

R&D Outsourcing

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The discovery of Russian scientists: polyethylene for strengthening asphalt

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It is alleged that this will allow repairing roads three times less often.

Ultra-high molecular weight polyethylene (UHMWPE) is a very strong and wear-resistant material, but quite expensive, and its use is limited by the complex process of processing into finished products. However, scientists from Novosibirsk have found a way to simplify the technology of its production so much that the material can become cheaper by 15 times and it can be used to strengthen roads, Izvestia writes. Moreover, this polymer is very resistant to temperature extremes.

We will not describe the complex technology, but the essence of the invention is such that special reinforcing nets can be created from polyethylene, which, if placed inside the road surface, will protect it from damage. This will increase the wear resistance and increase the period between repairs.

Worldwide, the demand for UHMWPE is about \$ 30 billion per year, and the annual growth is about 15%. In Russia, the demand for this material is still small, but the invention of domestic scientists will make it possible to squeeze out imports from the market and create a reserve for the supply of superpolyethylene abroad.

Rosavtodor notes that since the department is not aware of the specific technical parameters of UHMWPE, they cannot yet imagine the use of this material in the creation of "pavements". Well, before introducing a new technology, it must pass lengthy tests.

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