

SERECARB – Selective Recovery of Calcium Carbonate in Paper Making Effluents

Currently, the paper industry is confronted with huge amounts of sludge. Millions of tons have to be disposed world wide. The sludge contains of a high amount of water (up to 40%) and a fair proportion of minerals (round two thirds of dry content, half of it being calcium carbonate).



Deinking sludge

SERECARB aims at developing a new process based on selective recovery of calcium carbonate from paper mill effluents and sludge, purification, conversion into precipitated calcium carbonate (PCC) and reuse as filler in paper making.

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Project Partners

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- GAW Pildner-Steinburg GmbH Nfg & Co KG, Austria
- Millvision B.V., The Netherlands
- Holzforschung, Austria
- Ressourcen Management Agentur (RMA), Austria

Voices of the project partners about the SUSPRISE Joint Call

“The SUSPRISE programme offered the chance to get a project funded in a quite unbureaucratic way, with a very short time between submission of the proposal and start of the project. This is of important benefit for the industrial partners, as they ask for a fast response for improving the operational practice to save resources.”

Bernd Kleimt, BFI
(GER) STEELVDCON

“SUSPRISE is a really good instrument. It fits with small innovative organisations like us.”

Leon Joore, Millvision B.V.
(NL) NATUBAR

“The added value through transnational collaboration is obvious, for it mobilises complementary energies.”

Jean-Ives Escabasse, PTS
(GER) SERECAB

Read more about the SUSPRISE network and the different projects within the Joint Call at www.susprise.net

Evaluation of the Joint Call 2007

In summer 2008 the SUSPRISE Joint Call was evaluated. All project coordinators and project partners received a questionnaire in order to specify their personal experiences within the process of the Joint Call. Questions referred to the application procedure and the guidelines, the submission of proposals, the evaluation of the jury as well as to the administrative procedure. Additionally a special focus was put on the attractiveness of the transnational collaboration for the projects.

Out of 46 questionnaires the response rate added up to 50%. All eight SUSPRISE projects entailed a request. Most project partners highlighted the unbureaucratic submission. In some cases though, it took some time to get the projects running, due to national differences in decision-making processes and administrative procedures.

Almost all partners and coordinators emphasized the added value they gained from the transnational cooperation. However, persons involved stated a need for more adjustment

as regards administrative procedures of the national funding agencies. Due to different specification and procedures in national funding programmes the start of some projects was delayed.

The preliminary results of the evaluation and the lessons learnt will be discussed with the workshop participants in Berlin in September 2008. The main issues of the evaluation and this discussion will be used for future programme cooperation activities.

Outlook

The ERA-Net project SUSPRISE will end in December 2008. Currently, a new ERA-Net under the Framework Programme 7 is prepared. Most SUSPRISE partners intend to join the new network built on the lessons learnt from the four SUSPRISE years. The new network will focus on research and innovation for sustainability and not exclusively on sustainability in enterprises. New partners will join the network, e.g. from Eastern and Southern Europe.

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Colophon

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Comments by project partners of the Joint Call projects
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Next issue

The Final Report of the SUSPRISE cooperation



SUSPRISE Joint Call 2007: 10 projects funded

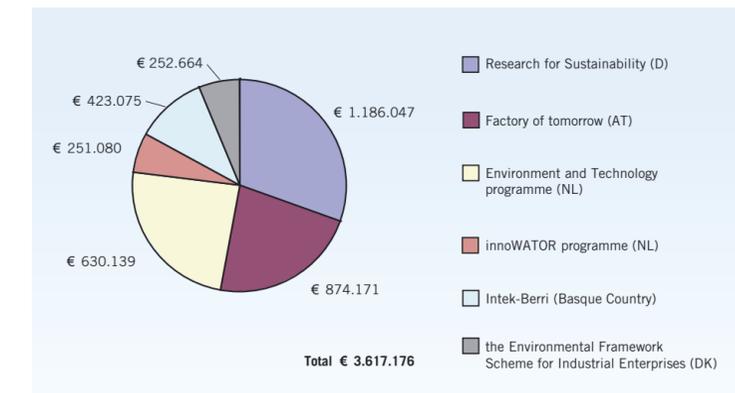
The results of the SUSPRISE Joint Call show a high interest of European companies and research institutes in transnational cooperation. Overall partners from Austria, the Basque Country (Spain), Denmark, Flanders (Belgium), Germany and the Netherlands submitted 15 transnational projects.

The SUSPRISE Joint Call was launched in March 2007 and open until 1 June 2007. The call was designed for transnational projects in the fields of industrial and pre-competitive research and dedicated to the thematic fields of "water technologies" (sub-call A) and "efficient use of raw materials" (sub-call B). An international jury nominated 10 projects for funding.

“The Joint Call was a very valuable experience within SUSPRISE. We learned a lot from the procedure in setting up and implementing the call. We are happy that the call was received well by the research and industry stakeholders and the feedback was very positive. It shows

that transnational research cooperation is a complementary instrument to EU and national funding. It addresses the need of industry and is especially adequate for SME.” (Sabine List, Federal Ministry of Transport, Innovation and Technology, Austria)

The SUSPRISE network organises a workshop in Berlin in September 2008. The project coordinators will present their projects and have the opportunity to deepen their contacts. There will also be time to discuss the evaluation of the Joint Call, so that future activities can benefit from the lessons learnt of the cooperation processes today.



The figure shows the distribution of budget provided by the national R&D programmes for the funding of ten SUSPRISE projects.

SUSPRISE, short for sustainable enterprise, is a European network of nine countries that all carry out sustainable technology programmes for industry. By cooperating and sharing experiences, SUSPRISE wants to be a leading facilitator in the process of making European industry more sustainable. The goal of SUSPRISE is closely related to the Environmental Action Plan (ETAP) of the European Commission.



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Results of the questionnaire on the evaluation of the Joint Call

Outlook



Petra Blauensteiner

Green Biorefinery – Technical, Economical and Ecological Optimisation of Value Chains by the Introduction and Efficient Use of Sustainable Raw Materials

Green Biorefinery stands for sustainable and highly integrated processing of green biomass into multiple products. By producing multiple products, a biorefinery can take advantage of the differences in biomass components and intermediates and maximizes the value derived from the biomass feedstock.

The project deals with the assessment and development of required technology for selected feedstock and evaluates market potential for out-products as well as the implementation potential for introduced processes.

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- Ökoenergie Utzenaich GmbH, Austria
- OÖ Bioraffinerie GmbH, Austria
- Ökoplan Energiedienstleistungen GmbH, Austria



Pressed fibre products of the biorefinery

NATUBAR – Natural Raw Materials for Specific Barrier Applications in Paper and Board

In many applications, paper and board need a barrier film on its surface to prevent migration of substances towards the paper bulk.

At present, the most efficient barrier materials are made of synthetic origin (polyethylene and other synthetic polymers, fluorinated resins, etc.). There is a strong interest to replace those barrier materials by natural, renewable products.

NATUBAR aims at researching and developing a totally new approach to starch modification namely selective oxidation as patented by Glycanex as well as the application in both modern folding box board (size press) and photopaper production environment (extruder). The objective is to assess whether the application for the coating process (water based /size press) or an extrusion film for the paper machine is the better solution. In parallel the best option for film extrusion will be examined. This new modification approach will contribute to a more sustainable paper production process.

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- Felix Schoeller, Germany
- Holzforschung, Austria
- Mayr-Melnhof, Austria



Kristina Nystrom

ARTech – Arsenic Removal for Drinking Water Production

The project ARTech aims at developing a robust and simple filtration process for arsenic removal from ground water to meet the standards for drinking water. As arsenic is a toxic component, the goal is to achieve an arsenic removal down to < 0.005 mg/l.

The process could then be implemented and commercialized in full-scale in those countries where groundwater polluted with arsenic is used for drinking water purposes, e.g. Denmark, Eastern Europe, the Middle East and the United States of America.

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- Galten Waterworks, Denmark
- IHE Delft, The Netherlands
- TU Delft, The Netherlands
- Vitens Water Technology, The Netherlands

RAILWASTE – Railway Sleepers from Mixed Plastic Wastes

As part of the track system sleepers are used to keep the rails at a given distance, and to transfer mechanical loads to the track bed. Thus the most important properties of sleepers are a defined geometry, weather stability, load bearing properties, and low maintenance cost.

The overall goal of the project is to produce railway sleepers from an intelligent combination of post consumer waste materials: Mixed plastic wastes (MPW) along with glass fiber wastes and auxiliary agents will be applied to

form a composite product with a thermoplastic polymer matrix, which is reinforced with glass fibers and consists of a foamed core.

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NATHPRO – Development of Natural Fiber High Performance Pultrusion Profiles

In the building and transport industry there is always a need for high strength, light weight profiles that are weather resistant, ecologically sound and of low-costs.

Pultruded profiles, a combination of extrusion and pulling of fibers through a dye, are mainly made of glass fibers reinforced plastics. They consist of extreme chemicals and show weather resistant properties combined with high strength and stiffness. An alternative material technology is a natural fiber reinforced profile made with pultrusion technology.

The project aims at combining the advantages of a pultrusion technology with the advantages of natural fibers to develop the strongest, lightest and most weather and heat resistant profiles that nature and man can make.

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Natural fibre profiles and materials

TheReMix – Development of Technologies for Feedstock Recycling of Renewable Polymers and Plastic Complex Mixtures

Due to the variability and increase in the price of petroleum, conventional plastic production declined extensively in the last years.

A lot of plastic producers all over the world nowadays show active interest in bioplastics made of renewable raw materials. Until now, disposal is the only management approach for these wastes. An innovative solution for managing the plastic waste is the Thermalysis Plant, which converts waste plastics into high-grade diesel fuel.

The main objective of TheReMix is to find new raw materials that mainly consist of complex plastic mixtures and renewable polymers and that are feasible for the Thermalysis system. Beside the reduction of waste disposal, the process of EcoDiesel production will be optimised.

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- Fraunhofer-Institute, Germany
- Tecnaro GmbH, Germany

STEELVDCON – Resource-Saving and Sustainable Production of High-Quality Steel by Enhanced on-line Control of Stirring Efficiency in Vacuum Degassing

The production of steel is connected with an extensive consumption of raw materials, energy and other resources.

The project aims at developing an enhanced online monitoring and control system for the liquid steel vacuum degassing process, which is used for production of high quality steel. Furthermore, the objective is to apply the monitoring and control system in an industrial plant. The system will be based on an infrared camera for observation of the melt surface, and on dynamic, analytical process models for predicting the performance of the main metallurgical reactions. Control set-points for the stirring gas flow rate will be derived for on-line control, leading to improved process reliability with less consumption of raw materials and energy.



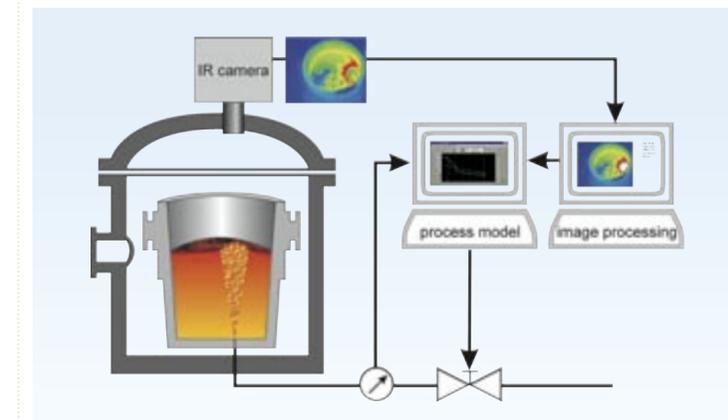
Vacuum degassing plant

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Digital image processing