

Original article

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Technical and legal regulation of urban railways

Andrei V. Romanov^{1✉}, Artyom A. Kiselev²

^{1,2} Emperor Alexander I St. Petersburg State Transport University (PGUPS); Saint Petersburg, Russian Federation

¹ andrey.romanov@mail.ru[✉]; <https://orcid.org/0000-0002-8071-8594>

² zhdp10@gmail.com; <https://orcid.org/0000-0001-7088-8824>

ABSTRACT The article deals with the issues of legal and technical regulation of railway transport infrastructure facilities in cities and urban agglomerations. An attempt was made to determine the legal status of such objects. The features of such railways are considered, the need for highlighting regulation of urban railways is indicated. It is proposed to initiate work on establishing the priority of passenger transportation over freight in the territory of cities and urban agglomerations.

Possible ways to solve the stated problem are proposed, consisting in several measures, including the definition of a list of regulatory documents that prevent the allocation of a separate regulation of railway transport in cities and urban agglomerations, conducting relevant scientific research and preparing proposals for amending regulatory documents.

KEYWORDS: legal regulation; technical regulation; urban railways

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Научная статья

Нормативно-техническое и нормативно-правовое регулирование городских железных дорог

А.В. Романов^{1✉}, А.А. Киселев²

^{1,2} Петербургский государственный университет путей сообщения Императора Александра I (ПГУПС); г. Санкт-Петербург, Россия

¹ andrey.romanov@mail.ru[✉]; <https://orcid.org/0000-0002-8071-8594>

² zhdp10@gmail.com; <https://orcid.org/0000-0001-7088-8824>

АННОТАЦИЯ Рассмотрены вопросы нормативно-правового и нормативно-технического регулирования объектов инфраструктуры железнодорожного транспорта на территории городов и городских агломераций. Сделана попытка определить правовой статус данных объектов. Приведены особенности таких дорог, указана необходимость выделения нормативного регулирования городских железных дорог. Предложено инициировать работу над установлением приоритета пассажирских перевозок над грузовыми на территории городов и городских агломераций.

Представлены возможные пути решения проблемы, заключающиеся в ряде мероприятий, включающих определение перечня нормативных документов, препятствующих выделению отдельного регулирования железнодорожного транспорта на территории городов и городских агломераций; проведение соответствующих научных исследований и подготовки предложений по внесению изменений в нормативные документы.

КЛЮЧЕВЫЕ СЛОВА: нормативно-правовое регулирование; нормативно-техническое регулирование; городские железные дороги

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INTRODUCTION

The growth of cities and urban agglomerations entails the development of their transportation network. Often, public transportation resources are limited and metro construction is expensive.

Most cities and urban agglomerations of the Russian Federation are also large railway hubs with an extensive network of railway stations and crossings, which, using international experience, can be organically integrated into the public transport system. The experience of Moscow agglomeration, which has been successfully operating the railway network of Moscow transportation hub for several years, is considered advanced in our country.

However, there is a large list of problems that limit the use of this resource in cities and urban agglomerations. These problems are of both regulatory and normative-legal and regulatory-technical nature.

This article is devoted to analysing these problems and trying to find ways to solve them in the regulatory and legal field of the Russian Federation.

SPECIFIC FEATURES OF TECHNICAL AND LEGAL REGULATION OF URBAN RAILWAYS IN THE RUSSIAN FEDERATION

Currently, the design, construction, reconstruction and operation of public railway transportation infrastructure facilities are carried out in accordance with a number of regulatory and technical documents of the Russian Federation.

Federal Law “On Railway Transportation in the Russian Federation”¹ says that “*railway transport in the Russian Federation consists of public railway transport, non-use railway transport, as well as technological railway transport of organizations...*”

Part two of Article 14 of the Law¹ establishes that access to infrastructure is provided to carriers on a non-discriminatory basis, providing for equal conditions for the provision of services for the use of infrastructure by carriers regardless of their incorporation forms and forms of ownership.

The legislation of the Russian Federation defines access to the railway transportation infrastructure regardless of the location of a given railway: within the urban agglomeration or outside its boundaries. This means that the legal status of the urban railway in the Russian Federation is not separately identified.

In 2017, the Federal Law “On Off-Street Transportation” was adopted, but its wording was criticized by scientists and specialists in this field [1].

The current system of technical and legal regulation of public railway transport infrastructure facilities, as well as related processes mentioned above, lacks the specifics of such regulation for the railway transport of cities and agglomerations.

THE NEED TO EMPHASIZE THE LEGAL REGULATION OF URBAN RAILWAYS

The need to highlight the legal and technical regulation of the railway transportation of cities and agglomerations is long overdue. To date, there have been many studies on this issue [2–8].

Here are the main reasons for such a separation, according to the authors of the article.

1. One needs to prioritize meeting the needs of the population in passenger transportation within cities and urban agglomerations over freight transportation. For example, in the Moscow agglomeration such a priority has already been established on the Moscow Central Ring and Moscow Central Diameters. However, in other urban agglomerations, such as Saint Petersburg, it has not yet been implemented. Freight trains, including those with increased weight and length, operate in almost all directions.

Until this important problem, which lies in the regulatory and legal plane, rather than in the technical, is solved, further talk about the development of urban railways in the Russian Federation is premature.

2. Urban agglomerations are characterized by constraints in the design of new railway lines, additional main tracks, reconstruction of existing railway lines and railway stations. There are planning constraints associated with the existing development that do not allow fitting the route parameters required by standardization documents (codes of rules and standards), which are now defined for mainline railways. This may also include dense saturation of underground space with utilities, the requirements for protection or removal of which from the construction site also impose restrictions.

All of the above restrictions derive from the original intent of the Federal Law “On Railway Transport”, which defines non-discriminatory access for carriers. At present, there are no restrictions for the owner of the railway transportation infrastructure on the movement on urban railways, for example, of loaded trains with a length of 71 conventional cars or coupled trains. Technical regulation of the processes of design, construction, reconstruction and operation of urban railways is difficult for this reason.

3. It should be noted that there are special conditions for the operation of railway transport infrastructure fa-

¹ Federal Law dated 10.01.2003 No.17-FZ “On Railway Transport in the Russian Federation” (as amended on 29.12.2022).

cilities that ensure the priority of passenger transportation (including axle loads, train speeds, train lengths, train intervals, etc.) over mixed or freight traffic.

Such factors refer to:

- lower axle loads compared to freight cars and more advanced design of running parts of passenger rolling stock, which have less force impact on the railway track, which allows both optimizing the design of the railway track and reducing the requirements for the protection of underground utilities;
- possibility of reducing the radii of curves due to the exclusion of mainline locomotives, which cannot fit into curves of small radii, as well as reducing the distance of approaching structures due to the admission of only specialized passenger rolling stock to the urban railway, which will reduce the cost of construction or reconstruction in dense urban areas;
- the need to introduce clock traffic, increase train speeds, train interval, which imposes special conditions on the reliability of subsystems of railway automation and telemechanics, railway power supply and railway telecommunications;
- requirements for vibration and noise reduction and other environmental requirements affecting nearby residential development;
- other factors.

One needs to find a comprehensive solution to this problem, including a combination of solutions at the level of the legislative and executive branches of government, as well as the development of standardization documents and infrastructure and business owner decisions.

POSSIBLE SOLUTIONS

A comprehensive approach to solving this problem, proposed by the authors, is based on the establishment

at the federal level of the priority of passenger transportation over freight and mixed transportation in the territories of cities and urban agglomerations, ensuring a comfortable and accessible environment for citizens.

This problem can be solved through a comprehensive public discussion of the issue of prioritizing passenger transportation in the territories of cities and urban agglomerations; amendments to the main federal laws regulating these issues.

It is required to amend or develop new regulatory legal acts of various levels (federal laws, resolutions of the Government of the Russian Federation, orders of federal executive authorities), as well as standardization documents (national and interstate standards and sets of rules) in conjunction with existing regulatory documents.

At the initial stage the following tasks should be solved:

1. To determine a complete list of regulatory legal acts governing the activities of railway transportation. To determine the provisions of such regulatory legal acts that prevent the allocation of a separate regulatory framework for railway transportation in the territory of cities and agglomerations.

2. To prepare proposals for amendments to the regulatory legal acts that would allow for such regulation.

3. To initiate research and development work confirming the possibility of changing the technical requirements for railway transportation infrastructure facilities of cities and urban agglomerations, which will ensure the safety requirements established by technical regulations.

4. On the basis of the research work performed, initiate amendments or the development of new standardization documents to ensure the design, construction, reconstruction and operation of railways in cities and urban agglomerations in accordance with the system of developed and approved regulatory legal acts.

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Bionotes

Andrei V. Romanov — Cand. Sci. (Eng.), Associate Professor, Head of the Department of “Railway track”; **Emperor Alexander I St. Petersburg State Transport University (PGUPS)**; 9 Moskovsky pr., St. Petersburg, 190031, Russian Federation; ID RSCI: 422086, Scopus: 57214099991, ORCID: 0000-0002-8071-8594; andrey.romanov@mail.ru;

Artyom A. Kiselev — Cand. Sci. (Eng.), Associate Professor of the Department of “Railway track”; **Emperor Alexander I St. Petersburg State Transport University (PGUPS)**; 9 Moskovsky pr., St. Petersburg, 190031, Russian Federation; SPIN-code: 8734-4325, ID RSCI: 1013853, Scopus: 57217403497, ResearcherID: IYS-2860-2023, ORCID: 0000-0001-7088-8824; zhdp10@gmail.com.

Об авторах

Андрей Валерьевич Романов — кандидат технических наук, доцент, заведующий кафедрой “Железнодорожный путь”; **Петербургский государственный университет путей сообщения Императора Александра I (ПГУПС)**; 190031, г. Санкт-Петербург, Московский пр., д. 9; РИНЦ ID: 422086, Scopus: 57214099991, ORCID: 0000-0002-8071-8594; andrey.romanov@mail.ru;

Артём Александрович Киселев — кандидат технических наук, доцент кафедры “Железнодорожный путь”; **Петербургский государственный университет путей сообщения Императора Александра I (ПГУПС)**; 190031, г. Санкт-Петербург, Московский пр., д. 9; SPIN-код: 8734-4325, РИНЦ ID: 1013853, Scopus: 57217403497, ResearcherID: IYS-2860-2023, ORCID: 0000-0001-7088-8824; zhdp10@gmail.com.

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Corresponding author: Andrei V. Romanov, andrey.romanov@mail.ru.

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