

Innovative transport systems

27 July 2023

TÜV SÜD certifies TUM Hyperloop Demonstrator

Munich. In Ottobrunn near Munich, the Technical University of Munich (TUM) has started operation of Europe's first functioning hyperloop segment including the associated passenger pod. TÜV SÜD has issued the certification for the first tube segment and the pod on the basis of the world's first guideline for hyperloop technologies.

“Hyperloop” is the umbrella term for innovative high-speed passenger and goods transportation systems. The concept envisages electrically powered transport pods that are propelled at travel speeds of over 800 km/h within sealed vacuum tubes. The TUM Hyperloop research programme was established after students from the Technical University of Munich (TUM) had successfully participated in several international competitions. The construction of the hyperloop demonstrator in October 2022 has now moved the project into the realisation stage. On the TUM campus in Ottobrunn/Taufkirchen, the first segment of the test tube – 24m long and 4m wide – has now commenced operation. Europe's first hyperloop journey with passengers in a passenger pod was performed in the vacuum tube under real-life conditions at the beginning of July.



TÜV SÜD certified the first segment of the test tube and the passenger pod. This certification was performed on the basis of the relevant machine safety standards and the world's first Guideline for Hyperloop Systems, in which TÜV SÜD set out the key safety requirements for the planning, building and operation of such systems. When drawing up the guideline, TÜV SÜD considered existing regulations and experience in fields spanning rail, metro systems, cable cars, amusement rides, aviation and the process industry, and aligned them to the specific conditions involved in hyperloop technologies. The requirements of the guideline cover

the transport pod, drive system, life support system (ECLSS) and tubes as well as the emergency evacuation procedure.

“This is Europe’s first demonstrator of its kind that has been fully certified for passenger transport“, says Daniel Steinbauer, Project Leader at TÜV SÜD. “We are very happy to support this project and contribute to the advancement of this innovative system and the realisation of a functioning test facility by issuing our certification.“

TÜV SÜD is offering the world’s first guideline for systems of this type free of charge with the aim of progressing the standardisation of hyperloop systems and the development of harmonised regulations for approval on national and regional markets such as the EU Single Market, as well as for certification of individual components and complete systems. The document in PDF format can be downloaded under the following link: www.tuvsud.com/en/resource-centre/white-papers/hyperloop-guideline

Caption First functioning hyperloop segment in Europe (l. to r.): Domenik Radeck, TUM Hyperloop; Florian Höhensteiger, TÜV SÜD; Daniel Steinbauer, TÜV SÜD; and Felix Achenbach, TUM Hyperloop (Picture: TÜV SÜD, Steinbauer)

Note for editorial staff: This press release and the high-resolution photo can be found on the Internet at <https://www.tuvsud.com/newsroom>.

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