

- Sumalan, I. David, I.- Simplified Method to Calculate the Yield Production of the Fully Penetrated Well in Phreatic Aquifers.....3  
**Abstract**-It's known the fact that the discharge of the well can be exactly calculated in terms of well radius and sink by using Dupuit's formula. To determine the maximum yield production, the maximum admitted water velocity and the entrance into well must be taken into consideration in order to avoid the aggradations of the well filter. Even the discharge obtained by Dupuit's formula is an exactly one this assumption doesn't permit the entrance velocity calculation because the outflow height, located above the well water level in neglected. The paper presents an analysis of the calculation methods of the yield production for wells located in phreatic aquifer. With this analysis a simplified calculation method is proposed based on empirical formula for the outflow height. The proposed method is verified by comparison of the results whit that obtained by Finite Element Method (FEM). It's shown that is not necessary as such complicated method, the results obtained by the simplified method being closed.  
**Keywords:** well yield production, numerical method, and simplified analytical method
- Hălbac-Cotoara,R.- Studies Regarding Aridity Phenomenon in Timiș County, Romania.....7  
**Abstract:** Drought and the two associated phenomena's (aridity and desertification) represent problems which were very studied in the last period. In the last 55 years, temperature around Timisoara increase with 0.7°C and the precipitation were reduced. Taking in consideration and other factors as human impact and soil's characteristics, it can be observe especially in the north-western part of Timiș County the appearance of aridity phenomenon. This paper presents an assessment regarding the aridity in western part of Romania, Timiș County, taking in consideration two indicators based on precipitation and temperature: De Martonne and Lang. Using these two indexes, were created and will be presented two maps.  
**Keywords:** aridity, indicators, De Martonne, Lang, maps
- Podoleanu C. E., Florescu C,-Establishing Criteria for Choosing Treatment Technologies for Making Drinkable Water.....15  
**Abstract:** The present paperwork presents the criteria for choosing water sources for supplying drinking water to the population and the criteria for choosing the technologies for treating the surface and underground water in order to make them drinkable, both in urban and in rural environment.  
**Keywords:** gross water quality, produced quality water, safety of treatment processes, installations flexibility, operator's ability, compatibility with the environment, dimension of the processes
- Hălbac-Cotoară,R.-Surface Drainage and Drainage Arrangements Evolution in Romania .....19  
**Abstract:** The paper present the history of surface drainage and drainage works on Romania territory, presenting evolution stages of these until 2004. Conclusions will post some recommendations referring to problem of humidity excess elimination and the perspectives of these types of hydroameliorative works.  
**Keywords:** evolution, surface drainage, drainage, perspectives, hydroameliorative works
- Titan, L. G., Damian, A., Barabas ,K.,Gherman, V.- Pollution and the Eutrophication Processes from Storage Reservoir .....27  
**Abstract** - Eutrophication represents water enrichment with nutrients, especially nitrogen and phosphorus resulted from algae and macrophyte bloom which lead to water pollution. Preventing the pollution events and reservoirs eutrophication will be accomplished through technical measures of polluting agents reduction and biological measures which are corresponding to the actual legislation.  
**Keywords:** eutrophication, pollution, biological methods, legislation
- Achim, C.- Considerations for Reducing Runoff on the Small Surface Using Bioretention .....31  
**Abstract** -It's becoming accepted that comprehensive storm water management systems need to focus on controlling peak rate, quality, frequency, duration, and volume of runoff. This focus is a vast improvement over our traditional systems that relied on detention to simply control peak flow rates. It has also become apparent that onsite infiltration and bioretention currently offer the greatest opportunities for solving our urban runoff and nonpoint-source pollution problems. In practice, these methods have not gained wide

*acceptance as practical storm water management methods.*

***Keywords:*** *storm water, peak flow, bioretention, runoff, infiltration*

Man, T. E., Mateoc-Sarb, N., Hălbac-Cotoară, R.- Rural Development Infrastructure – Decisive Factor for a Sustainable Rural Development .....35

***Abstract:*** *Romania's actual situation indicate the necessity to accelerate the organization, systematization and modernization from agricultural, rural development and forestry sectors taking in consideration their importance for a social and economical sustainable development of rural space.*

*This paper presents the role of inland and outland infrastructure for a sustainable rural development, in encouraging non-agricultural investments, with a significant general impact upon rural development.*

***Keywords:*** *rural development, sustainable, infrastructure, inland, outland*

Nemes N.- Recycling – A Pollution Alternative .....43

***Abstract -*** *It is a synthetic work, based on data from specialized, literature, as well as those provided by Caraş - Severin Environment services. It presents the specific quantities of domestically waste from different countries, compared to Romania, the average essence of domestically waste and solid urban waste characteristics. The papers contain also a comparison between Romania and others country regarding the specific domestically waste quantities and composition. It is also brought up the impact on the quality of the environment factors.*

***Keywords:*** *recycling, environment factor, domestically waste, solid urban waste*

Eles,G-, Appropriate Interface Between Total Stations and PC Applications For Civil Engineering and Cadastre ... ..47

***Abstract -****At the present time, it is obvious that software based on total stations equipment is gaining more and more development. An important aspect in the software for electronically equipment consists in its applicability for processing data obtained by total station or any other electronic equipment during field measurement. The paper shows how an appropriate interface between a total station and PC applications can rise up the efficiency of the PC applications in generating digital plans and also other elements with application in cadastre and civil engineering.*

***Keywords:*** *tachymeter, theodolite, bluetooth, GIS format, Direct.dxf*

Wehry, A., Costescu, I., Modra, C.- The In Situ Hydraulic Conductivity Determination Using the Drilling Method, when the Phreatic Level is Under the Drill .....51

***Abstract:*** *It is presented an in situ method when the phreatic level is at over 2 m depth. Inside the drill water is purred and with a float bowl we observe the level decreasing.*

***Keywords:*** *hydraulic conductivity, in situ drilling method, phreatic aquifers*

Brata S., Jura C.- Optimized Drawing of the Technical Networks Working in Closed Circuit.....55

***Abstract -*** *The thermal and electric line systems networks are systems functioning in closed circuit. These structures are drawn like ring-shaped structures. In the paper efficient dimensioning methods of these structures are presented focusing especially on the general method of the virtual transitions which always ensures properly results.*

***Keywords:*** *technical networks, optimizing procedures, virtual transitions*

Brata S., Jura, C.- Efficient Analytical Methods for Optimized Dimensioning of the Technical Networks for Fluids Distribution .....59

***Abstract-*** *In the paper is presented the mathematical model for open technical networks optimization which distribute fluids like drinking water, hot water for central heating systems or combustible gases.*

*Generally, the optimized dimensioning criteria with the best results is based on the minimum annually equivalent cost equation. Beside of the mathematical models for these optimization systems short particularly numerical case studies are presented.*

***Keywords:*** *technical networks, minimum cost*

Mirea, M.- Research Concerning the Influence of the Prefabricated Foundations Shape and the Modality of Introducing them into the Ground upon their Bearing Capacity using FEM.....63

***Abstract -*** *The research aimed at determining the bearing capacity (through FEM) of certain foundation systems with different shapes placed in a cohesive (non-cohesive) soil, subjected to different loading steps and the comparative analysis of the obtained results.*

***Keywords:*** *bearing capacity, foundations, punched holes, prefabricated*

Mirea, M., Miha, P.- Tests for Vertical Compression Loadings on Foundation Piles on A Hotel in Timișoara.....67

**Abstract-** *The paper presents the behavior of two drilled piles with large diameter under vertical compression loads, piles that are part of the foundation system for a hotel in Timișoara. The tests were carried out to establish the bearing capacity of the piles for providing some useful design information.*

**Keywords:** *deformations, piles, loadings, compression*

Herban, I.S.- General Considerations Regarding the Methods in Determining Deformation in Constructions..... 71

**Abstract-** *Since Antiquity, the human desire to conceive and build great objects is well known, beyond all imagination, some of them have been built up with the purpose to touch the heaven and even beyond its (Babel Tower 3500 B.C.). If we refer to our days, it says that the architects together with the construction engineers “overtake” the limits of our age and the watcher has the impression that some of the edifices that are built now belong to the future. In this paper the author wants to create some models for searching and evaluate the behavior of the buildings, constructions, with the purpose of finding the reason of the improper and deformation in time of those constructions*

**Keywords:** *building deformation, measuring methods, topo-geodesic method*

Wehry, A., Costescu, I.A.- Experimental Determination of Cumulated Infiltration in Soil .....75

**Abstract:** *To estimate the cumulated infiltration in soil (the wetting norm) an experimental determination is presented using the Uncianschi Infiltrometer and the adequate processing.*

**Keywords:** *cumulated infiltration, Uncianschi Infiltrometer*

Wehry, A., Hălbac-Cotoară, R., Receanu, R.- Consideration about Determination of Jumping-up Size Basins with Drowned Vein, at the Pumping Stations for Surface Drainage.....79

**Abstract:** *After the floods in the county Timiș from April 2005, was drawn up in December 2005 a technical project for the surface drainage pumping station modernization at Cruceni on the river Timiș, by IPROTIM, beneficiary being ANIF Timiș-Mureș Inferior. Besides the capacity of pump duplication, by installing submersible electro pumps, a very important was the Timiș jumping-up basin redesign, affected through the danger stability of the dam. So, were reused the laboratory studies made by the Hydrotechnical department of Construction Faculty from Timișoara, about energy dissipation through drowned vein in jumping-up basins. Is given as example a jumping-up basin of the Mureș pumping station on the channel Aranca – Mureș, near the commune Cenad, dimensioned with drowned vein and which resists well for almost 40 years. Applying modern calculation procedures, energetic, are presented monograms for jumping-up basins dimensioned with drowned vein, based on the dynamic energy decrease from vein, with many percents, the water speed computation as far as admitted values into the river, quotient the geometric elements of the jumping-up basin*

**Keywords:** *jumping-up basin, dissipation energy, drowned vein.*