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# THERMAL SCIENCE

## International Scientific Journal

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### DEVELOPMENT A MICRO HYDRO POWER SCHEME AT THE WEIR ON BLACK TIMOK

#### ABSTRACT

The micro hydro power scheme (MHPS), as a practical realization of research project supported from Ministry of Science of the Republic of Serbia, is presented in the paper.

MHPS was constructed on the Black Timok (East Serbia) at the deserted weir. MHPS can be used as a model for other similar sites with extremely low head. On this way, the contribution to approaching to Directive EU for renewable energy sources was done. The results of project are summed in the paper. The method of turbine type selection by use of nomogram is presented. The results of dimensions scaling of existing smaller turbine are given. On the base of these results, the turbine of 5 times higher dimensions was designed and made. The results of estimation and measuring the parameters of this turbine are compared. Designed and constructed powerhouse of MHPS, which is jointed to existing weir, is described. The results of energy efficiency and ecological effects analysis of MHPS are given in the paper.

#### KEYWORDS

[micro hydro power](#), [turbine](#), [powerhouse](#), [distributed grid](#)

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#### REFERENCES [view full list]

1. Harvey, A., Micro Hydro Design Manual, Intermediate Technology Publications, Southampton Row, London, 2000
2. Saric, A., Jevtic, M., The Selection of Turbine and Generator for Micro Hydro Power Scheme (in Serbian), Electric Power Industry, 57 (2005), 3, pp. 98-105
3. \*\*\*, Technical information (in Serbian), Military Technical Institute, Zarkovo, Belgrade, 1992
4. Jevtic, M., Development of Model of Micro Hydro Power Scheme at Existing Weir on Black Timok - report of project (in Serbian), Serbian Ministry of Science and Environment

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Protection, Belgrade, 2006

5. Maricic, N., Estimation of Characteristics of Constructed Propeller Micro Hydro Turbine (in Serbian), Electric Power Industry, 58 (2006), 3, pp. 48-53
6. \*\*\*, Construction of Small Hydro Power Scheme - Chapter 3: Turbine and Auxiliaries (in Slovenian), Union of Organization of Technical Culture of Slovenia, Ljubljana, 1983
7. Benisek, M., Hydraulic Machine (in Serbian), Faculty of Mechanical Engineering, University of Belgrade, Belgrade, 1998
8. Radosavljevic, J. , Jevtic, M., The Effect of Distributed Generation on Voltage Drops, Power Flow and Power Losses in Radial Distributive Grid (in Serbian), Electric Power Industry, 57 (2005), 1, pp. 58-65

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