SANITATION CONSTRUCTIONS AND THEIR IMPACT ON THE ENVIRONMENT

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Abstract

Experimental research results were made on a laboratory plant within the Department of Hydrotechnical Engineering, with water from Bega river and highlighted, efficiencies achieved with upward and downward filtration plants equipped with multiple layers, consisting of homogeneous material (quartz sand - for upward filtration) and inhomogeneous (polystyrene, anthracite, quartz sand, garnet and magnetite - for downward filtration) .

The experimental research has shown upward filtration performance equipped with structures of homogeneous materials compared to those of the downward filtration. These results were obtained while the Bega water, used in the experiments, was made up of the colloidal suspensions obtained after a preliminary settling in the suction basin of the supply pumps from laboratory.

The main results of the thesis were presented at several national and international conferences and published in national scientific journals. The candidate has also been involved as a member or coordinator on several contracts and research projects at national and international projects and also with partners in production.

Habilitation thesis summarizes some of the research work of the candidate after obtaining doctoral thesis from the Politehnica University of Timisoara, in October 2005.

Selected activity proves original achievements and relevance of academic, scientific and professional contributions for an independent development of future career on the academic and research line.

The presentation of post-doctoral work it was conducted in two main directions: "Sanitation constructions", presented in Chapter 2, and "Environmental impact of sanitation constructions", presented in Chapter 3.

Scientific research results are materialized mainly through publications of scientific specialist articles and books, textbooks and laboratory and design guidance.

In recent years, the candidate was that the main priority, publishing scientific articles in journals and various scientific journals indexed in the Web of Knowledge (ISI), or in magazines and books of different scientific manifestations indexed in other relevant international BDI databases.

The candidate has published over 70 scientific papers, of which 13 in journals indexed in the Web of Knowledge (ISI) and 12 in other journals indexed in international databases BDI. Main achievements and results are presented in detail in Chapter: B. Scientific achievements, academic and professional.

Another important component of the candidate in Activity Research consists of worldwide documentation for scientific activities in civil engineering field. By engaging in specialized scientific committees, international events or publications, also the activity of scientific reviewer of publications, the candidate aims his training and development from professional and scientific point of view.

The research activity on main direction: "Sanitation constructions" presented in Chapter 2, refers to the centralized systems of water supply and sewerage in populated centers.

In the country, of the 13,842 localities, approx. 10% of them are equipped to European standards as regards the centralized systems of water supply and sewerage in populated centers. The most important European funds are currently allocated to this work.

A second direction for research activity refers to:

"The impact of sanitation constructions on the environment", presented in Chapter 3.

In general, sanitation works are constructions that ensure the protection of the environment.

The full abstract at:

http://www.upt.ro/img/files/2014-2015/doctorat/abilitare/florescu/Rezumat_teza_abilitare_FLORESCU_en.pdf

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