

Permanent Energetic Management a Solution in Rehabilitation of Small Hydropower Plants

Victorita RADULESCU

Hydraulics, Hydraulic Machinery and Environmental Engineering
University POLITEHNICA of Bucharest

Bucharest, Romania

vradul4@gmail.com

Abstract — The paper presents an evaluation of the role, importance, and necessity of the rehabilitation for the main courses of small rivers, equipped with Small Hydropower Plants- SHP. The assurance of a proper management, in accordance with the local and specific conditions may provide a high efficiency, and a smaller time to recover the initial investment. The paper structured in six parts aims to highlight the importance of surveillance, designing, modeling, and efficiency of SHP, in the context of the sustainable development of the energy sector. For the local communities, private investors, social communities and local authorities, hydropower plants represent in many cases, the main source of energy. First is analyzed the efficiency of the local energetic infrastructure, in the current economic context. A presentation of the optimal solutions for designing and modeling, followed by the Demand Site Management-DSM is mentioned. The main factors that influence the optimum functioning of the SHP, correlated with the local conditions are introduced as the input-data. A briefly presentation of the numerical model is mentioned, with the main considered parameters. Some of the obtained results for a specific area will highlight the efficiency of the proposed solution, the real benefits of the combined tasks. The paper ends with some conclusions, and references.

Keywords — Engineering management, Micro-hydro power, Energy efficiency, Maintenance engineering, Numerical models

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