"Brick style" in creative work of Russian Far East architects (the second half of the 19th - early 20th century)

M E Bazilevich
Department of Architecture and Urbanistics, Institute of Architecture and Design, Pacific National University, 136, Tihookeanskaya St., Khabarovsk, 680035, Russia
E-mail: mikhailbazilevich@gmail.com

Abstract. The article discusses the creative activities of the Far Eastern architects of the second half of the 19th - beginning of the 20th century, who worked in the wake of one of the rational architectural trends called a "brick" style, widespread at that time in central Russia and on its outskirts. A full-scale research and analysis of the objects of the creative heritage of Far Eastern architects, preserved in Blagoveshchensk, Vladivostok, Khabarovsk, Ussuriysk, Kamchatka peninsula and Sakhalin island were conducted in the course of the study. As a result, during the reviewing period the general patterns of “brick” architecture development in the region were established, as well as the distinctive features of the work of individual architects who worked in different cities of the Far East.

1. Introduction
Recently, Russian architects have shown an increasing interest to the architecture of the pre-revolutionary period, trying to restore the threads of continuity with the past of national architecture, which was largely lost in the Soviet period. An awareness process of the importance of architecture works of the second half of the 19th - early 20th century is going on. This is the time of Russian capitalism development, which gave an amazing variety of architectural styles, typologies and forms.

The relevance of the current research is that specialists studying the national architecture of the pre-revolutionary period, start to feel the increasing need to objectively evaluate the contribution made by eminent Far Eastern architects, who are widely known for their creative achievements in the development of the region architecture, its central and large cities. Among the vast number of objects of their creative heritage, preserved in Blagoveshchensk, Vladivostok, Khabarovsk, Ussuriysk, Kamchatka peninsula and Sakhalin island there is a group of buildings of different types, which should be highlighted. This group of buildings built in the so-called “brick” style.

This term is a symbol of one of the rational currents in the Russian architecture of the second half of the 19th - beginning of the 20th century, which received its name from the way of finishing the facades with the decor of unpainted brick. Appealing to this direction was typical for the works of many Russian architects, including those who worked in the Far East, where the “brick” style acquired its distinctive and well-recognized features.

2. Literature review
This study is based on a number of works written by Russian and foreign scientists, affecting some aspects of the fundamental scientific problem solved by the author of this article. General questions, reasons for the emergence and development patterns in Russian "brick" style are considered in the...
studies of E. I. Kirichenko [1, 2]. Urban planning, historical and cultural development of the Far East cities of Russia in the period of the second half of the 19th - early 20th centuries are considered in the works of N. P. Kradin [3, 4], S. S. Levoshko [5], N. A. Vasilyeva [6]. In these studies, were revealed both the general development patterns of the regional architecture and its individual cities, as well as specific architectural monuments, their planning, stylistic and compositional features.

The works of D. S. Maslennikova [7] and Yu. V. Okhotnikova [8] represent the formation and development history in the region of the Orthodox church architecture and consider church planning, building and finishing materials. The stylistic features of the regional architecture are touched upon in the works of A. A. Artemyeva [9], L. E. Baklyskaya [10] and A. P. Ivanova [11].

However, the available literature does not fully reflect the development of the “brick” style in the creative works of Far Eastern architects, so as a result the problem requires further analysis and systematic study.

3. Materials and methods of research

The materials for the analysis of the distribution and development process of the “brick” style in the creative activity of Far Eastern architects were served by various archival, literary and digital sources devoted to this issue. The field observations made by the author and the photographic images of various types of brick-built constructions preserved in Blagoveshchensk, Vladivostok, Khabarovsk and Ussuriysk allowed to make a systematic analysis of the creative heritage objects of the local architects. As a result, both general patterns of the Far Eastern “brick” architecture development during the second half of the 19th - early 20th century, and the distinctive features of the work of individual architects who worked in different cities of the region were established.

4. Results

4.1. Prerequisites for the approval of bricks as the main building material in the Far East

Most of the cities and settlements on the eastern outskirts of the Russian Empire were founded as military posts or ports, securing the territory of the state and providing an opportunity for its further development. At the initial stage, the building was mainly utilitarian and was usually raised without the participation of professional architects. Cities were built mainly one or double-storey wooden houses, some of which had stone foundations. The populated localities continuously grew and changed, soon the civilian population stretched into them - businessmen and industrialists, who engaged in the supply of food and necessities. The development of trade and entrepreneurship in the region was largely promoted by the operation of the Free Port system. The duty-free import of goods attracted large foreign trading firms to the Russian Far East, such as Kunst and Albers, “I. Y. Churin and Co”, "Emery". On average, more than 70% of commodity turnover in the region accounted for these firms [12]. Intensive economic development of the region and the influx of population required administrative regulation in the field of urban planning and enhancement of aesthetic and utilitarian qualities of development, which, of course, required the involvement of professional architects and engineers in the region.

Before the establishment of the Amur General Governorship, the main construction organization in the Far East of Russia was the Amur Engineering Distance, created in Nikolayevsk in 1868 for the construction of military and civilian facilities. The organization was a district office of the Main Military Engineering Directorate. In 1872, the Distance was transferred to Khabarovsky (now Khabarovsk). The organization had its own sawmill and brick factories, stone and lime quarries. There also existed independent building department and management of construction and road parts of the Amur Engineering Distance [13].

In 1884-1896 in the Russian Far East, public self-government structures were finally formed, urban status was introduced in the settlements, and a system for managing the construction and road sections was formed. The appearance of the first brickworks and the approval of ceramic brick as the main
building material belong to this period, which in general reflected whole-Russian tendency of construction in the so-called “brick” style.

4.2. Ceramic brick in the works of Far Eastern architects

Due to the cheapness, simplicity in construction and operation, as well as the relatively high aesthetic qualities of brick, public and departmental buildings were built from it in provincial cities throughout the country, including in the Far East. It should be noted that mainly Chinese people worked in brick factories of Khabarovsk, and along with the traditional red baked bricks for Russia, they also produced gray unburned Manchurian bricks, which were actively used by the architects of the city [14]. Thus, the use of bricks of two colours in the facade design is a distinctive feature of the Khabarovsk architects, who were able to skilfully use the features of the local building material as a tool to achieve the greatest artistic expressiveness of their buildings.

Considering the fact that mainly the buildings of the military department and the city administration were built in a “brick” style in the Far East, with often usage of standard projects and their adaptation to local conditions, this style was mainly reflected in the architectural works of military engineers. Thus, in Khabarovka, the house of the Governor General (1884–1885), the Military Assembly (1887), the Chancellery of the Amur Governor General (1895–1896), as well as the building of the barracks and artillery depot E. I. Shefer and the building of the Olginsky orphanage (1895) designed by N. F. Alexandrova. In the period under review, the building of the city police department and the second fire station (1894–1896) [15] were built in Blagoveschensk by E. I. Shefer in the “brick style”. Religious buildings were also built of brick in the region: The Assumption Cathedral in Khabarovsk (1883–1886, S. O. Ber), a chapel in the Alexandrovsky post (1893, I. A. Charushin).

It should be noted that the use of “brick” style by Khabarovsk and Blagoveschensk architects and engineers was dictated by local conditions (construction material surrounding the building) and the wishes of customers (military department, administration), as evidenced by the fact that I did not find a special expression of “brick” style in the architecture of Vladivostok [16]. For example, brick buildings constructed by Khabarovsk architect V. G. Moor in Vladivostok, the residence buildings of the military governor of the Primorsky region (1889–1891) and the city duma and council (1895), have a neoclassical style that manifests itself in a three-part symmetrical composition of facades, a characteristic decor and plastic study of plastered walls. The same tendency is observed in the cult architecture of the town during this period. The Assumption Cathedral (1887–1888) and St. Nicholas Chapel (1892–1896), built of brick according to designs and with the participation of I. I. Zeendstrand and P. E. Bazilevsky, have plastered walls. The only exceptions are the town school building (1885–1886), designed by A.-K. A. Gvozdiovskogo and the first railway station, built by P. E. Bazilevsky (1891–1894), is a typical example of brick “garrison” architecture.

When Russia obtained a concession for the construction of the Chinese-Eastern Railway (CER) on the territory of Manchuria in 1896, and then rented the Liaodong Peninsula in 1898, a new stage of development of the region has begun. In the Far East, there are a large number of railway engineers working on the construction of the CER lines and related facilities. The construction of “Russian” cities on the territory of Manchuria (Port Arthur, Dalniy, Harbin) dates back to this time.

The construction of railways and the building process of related infrastructure facilities contributed to the creation of a large number of jobs and the attraction of professional engineers to the Eastern outskirts of the Russian Empire. The emergence of uninterrupted transport communications between the western part of the country, Pacific ports and Asian countries led to the development of trade and the influx of large foreign investments. In turn, the emergence of a major customer in the region required the involvement of a large number of highly qualified design professionals and the creation of a new original architecture corresponding to the status of the customer. During this period in the largest cities of the Far East, such as Blagoveschensk, Vladivostok and Khabarovsk, Nikolsk-Ussuriysk, the active construction of brick buildings began, the nature of the building changed, and the central regions were significantly transformed. At the turn of the 19th – 20th centuries a whole pleiad of architects worked in the region, the buildings and structures built by them formed a unique portrait
of the Far Eastern cities, and many of them belong to the golden fund of Russian Far Eastern architecture.

Increasing of constructing works, the widespread electrification, the use of steam heating and the installation of water supply have led to an increase in utilitarian and aesthetic qualities of the development and a significant improvement in the life of citizens.

In Khabarovsk, which at that time was an important transit hub (rail and river transport), a large number of so-called “tenement houses” appeared, concentrated along the central streets of the city. Ceramic brick was used as the main building material by architects. The apartment buildings were built according to a similar layout: on the first floor with large display windows, there were shops, household workshops with their own entrances. On the second floors, which also had separate entrances with vestibules and main staircases, there were hotels with restaurants, apartments and administrative premises. Buildings differ in the stylistic decision and type of facade decoration. For example, the buildings of the tenement houses of I.S. Emery (architects А.В. Перьц and Л.О. Чайковский, 1897), the mayor of Khabarovsk А.А. Rassushin (architect В.А. Rassushin, 1900), the brothers Prins and S. Y. Bogdanova (architect Y. Z. Kolmachevsky, 1902 and 1908) are built in eclectic style with a predominance of the Russian style motifs and garrison architecture, which is clearly readable in the decorative elements of the front masonry of red and gray bricks. Street facades of the buildings of I. Takeuchi apartment buildings (architect B. A. Malinovsky, 1912) and Arkhipov's apartment building (civil engineer K А. Levetev, 1914), on the contrary, were plastered. We can trace the features of neoclassicism and modernity in the plastic of their facades.

The appearance of these apartment houses can show us the change of the capitalization level in the city. The nature of the development is dictated primarily by the financial capabilities of customers, by their tastes and the measure of familiarity with the fashionable architectural trends of the time. Apparently, the experience of Vladivostok developers played a significant role in shaping the “taste” preferences of Khabarovsk merchants. In Vladivostok the capitalization process and financial turnover were expressed in a larger form, which was reflected in its development [17].

At the beginning of the 20th century, hotels were built in the center of Vladivostok, they were based on examples of the best hotels in Europe. An example of this type of building is the buildings of the “Pacific Ocean”, “Europe” and “Versailles” hotels, flanking the beginning of the central street of Vladivostok Svetlanskaya, as well as the “Golden Horn”, “German” and “Central”, emphasizing the intersection of Svetlanskaya and Aleutskaya streets [18]. The architecture of the structures traced the features of neoclassicism, oriental and rationalistic modernity. As noted earlier, for the architecture of Vladivostok, it was not typical to use the artistic properties of decorative brickwork, so the walls of the hotels are plastered.

It should be noted that at the beginning of the 20th century, Far Eastern architects turned to the “brick” style when designing not only apartment buildings, but also other types of public buildings, including:

- Post offices. In Vladivostok: the post office (architect A.-K. A Gvozdiovsky, 1897–1899); in Khabarovsk: post and telegraph office (civil engineer S. O. Ber, 1901-1903).
- Educational institutions. In Khabarovsk: a female gymnasium (military engineer V. G. Mooro, 1898), a real school (civil engineer S. O. Ber, 1900–1903), a cadet corps (built with the participation of military engineer B. A Malinosky, 1902–1905); in Blagoveschensk - the diocesan school (civil engineer A. R. Stankevich, 1903–1906), men's gymnasium (military engineer E. I. Shefer, 1911–1913 [19]); in Vladivostok: Eastern Institute (architect A.-K. A Gvozdiovsky, 1866–1899); in Ussuriisk: Vocational School (civil engineer S. O. Ber, 1902–1905).
- Cult objects. In Blagoveschensk: Roman Catholic Church of the Mogilev Archeparchy (civil engineer L. O. Tchaikovsky, 1896, 1911); in Khabarovsk: Innokentievsky temple (military engineer V. G. Mooro, 1898); in Vladivostok: the residence of the archbishop of the Vladivostok-Kamchatka diocese on Sedanka (military engineer I. V. Meshkov, 1900), a Roman Catholic church (civil engineer V. A. Planson, 1909–1921).
• Trading houses and auxiliary buildings. In Vladivostok: the headquarters of the TH "Kunst and Albers" (civil engineer V. A. Planson, 1903); in Khabarovsk: servants' hostels and warehouses of the TH “Kunst and Albers” (military engineer B. A. Malinovsky, 1908); in Ussuriysk: TH “Kunst and Albers” (civil engineer V. A. Planson, beginning of the 20th century [20]).

Single objects are undoubtedly interesting, such as the buildings of the Russian Geographical Societ museum (1896–1899) and the State Bank (1904–1907) built in Khabarovsk according to the designs of military engineer N. F. Alexandrova [21]. Located next door on the street Alekseevskaya (now Shevchenko), these monumental red-brick buildings are expressive examples of eclectic architecture, which is using elements of classicism in the facade decor.

4.3. Features of the "brick" style in the works of Far Eastern architects

As a result of the research, it was established that the architecture of large towns in the Russian part of the Far East was characterized by a certain stylistic delay, primarily due to the remoteness of the region. The transformation of many architectural details in the direction of simplification is also seen, due to the peculiarities of local materials and the insufficient qualifications of builders. There is also a lower number of floors of stone buildings (two-three, less often four floors) in comparison with capital samples. This circumstance, was surely caused by a smaller population in the towns of the region, the availability of free plots along central streets and, as a result, the lack of demand for higher-rise architecture.

The made analysis showed that the majority of brick buildings in the Far East differed in their rational planning and humble interior decoration. They were rarely attached close to each other and were usually well viewed from different sides. The architectural expressiveness of the volume was created by the brickwork pattern. The relief was formed by the protrusions and deepening of the brick. For constructive reasons, the production of bricks could be made no more than 7 cm, therefore more or less significant protrusions beyond the plane of the wall were made only by a stair-stepped corbel of the bricks. The tectonic features of the brickwork were determined by a stair-stepped, figured pattern of architectural decor, so typify for the “brick” style.

The artistic possibilities of the red-brick architecture were more limited in comparison with the possibilities of academic eclecticism. Therefore, the Far Eastern architects turned to the forms of other styles of neo-Gothic, neo-classicism, Russian style and modern. Despite the unified size of the material, intricate patterns and complex plastic elements were created from it. The brick was laid not only flat, but also with an abutting end, edge, inclined, receiving a lot of various options for the masonry pattern. By pushing rows of bricks from the plane of the wall, the masters received articulations of the plane, and when taking into account the solar climate of the south of the Russian Far East, such protrusions and deepening’s created a unique play of light and shadow on the facades.

5. Conclusion

The spread of ceramic bricks as the main building material for the construction of cities in the Russian Far East was primarily promoted by its high qualities, such as strength, availability, low cost, ease of construction and operation, and artistic expressiveness. Eclecticism, which dominated the architecture of the region at that time, gave architects vast opportunities to use a variety of facades design techniques, thanks to which buildings from that period were so diversified in decor. Another mean of artistic expressiveness of the brick architecture of the region was the usage of two-color bricks in palette of Khabarovsk architects.

References

[1] Kirichenko E I 1986 Architectural theories of the 19th century in Russia (Moscow: Moscow publ. House)
[2] Kirichenko E I 1997 Russian style. The search for the expression of national identity. Nationality and ethnicity. Traditions of Old Russian art and folklore in Russian art of the 18th - early 20th century (Moscow: Moscow publ. House)

[3] Kradin N P 2010 Transformation of the Far Eastern cities in the 18th-19th centuries vol 1 Fundamental and priority applied research of the RAACS on the scientific support of the development of architecture, urban planning and the construction industry of the Russian Federation in 2008: scientific work / RAACS (Moscow: RAACS) pp 263–269

[4] Kradin N P 2018 Old Khabarovsk. City portrait in wood and stone (1858–2018) (Khabarovsk: Far Eastern publ. Center)

[5] Levoshko S S 2003 Russian architecture in Manchuria (Khabarovsk: Private collection)

[6] Vasilieva N A 2008 The architectural image of the urban development of the Amur region in the early 20th century (Blagoveshensk: comp. Bulletin of AmSU, run “Faculty of Applied Arts”)

[7] Maslennikova D S 2006 Architecture of Orthodox churches in Eastern Asia: the beginning of the 18th - the first half of the 20th centuries (Novosibirsk: Novosibirsk State Academy of Architecture and Art)

[8] Okhotnikova Yu V 2011 Orthodox temple architecture of the south of the Far East of Russia (middle 19th - early 20th centuries) (Moscow: Institute of Theory and History of Architecture and Urban Planning of the Russian Acad. architecture and builds. sciences)

[9] Artemieva A A 2007 Modern in the architecture of the Far Eastern towns (Moscow: Institute of Theory and History of Architecture and Urban Planning of the Russian Acad. architecture and builds. sciences)

[10] Baklyskaya L E 2015 East and West in Far Eastern Architecture: a monograph (Khabarovsk: Pacific National University)

[11] Ivanova A P 2014 Architecture of the state idea in the Russian Far East. Vol 1Balandinsky readings / Digest of articles of 8th scientific readings in memory of Balandin S N (Novosibirsk: Novosibirsk State Academy of Arch. and Arts) pp 319–324

[12] Pozniak T Z 2008 Housing and life of citizens on the Far Eastern outskirts (the second half of 19th - early 20th century) No 4/1 News of Altai State University, run History. Political science (Barnaul: Altai State University) pp 103–111

[13] Bazilevish M E 2016 On the work of the Amur engineering distance (second half of the 19th - beginning of the 20th century) The New Ideas of New Century – 2016 (Khabarovsk: Pacific National Univ. Publ.) I pp 17–22

[14] Okhotnikova Yu V 2006 Rational brick style and temple architecture of the Far East The New Ideas of New Century – 2006 (Khabarovsk: Pacific National Univ. Publ.)

[15] Kholkina T A, Chayun L A 2006 The architectural heritage of Blagoveshchensk Series “Blagoveshchensk. From Century to Century” (Blagoveshchensk: “Amur Fair” OJSC)

[16] Bazilevish M E 2018 Influence of professional activity of the graduates of Saint Petersburg architectural and engineering higher schools on the development of the architecture in the Far East in the pre-revolutionary period Bulletin of civil engineers (St. Petersburg: St. Petersburg University of Architecture and Civil Engineering) 3 pp 5–14

[17] Objects of cultural heritage (historical and cultural monuments) of the Khabarovsk Region 2006 (Khabarovsk: Russian Media Alliance Publishing House) pp 208

[18] RSHA FE fund 28, inventory 1, affair 729. Description of Vladivostok, its growth and value. 1922, pp 24

[19] RSHA FE fund 704, inventory 3, affair 465. Protocol of the technical meeting on the construction of a male gymnasium in Blagoveshchensk, 1910-1912, pp 94

[20] Frankyen I V, Hisamutdinov A A 2014 Vladimir Planson: from Vladivostok to San Francisco (Vladivostok: Vladivostok Book publ. House)

[21] Kradin N P 1999 Protected by the state. Monuments of architecture and sculpture of all-Russian significance in Khabarovsk (Khabarovsk: Private collection)