



ECOPHOS

Waste utilization in the phosphoric acid industry through the development of ecologically sustainable and environmentally friendly processes for a wide class of phosphorous containing products

European Commission funded project ECOPHOS involves the development of a new research and innovation strategy for the waste minimisation and utilisation in the phosphoric acid industry. The main aim is the development of ecologically sustainable, environmentally friendly, resource and energy saving industrial process technology for the production of a wide-class of phosphorous-containing substances. The project focuses on new technologies for (a) the production of useful phosphorous salts (fodder, food and pharmaceutical phosphates), phosphorous acid and phosphates in a cost efficient and ecologically sustainable way, (b) the improvement of existing methods in the phosphoric acid production for the drastic minimisation of waste, (c) the utilisation and processing of industrial solid waste from the production of phosphoric acid, and (d) the production of a new generation of phosphoric fertilizers. Mathematical models and computer-aided process engineering tools guarantee the efficient and sustainable operation of the production systems with key objectives the reduction of cost, waste and energy. The new technological advancements will be accommodated in an information system for easy access and utilisation. The newly developed production systems will be classified with respect to both the waste properties and the environmental and sustainability potentials. An expert system will assist the user to select the appropriate production scheme according to the needs and particular specifications.

The Project is finishing in November 2008 and the Workshop aims at disseminating the major achievements of the project in the field of production technology development, optimal design and optimisation of sustainable processes for the productions of phosphorus containing products.

More information about the Workshop can be found at the project's website (www.ecophos.org) and by directly contacting the Coordinator at the following address:

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ECOΦOS

Participating Partners



Centre for Research and Technology – Hellas
Chemical Process Engineering Research Institute, EL
(CERTH.CPERI)



University of Manchester, UK (UOM)



Universidad Politecnica de Catalunya, ES (UPC)



Firth Executive, Ltd, UK (FE)



Phosphoric Fertilizers Industry S.A., EL (PFI)



Universitaet Dortmund, DE (UNIDO)



Brno University of Technology, CZ (VUT)



Mendeleev University of Chemical Technology of Russia,
RU (MUCTR)



GNII "IREA" Moscow Research Institute, RU (IREA)



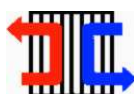
St. Petersburg State Technical University, RU (SPSTU)



OOO Promtrak, RU (PROMTRAK)



South Kazakhstan State University, KZ (SKSU)



OAO Sodruzhestvo-T, UA (SODRU)



ECOPHOS

ECOPHOS WORKSHOP

Program (tentative)

Location: Brno, Czech Republic

Address: Technical University of Brno

Thursday, November 6, 2008

Welcome

09:30-09:40 Welcome (P. Stehlik, VUT)

09:40-10:00 ECOPHOS Overview (P. Seferlis, CPERI)

Production Technology of Phosphorous Containing Products

10:00-10:45 Production Technology and Modeling Aspects of Phosphorous Containing Products (E. Koltsova, MUCTR)

10:45-11:15 Life Cycle Analysis for Sustainable Design (A. Bojarski, UPC)

Coffee Break

Sustainable Flowsheet Development for Phosphoric Acid Production

11:30-12:15 Integrated Optimal Design Framework – Industrial Application (A. Papadopoulos, CPERI, E. Papaconstantinou, PFI)

12:15-12:45 Heat Integration and Efficient Energy Use (P. Kapustenko, SODRU)

Lunch – Poster Session

Advanced Technology for Phosphogypsum Utilization

14:00-14:30 Phosphoric Acid and Sludge Cleaning (M. Zhekeev, SKSU)

14:30-15:00 Sludge Utilization – Industrial Application (B. Dmitrevsky, SPSTU, A. Polonyk, PROMTRAK)

15:30-16:00 Phosphogypsum Utilization in Waste Water Treatment Plants (J. Boran, VUT)

ECOPHOS Software Demonstration

16:00-16:45 ECOPHOS Software Tool (I. Bulatov, UOM)

16:45-17:30 Software Demonstration

Dinner



ECOΦOS

Brno lies in the central part of Europe, in the Czech Republic of which it is the second largest city. At the same time, it represents the centre of the province of Moravia, one of the historic lands of the Czech Crown. It is situated at the crossroads of ancient trade routes which have joined the North and South European civilizations for centuries. Brno is 110 km away from Vienna and 120 km away from Bratislava. Brno can be easily reached by train from Prague, Vienna and Bratislava international airports.

The Workshop will take place at the Brno University of Technology (building of the Rectorate Antonínská 548/1) located near the centre of the city. A number of hotels are within a walking distance from the Workshop venue. For more information consult the project webpage (www.ecophos.org)