

Specialists of the South Ural State University conducted a unique restoration of a military monument in the Kaluga region. The sculpture “mother”, symbolizing the feat of women in the rear during the war, was restored using innovative concrete with bacteria.

As the head of the department, Alexander Orlov, explained, traditionally the monument demanded repairs every two years due to the formation of microcracks. The new material contains a senous stick that feeds on calcium lactate and emits a substance that fills the microcracks. This prevents the penetration of water and air that cause destruction.

Professor Tamara Chernykh noted that bacteria not only “healing” damage, but also increase concrete density. This makes the structure more durable and durable.

The technology developed in SUSU has broad prospects for application. It can be used in the restoration of historical buildings, the construction of roads and other concrete structures. This is the first case of the successful use of “live” concrete in Russia to preserve cultural heritage.