Janusz Poliński: Exploring the Railway of the Future – MagRail

The article from the series “Exploring the Railway of the Future” outlines solutions utilising magnetic levitation on the existing conventional network. The idea of such transport was considered in the USA, but a significant role in this field belongs to Polish technical thought, the effects of which are visible in the subsequent steps of developing the MagRail system technology. A decisive role in this area was played by the company Hyper Poland, founded in 2016 at the Faculty of Power and Aeronautical Engineering (MEL) of the Warsaw University of Technology. Its activities are now continued by Nevomo, which collaborates with a number of specialists from various technical fi elds. The MagRail technology has already been recognised by the European railway industry. This is confirmed by several signed agreements, including with the Italian infrastructure manager Rete Ferroviaria Italiana, the largest German inland port Duisport, and the French railways SNCF. The first 1:5 scale demonstrative version of MagRail was presented by Nevomo in 2019. Successful tests on a 1000 mm track were conducted in December 2020. In 2022, in Nowa Sarzyna, Nevomo completed the construction of a full-size test track, which is the longest track for testing passive magnetic levitation in Europe. Tests of new magnetic levitation solutions in the Subcarpathian region have already begun. In the next phase, in collaboration with GATX Rail Europe, they will be expanded to include MagRail Booster tests with conventional freight wagons.

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