



UNIVERSITY OF SZEGED FACULTY OF ENGINEERING

***INTERNATIONAL CONFERENCE ON
SCIENCE AND TECHNIQUE BASED ON
APPLIED AND FUNDAMENTAL
RESEARCH***

**Book of
ABSTRACTS**

ICoSTAF'16

2 JUNE 2016

Szeged
Hungary

PURIFICATION OF OIL CONTAMINATED WATER BY DIFFERENT ADVANCED OXIDATION PROCESSES COMBINED WITH MEMBRANE FILTRATION

Gábor VERÉB, Renáta BOZÓKI, Mihály ZAKAR, Ildikó KOVÁCS, Cecília HODÚR, Zsuzsanna LÁSZLÓ

Department of Process Engineering, Faculty of Engineering, University of Szeged, 6725 Szeged, Moszkvai krt. 9., Hungary

verebg@mk.u-szeged.hu

The development of effective purification methods for the treatment of oil contaminated waters is an intensively investigated research area. Stable oil in water emulsions ($d_{oil\ droplets} < 2\ \mu m$) mean the main problem for the common purification methods. In the present study different advanced oxidation processes (applied as pre- or as post-treatment) combined with membrane filtration were investigated. Pretreated stable oil in water emulsions ($c_{oil} = 100\ ppm$; $d_{oil\ droplets} < 2\ \mu m$) were filtered using polyethersulfone (PES) micro-filter membrane ($d_{pore} = 0.2\ \mu m$). Removal efficiency was determined by measuring turbidity, COD, TOC and extractable oil content. Fluxes were measured and fouling models were calculated in all cases.

Acknowledgements: This project was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences. The authors are also grateful for the financial support provided by the project Hungarian Science and Research Foundation (NKFI contract number K112096).

ANALYSIS OF SOME CHARACTERISTICS OF AGRICULTURAL EXTENSION AND TRAINING OF AGRICULTURAL ADVISORS IN HUNGARY AND BULGARIA

András VÉR¹, Attila NÉMETH¹, Dalma CSERI¹, Dimitar VANEV²

¹ Széchenyi István University, Faculty of Agricultural and Food Sciences, Institute for Consultancy and Training, 9200 Mosonmagyaróvár, Vár 2., Hungary

² General Directorate "Agricultural Advices and Analytical Laboratory", National Agricultural Advisory Service, 1331 Sofia, Shosse Bankya No.7, Bulgaria

ver.andras@sze.hu

The aim of our study was to compare some characteristics of Hungary and Bulgaria regarding agriculture, agricultural extension and training of agricultural advisors because of the similarities of the two countries (total population, area, utilized agricultural area, accession to the EU, etc.). The study brings into focus the following topics: structure of Hungarian and Bulgarian AKIS (Agricultural Knowledge & Information Systems) and extension systems, training of agricultural advisors and its topics. According to our results, the AKIS systems are farmer-oriented in both countries, however with fragmented structure. The differences between the two extension systems are more evident, in Hungary the system is changing currently; the role of the Hungarian Chamber of Agriculture is getting stronger and stronger. The National Agricultural Advisory Service in Bulgaria was founded in 1999, and has a well-built and well-functioning structure. There is a discernible contrast between the two countries as well regarding the training of agricultural advisors and its topics.