

Conclusive statement

The efficiency of industrial application of SkyWay technology can be determined only by the optional project designing of a real route under various natural and climatic conditions. This beam-track structure can compete with the existing transport systems provided the spans are not large, the supports are not high and their design is simple with a reliable sub-base.

In general, the string-rail technology is innovative and presents an apparent interest to scientific, engineering, designing and experimental researches.

The technology can be implemented with correct solutions on stiffness, durability, safety and maintainability. In parallel with scientific and experimental research with the participation of leading professionals and experts, it is recommended to consider the issue of creating a sufficiently long pilot track section similar to the experimental circle of the National Scientific Research Institute of Railroad Transport (VNIIZhT) in Shcherbinka. The test site of SkyWay Technologies Co. demonstrates four versions of the transport system. Two of them (string and truss types) are in operation. This is conformed by two trial visits of MIIT representatives. Two other tracks (boosting section of the high-speed system and the freight line) are also realized structurally at the test site, however, traffic on them was not demonstrated during the visit.

A final statement on conformity of SkyWay transport system to the claimed operational parameters can be issued after the on-site testing operation of a full-size version of the system in the operational range of speed. The further increase of speed is possible only after a full-scale model rides along the track (test site) fault-free at 100 km/h speed for at least 2 days (according to the developers, the high-speed system of 20 km distance should reach 500 km/h speed).

It should be noted that the above remarks are not prescriptive in nature, rolling stock and chassis in UST technology provide reduction of tensions and improved interworking of the wheel and rail, allow to raise the lifetime of chassis and railway compared to the rolling stock of railroads and might be recommended to practical implementation.

The technical novelty of UST lies in the use of lightweight vehicles - unibuses that do not need complicated spring suspension and cushioning devices, as well as considerable stabilizing masses for damping impacts from track irregularities that are typical for the traditional rail transport. Lightweight UST unibuses are equipped with an anti-derailment system.

Based on the viewpoint of estimating the prospects to use this mode of elevated transport, it is possible to agree with its creators on the possibility to develop economically efficient technical solutions for string transportation routes.

Based on the above consideration of the issues from the point of ensuring its durability, safety and maintainability with the use of presently developed innovative methods to produce concrete of high durability for manufacturing structures of string-rail transport, its operation does not cause objections.

There is a great number of areas of activities needing the appearance of new solutions. Such inquiry comes from cargo shippers and passengers, however, only the solutions tested for many years are presently seriously considered. Transport sector deals with all innovations with great skepticism, because starting from the second half of the XX century there were many pompous projects promising the solution of all transportation problems that actually turned out to be undeveloped technologies, for which the access to major investments was closed forever after the first unsuccessful implementations.

SkyWay should not repeat the destiny of such technologies and demonstrate in the first commercial projects its viability and, which is more important, economic efficiency of SkyWay transport operation. A large potential of all the options of application arouses a hope that in any case the areas of use will be found.

The SkyWay project proposed by the developers contains theoretical solutions to freight and passenger logistics.

According to preliminary estimates and developers' calculations, SkyWay is the most eco-friendly among the surface modes of transport existing today.

The elevated string-rail transport (UST) is innovative and capable to compete with railway and automobile transport. UST may be recommended for application in various regions taking into account natural and climatic conditions and its appointment to fulfill various tasks after a preliminary completion of full-scale experimental tests, development of technical specifications based on their results for the further certification and preparation of regulatory and legal framework on UST application.

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