



Railway Transport, its Specific Characteristics and Main Indicators

Железнодорожный Транспорт, Его Особенности И Основные Показатели

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ABSTRACT

Railway transport plays an important role in the functioning and development of the country's goods market and in satisfying the population's need for migration. It is the main link of the transport system of Uzbekistan and most countries.[1]

ARTICLE INFO

Received: 17th September 2022

Revised: 10th October 2022

Accepted: 10th November 2022

KEY WORDS:

Railway transport, specific characteristics of railway transport, main indicators of railway transport.

Introduction

The important role of the railways of the Republic of Uzbekistan is determined by the size of transportation distances, the absence of inland waterways, and the fact that the main industrial and agricultural centers are located far from highways. Therefore, its share corresponds to about 50% of cargo turnover and more than 46% of passenger turnover in all types of transport in the country.[2]

The main field of application of railway transport is the mass transportation of goods and passengers on inter-regional (inter-provincial), inter-city and suburban connections, in which cargo transportation is a priority, which accounts for more than 80% of revenue. will give. Transportation of passengers by railways is not a priority for suburban and local connections (about 90% of the total number of passengers). Long-distance passenger transport accounts for more than 40% of passenger traffic.[3]

The importance of Uzbekistan's railways in interstate relations and international transport with MDH countries is very great. Historically, railways in Uzbekistan have developed as a whole structure with a

different width of tracks (1520 mm) and rational placement of technical equipment and auxiliary productions across the territory of the country. Currently, domestic production of technical equipment for railways (for example, freight and passenger cars), cooperation and mutually beneficial cooperation with the MDH countries and other countries on these issues is being established. is developing.[4,5,6]

The density of the railway network in Uzbekistan is 0.51 km per 100 sq km (see table 2.1), which is much lower than the density of the railway network not only in developed countries, but also in most former USSR republics (in Ukraine 2.76 km per 100 sq km, in Belarus - 2.77 km, in Latvia - 3.60 km, in Georgia - 2.2 km, in Uzbekistan - 0.79 km, in Kazakhstan - 0.53 km). It can be seen that in Uzbekistan, especially for the development of large fuel and raw material deposits, it will be necessary to build new railway lines, and this is already being done.[7,8,9]

Technical and economic characteristics and advantages of railway transport are as follows:

- the possibility of building railways, tunnels, bridges and railway connections in any land area;
- mass transportation on railways and high carrying capacity of railways (up to 80-90 million tons per ear on double-track roads or 20-30 million tons per ear on single-track roads) ;
- universality in use for transportation of various goods and the possibility of mass transportation of goods and passengers at high speed;
- regularity of transportation regardless of the season, time of day and weather;
- compared to water transport, as a rule, the distance of cargo transportation is shorter (by 20% on average);
- relatively low cost of transportation compared to other types of transportation (except for pipeline transportation).[11,12]

Railway transport will remain the leading type of transport in the country in the future, but its development rate may be lower than road, pipeline and air transport due to their insufficient development in the country. In addition, it is necessary to take into account the increasing competition in the transport market, technical development and some shortcomings of railways.[13]

These disadvantages include, first of all, the high cost of building railways and the relatively slow return of invested funds (in 6-8 ears, and sometimes even more). In terms of difficulty, the construction of a 1-km-long single-track railway will cost about 7-9 billion rubles (at 1995 prices) in average conditions, and 2-3 times more in the harsh climate and geological conditions in the east of the country.[14]

The cost of building a two-track line, as a rule, is 30-40% higher than a single track. Therefore, the profitability of capital costs in the construction of the railway depends to a large extent on the capacity of cargo and passenger flows to be absorbed on the new line. As a rule, more output (ton-kilometers) per unit of capital invested for the development of railway transport is corresponding to other types of transport (in the current distribution of transport).[15]

Railways are a large consumer of metal (about 200 tons of metal are required for 1 km of track). In addition, railway transport is a very labor-intensive sector, where labor productivity is lower than that of pipelines, sea and air transport (but higher than that of road transport). On average, 1 km of operational length of Uzbekistan's railways has about 14 people engaged in transportation, and in the USA - 1.5 people in similar volumes of transport work.[16]

The main elements of the technical equipment of railway transport are rails, stations and separation points with appropriate devices, rolling stock (wagons and locomotives), electrical equipment, special regulation and traffic safety devices, and the transportation process. are control devices.[17]

The length of the railway network, as a rule, is compared to the operational (geographical) length of the main roads, regardless of the number of main roads and the length of other station roads. The spread length of railways takes into account the number of main tracks, that is, the geographical length of the two-track section is multiplied by 2. Double-track inputs on single-track lines are also considered.[18]

There are more than 4,700 railway stations in the railway network of Uzbekistan, which are the main points of cargo and passenger generation. Large passenger, freight and sorting stations have excellent buildings and structures - stations, platforms, cargo areas and yards, warehouses, container terminals, loading and unloading mechanisms, branched rail tracks and other devices and equipment.[19]

Railways of Uzbekistan has a powerful fleet of modern locomotives - electric locomotives and steam locomotives, which are mainly produced in the country itself. Almost the entire volume of cargo and passenger transportation is carried out by them, including 72.7% by electric traction and 27.3% by locomotive traction. Among them are two-, three- and four-section TE10, TE116, TEP60, TEP70, TEP80 locomotives, TEM2, TEM7, CHMEZ and other shunting locomotives with more power.[20]

Conclusion

Since its existence, railway transport has been closely cooperating with other sectors of the economy of Uzbekistan. One of its main tasks is to ensure timely freight and passenger transportation to meet the needs of the economy. Work in this regard is carried out in various ways and is aimed at ensuring the maximum safety of the railway network of the Republic of Uzbekistan.[21]

Formation of cargo and passenger transportation, cost optimization of railway use, ensuring the safety of train movement are carried out in close cooperation with foreign partners within the framework of international agreements.[22,23]

Taking into account that the Republic of Uzbekistan occupies a strategic geographical position in Central Asia and is the center of geopolitical development in the region, the main transit corridors connecting the North and South East and West of our continent passed through the territory of the Republic of Uzbekistan. This is an important factor in planning the development of AJ and identifying problems that need further study and optimization.[24,25,26,27]

In accordance with the decision of the Cabinet of Ministers of the Republic of Uzbekistan No. 173 dated 19.06.2009, the quality system in accordance with the international standard ISO 9001:2008 was introduced in the joint-stock company "Uzbekistan Railways". In accordance with the decision of the International Organization for Standardization dated 15.09.2015, a new interpretation of the international standard ISO 9001:2008 was published. Accordingly, the quality system in accordance with the ISO 9001:2015 standard was introduced on April 27, 2017 in the joint-stock company "Uzbekistan Railways".[28,29,30,31,32]

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