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HYDRAULIC ASPECTS OF SCALING IN GEOHERMAL ENERGY SYSTEMS

Imre Csáki*, Ferenc Kalmár

University of Debrecen, Faculty of Engineering, Ótmető u. 2-4, 4028 Debrecen, Hungary

Abstract

The European countries have few fossil fuel reserves and the main goal of the Lisbon strategy is to promote the utilization of renewable energy sources. In Hungary, because of the huge amount of thermal water reserves, geothermal energy might be one of the energy sources which can help to raise the share of renewables in the energy market of the country. Beside the positive aspects the use of thermal water for energy purposes have some important physical, environmental and economical aspects which have a moderating effect on the large scale spreading of these systems. This paper highlights the negative aspects of scaling from hydraulic point of view. Practice has shown that in five years the cross section of a pipe might be reduced to one third. Having a dynamic mathematical model of scaling process the expected pumping heat variation in time might be determined.

Key words: geothermal energy, pumping head, scaling

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* Author to whom all correspondence should be addressed: E-mail: imrecsaki@eng.unideb.hu; Phone: +3652415155; Fax: +3652418643