



02.04.2019

RUSAL and Tiocomposite Test Production Technique for Sulphur Concrete Using Red Mud

RUSAL (stock code at the Hong Kong Stock Exchange: 486, at the Moscow Exchange: RUAL), one of the world's largest aluminium producers, and Tiocomposite signed a memorandum of intent to set test production of sulphur polymer concrete using alumina production waste in the Republic of Tatarstan, Russia.

The details of the economic and organisational conditions of the project, as well as its location, are expected to be agreed upon in 2019.

In 2017, RUSAL initiated R&D to explore opportunities for application of a by-product generated during the processing of bauxite into alumina—'red mud', to produce commercial products. Up to 2.87 tonnes of bauxite are used to produce 1 tonne of commercial alumina, and this generates up to 1.56 tonnes of red mud. The project solves the problem of red mud disposal, as now the production waste is used as a filler in sulphur polymer concrete.

Sulphur concrete production is a specialty of Tiocomposite. It is an innovative construction material which can be used to produce pavement slabs, kerb stones, drain channel trays, gravel and other materials necessary for the implementation of infrastructural projects. Sulphur concrete differs from traditional materials by its high strength, corrosion resistance, low water absorption and permeability, fast strength generation and low cost.

The first pilot mobile unit to produce sulphur polymer concrete products was launched in 2018. Now, the planned pilot production will be able to process up to 100,000 tonnes of dehydrated red mud per year (equivalent to around 300,000 tonnes of usual mud). The output of commercial concrete will be around 200,000 tonnes. Following the pilot stage, more accurate data will be obtained with respect to the process parameters and the characteristics of the materials and products produced on its basis. Test batches of the products will be well-ried at construction facilities. After that, it will be decided whether the project should be rolled out.

LLC TIOCOMPOSITE is a project company of the Nanotechnology Centre of the Republic of Tatarstan, which is included in the investment network of the The Fund for Infrastructure and Educational Programs (ROSNANO Group). The company's technology for sulphur polymer concrete production will be new to the



**FUND FOR INFRASTRUCTURE
AND EDUCATIONAL
PROGRAMS**
RUSNANO Group

Russian market. The proposed technology will be fully supplied by the relevant natural and technical resources.

***The Fund for Infrastructure and Educational Programs** was established in 2010 in accordance with Federal Law No. 211-FZ “On reorganization of the Russian Corporation of Nanotechnologies.” The Fund aims to develop the innovative infrastructure in the sphere of nanotechnology and implement the educational and infrastructure programs already started by RUSNANO.*

The supreme collegial management body of the Fund is the Supervisory Board. Under the Fund’s Charter, the competence of the Supervisory Council, in particular, includes the issues of determining the priority directions of the Fund’s activity, as well as its strategy and budget. The Chairman of the Fund’s Executive Board, the collegial management body, is the Chairman of the Board of Management Company RUSNANO LLC Anatoly Chubais; the Chief Executive Officer of the Fund is Andrey Svinarenko.

Further details: www.fiop.site