Desalination of Seawater Research Project on the Basis of the Positive Results of Water Treatment by Magnetic Field

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Abstract

The present technology offered is that of the generation of fresh drinking water from salty, polluted or sea water. The technology has been tested when various salts and other impurity have been dissolved in the water.

The objective of this research project is the desalination of seawater using the physical parameters of magnetic fields, the idea is inspired by the work we have done previously with simple installation, based on the use of a magnetic field without energy consumption, whose results confirmed the possibility of a optimal reverse process of mixture. This idea led us to realize:

- The crystallization liquids;
- Eliminate residues in liquid tubes...;
- Cleaning water drains from wastewater;
-Increase the concrete strength up to 60% of the initial resistance;
- As it was found that the magnetic field affects the acidity of the fluid whose parameters are defines (speed, pressure, magnetic field etc ...) in a single tube.

The positive results have been received from the experimental research and testing, but to get final results it is necessary to conduct further research.

This work contains three offers for cooperation, such as sea water desalination, preparation of cement concrete, concrete products and slate, prevention of scale appearance in hot-water boilers and pipelines. To give an impression about these developments there have been given such sections as actuality of the developments, which includes description of different problems to solve; problem solutions; development implementation, which contains full information about the application of developments; technical-economic substantiations and conclusions.

Biography

Abderrahmane Bellaouar is currently an associate Professor of Master of Gas engineering in the department of Process Engineering, also Master of Power Engineering and Master of Mechanical Construction in the Department of Mechanical Engineering at the Amar Thelidji University of Laghouat (Algeria). Mr Bellaouar holds a Engineer of State degree (Master2) in Mechanical of the Petrochemical Units from University Mohamed Bougarra of Boumerdes (Algeria), and diploma of Russian language from Odessa National Polytechnic University (Ukraine) and Master of Science in Mechanical Eng. Spec. Equipment of Processing and Food Productions from Odessa National Academy of Food

Technologies (Ukraine), and Ph.D in Pipeline Transport, Oil and Gas Storage from Ivano-Frankivsk National Technical University of Oil and Gas (Ukraine). He teaches courses is "Compressible Fluid Flow", "Turbomachinery", "Industrial Maintenance", "Reliability of Oil and Gas equipments" and "Gas Transport and Pipeline Reliability". His research interests include maintenance and reliability of oil and gas equipment and rotating machines, gas treatment and separators, Fluid Flow modeling, Simulation, Water treatment, Corrosion protection. Mr Bellaouar is a director of a Research and Manufacturing Company in Oil and Gas Services. He has published 16 scientific and methodical works, conference papers, as has published 1 patent work, and 1monographs.

Farid Touaiti, holding an D.Sc in chemical engineering from the Abo Akademi University- Finland, with major in coatings. Worked in many Algerian and international companies in the oil and chemicals sector. Before joining the Afro energy company Farid worked as post-doc researcher at the Bionanocomposite group at the Lulea university of Technology - Sweden. currently he is working as Technical manager at the Afro-energy Corporation laboratories. Farid has 8 publications in the field of polymers, composites and organic coatings. His main focus on the mechanical and thermo-mechanical characteristics of polymer based materials.