

Idea to use a side flow material reinforced and tailored for new products

Background:

Baltic TRAM project supported a company to find out the composition of the side flow material from their production process. This helped the company to engage into a product development to create a new product from the material that previously was discarded as waste. The results of the measurements provided unique information that allowed the company to expand into a new product portfolio in a very different market segment.

WHAT did we do?

Research The main focus of the experiment was finding out the possibilities to use a side flow material from stone cutting and handling to create a new product. The experiment gave the information about the composition of the side flow product and made it possible for the company to continue the development of the new product from the material.

Method The mineral composition of samples was studied by means of X-ray fluorescence.

Bulk chemical composition was measured using pressed powder preparations on Rigaku Primus II X-ray fluorescence spectrometer using SQX matching library quantification method. The leaching test was conducted in water:rock ratio of 1:10 for 24 hours by EN 12457-3 standard. Grainsize distribution was measured using two methods, wet sieving and Laser diffraction Analysis.

Materials A sludge created as a side flow product when cutting and handling stone.

HOW did it benefit?

... the company in understanding the product

The company had already the idea of the use of the side flow product for certain products, and the knowledge was reinforced and proved by the findings of the experiment. The involved analytical research center followed up the measurements by providing the assistance in interpreting the results. The company received important support to kick off the product development from the side flow material. Development support was given by other regional development projects more specific to the industry. For a micro company, the start of a new product development process is a big challenge which means that the support for the initial measurements and feasibility study turns out to be of a high value. The possibility to continue the support after the experiments under the BalticTRAM project through other project initiatives proved to be crucial in this case to find the right partners and institutions for the product development.

WHAT is next?

The company is currently exploring the possibilities of the material to create new products in co-operation with industrial partners. Baltic TRAM is keeping follow up sessions with the business in view of possible support needs timely identified. Updated information towards the end of 2018.



Rigaku Primus II XRF spectrometer used in studies of the samples in the Institute of Ecology and Earth Sciences, University of Tartu

For more information visit www.baltic-tram.eu

