

Project name:	Collaborative research to increase the level of development of a new innovative method of testing fracture toughness using a ring-type test specimen (KIRIMI)
Description:	Through collaborative research with an industrial partner, the level of development of a new innovative method of testing the fracture toughness of materials using a state-of-the-art test specimen patented by a member of the project's research team will be increased. This will improve and further stimulate the cooperation of research organizations and companies and improve their capacity for research, development and innovation. The subject research of the project is very complex and requires expensive equipment that will be purchased with the financial resources of this project. The project leader has assembled a strong team of domestic and international scientists from the subject area who will jointly conduct the planned research in order to develop the newly proposed test sample to the technological readiness level of TRL4. Furthermore, the support will also help in future research of the test specimen, up to the next stages of the level of technological readiness, with the ultimate goal of standardizing the test sample on a global level. The project deals with the issue of the integrity of pipelines, which is a key issue considering their role in the energy, industrial and communal infrastructure, and this is in line with the faculty's goal to solve current social and technical challenges with its research. The project offers significant benefits to academia, industry and society as a whole. Through this project, the academic community in Slavonski Brod, including professors, researchers and students of the Faculty of Engineering in Slavonski Brod, gets an opportunity for innovative research, connection and improvement of teaching. An international research team is being formed that will work on a patent solution for measuring the fracture toughness of pipe materials, enhancing the development of young researchers. Basch-Mont d.o.o. will improve its products, market position and pipeline safety through collaboration. The wider pipeline manufacturing industry can use the research results to increase plant safety and optimize materials. This will indirectly improve the safety of citizens and the environment and potentially influence the development of new industrial standards.
Webpage:	In progress
Source of finances:	European Union, competitive project financing, Mechanism for recovery and resilience, Targeted scientific research
Beneficiary:	University of Slavonski Brod
Partners:	Basch – Mont d.o.o.
Project budget:	1.406.174,48 EUR
Duration:	01.04.2024. – 30.06.2026.
Location:	Slavonski Brod
Target groups:	The target groups are the academic community, especially at the Mechanical Engineering Faculty in Slavonski Brod, the industrial partner Basch-Mont d.o.o., and the wider pipeline production and maintenance industry.
Objectives:	Increasing the level of development of a new innovative method of testing the fracture toughness of materials using a state-of-the-art test specimen. Note: due to the activity of the project related to the verification and protection of intellectual property, more specific goals of the project cannot be stated.