains the description of the necessary activities and research elements are shortly discussed. Presented activities are divided into two parts: research and administrative. Initial research, concerned determining the impact of local seismic disturbances on water-filled basins, which constitute an important element of the infrastructure being developed is shown. Subsequent research results focused on determining the appropriate sizes and shapes of research pools and covering them with sound-absorbing materials using finite element modeling methods and performing actual tests are presented. Next, the issues of the design of research pools, necessary research equipment for calibration of sensors and underwater acoustic equipment, and a mobile testing ground for testing the underwater acoustic field of ships in the Bay of Gdansk are discussed. Some of the aforementioned issues were supported by a survey addressed to potential users as a part of the business justification of the project. Finally, a preliminary characterization of the elements of the future research and construction infrastructure as well as determining the costs and deadline for its implementation, based on the development of a Functional and Utility Program and a Feasibility study for the project was elaborated. The project

schedule, developed in detail on the basis of preliminary research, received high marks from the reviewers of official evaluation body and was qualified for implementation.

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