

Germany – Land of Ideas

sludge2energy in the spotlight: selected landmark in the Land of Ideas

Straubing, , Bavaria, 13 December 2009

– sludge2energy project in the public spotlight. Bernd Sauter, chairman of the management board of Deutsche Bank Nuremberg, awarded the innovative project for environmentally and climate friendly disposal of sewage sludge as selected landmark in the Land of Ideas. 'sludge2energy' is one of the winners of the nationwide innovation contest '365 Landmarks in the Land of Ideas'.



On the occasion of the award ceremony Bernd Sauter pointed out: "Decentralized sewage sludge incineration provides for cost-efficient and eco-friendly disposal and represents an innovative option how to produce energy. 'sludge2energy' combines sustainability and visionary thinking and is therefore trend-setting for Germany as a location for business."

Dr. Ing. E.h. Hans Huber, CEO of HUBER SE, is proud of the award: „We are happy to have been selected as landmark in the Land of Ideas with our sludge2energy project. Our concept of decentralized sewage sludge utilisation permits the disposal of sewage sludge in small plants in the immediate vicinity of the source of origin. This avoids long transport routes and provides municipalities with a disposal option that guarantees long-term security. My special thanks go to the municipality of Straubing. Without their courage to go pioneer new ways, it wouldn't have been possible for HUBER to implement for the first time such an innovative project."

The sludge2energy project is an excellent example of how new ideas can be born, promoted and finally implemented through the collaboration of science, industry, municipalities and authorities. Professor Faulstich with his chair for raw material and power engineering is deemed to be the intellectual father of the project, which has been supported by the Bavarian Ministry for the Environment and Bavarian State Office for the Environment right from the beginning. HUBER gets further active support in implementing the project by ATEMIS engineers at Aachen and atz development and research centre at Sulzbach-Rosenberg. Even the European Union contributes within the scope of their LIFE program.

The efforts on the part of the municipality of Straubing and especially the commitment of their civil engineering office and wastewater treatment plant management have provided the basis that allows us to put the sludge2energy idea into practice. New grounds could never be broken without such pioneers.

The sludge2energy project at Straubing:

The sludge2energy project Straubing is designed for the utilisation of approx. 10,000 tons of dewatered sewage sludge per year.



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The sewage sludge is dewatered in centrifuges and with a water content of 72% fed into the belt drying plant, which reduces the water content to approx. 35% while drying the sludge at approx. 100°C. This reduced water content is the precondition for sludge incineration without adding external energy. The generated hot flue gases with temperatures of up to 800°C are cooled in a high-performance heat exchanger, the energy being transferred to compressed process air that drives a generator via a micro gas turbine. The generator produces electrical power. The residual heat of the flue gases is used to supply the energy required to dry the sludge. The whole process is thus energy-autarkic. The energy generated through sewage sludge incineration is used for sludge drying.

At the end, 1400 t of sewage sludge ash remain from originally 10,000 t dewatered sewage sludge. As the sewage sludge from the sludge2energy process is rich in phosphorus, the ash represents a 'resource' for future phosphorus recovery.

In view of the worldwide very limited but essential phosphorus deposits scientists are intensively investigating how to recycle phosphorus. If sewage sludge is incinerated along with coal in power or cement plants or disposed in waste incineration plants, the chance to recover the phosphorus contained is lost for ever.

Germany – Land of Ideas initiative

The sludge2energy project was selected as ambassador for the Land of Ideas from more than 2,000 submitted applications. The 2009 event is already the fourth in a series organised by Deutsche Bank and Germany – Land of Ideas e.V. under the patronage of German President Horst Köhler. „With their creativity, know-how and passion the selected landmarks 2009 are the spine that makes Germany a 'Land of Ideas' with a wealth of ideas and inventiveness. We can see every day how the nationwide network of ideas is growing owing to the enormous potential we find here”, justifies Bernd Sauter the strong commitment of Deutsche Bank to this initiative.



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