

---

Vol. 12 (4): 433-438 (2022)

## EFFECTIVE TECHNOLOGIES FOR REPAIRS OF ENGINEERING NETWORK PIPELINES WITH THE USE OF COMPOSITE MATERIALS

V.A. Ivanov<sup>1\*</sup>, A.V. Demenev<sup>1</sup>, A.A. Korneev<sup>2</sup>, A.K. Prokopenko<sup>2</sup>, M.V. Fedorov<sup>2</sup>

<sup>1</sup>*Russian State University of Tourism and Services, Cherkizovo, Pushkinsky district, Moscow region, Russia;*

<sup>2</sup>*A.N. Kosygin Russian State University, Moscow, Russia;*

\*Corresponding Author V.A. Ivanov, email: [vyacheslav.a.ivanov@bk.ru](mailto:vyacheslav.a.ivanov@bk.ru);

Received August 2022; Accepted September 2022; Published October 2022;

DOI: <https://doi.org/10.31407/ijeess12.454>

### ABSTRACT

The study analyzes the causes of engineering network equipment failure and offers suggestions on the use of progressive composite materials for their repair for continued functioning. The possibility of the use of metal-polymer composites in the technologies of repair and restoration of network pipelines is considered. The importance of timely elimination of defects is emphasized. The most suitable composite material is determined and its main properties are described. The advantages of using repair composites are demonstrated and examples of their successful application in repairs in the housing and communal services are presented.

**Keywords:** engineering networks, pipelines, sealing, defect, composite materials, metal polymers.