

The Architectural Complex of the Nevskaiia Manufacture of Baron Stieglitz: History and Problems of Reconstruction*

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Abstract—All of the branches of the Russian industry, including the most progressive in the XIX century — textile industry, were born in the leading industrial center Saint-Petersburg. Nevskaiia manufacture occupies a prominent place among the textile enterprises with its splendid examples of the “brick style” architecture. The factory founded in 1833 by a major industrialist, financier, and philanthropist L.I. Stieglitz marked the beginning of the country's industrialization and the emergence of the new trends in architecture and construction. Its multi-storey first frame buildings rise in the panorama of the Neva River. Nowadays the historical industrial complex combines original and new functions reflecting one of the ways of transforming the historical urban environment.

Keywords—*Nevskaiia manufacture; industrial architecture heritage; brick style; transformation of industrial landscapes*

I. INTRODUCTION

Since the second half of the XX century there have been enhanced efforts made to preserve the heritage of industrial architecture in developed countries [1]. Saint-Petersburg didn't stay behind the transformations of historical industrial complexes within the protected zones. The lack of drastic urban metamorphosis in the city at the beginning of the XX century (in contrast to other European capitals) predetermined the preservation of industrial factories blended into residential areas. The phenomenon of that situation is that this flaw in the urban fabric shows a rich potential for its improvement in the present time by “uncovering” problematic degrading spaces and incorporating them into a new context. One of such factories, which turned out to be in the modern center of the city, is the former Nevskaiia manufacture. The history of the enterprise dates back to the beginning of the XIX century when the first

multi-storey buildings of cotton-spinning factories began to be built in the capital (earlier than in other cities of Russia) marking the beginning of the country's industrialization.

II. THE BEGINNING OF THE COMPLEX: NEVSKAIIA SPINNING MILL (1833-1880S)

By the time the mill was founded on the territory bounded by the Neva Embankment, Bolshaia Bolotnaia, and Malaia Bolotnaia streets a diverse built-up area had developed at the site. Wooden buildings for production and storage mingled with residential houses, while the rest of the plots remained almost undeveloped. On the “Schubert Plan” of 1828 the land of the future manufacture was marked belonging to Lieutenant-General A.A. Betancourt, an outstanding engineer and builder. Betancourt's son, captain of the cavalry regiment Alphons Avgustinovich, sold “his wooden house with all constructions and land” to baron Ludwig Ivanovich Stieglitz [2].

The new owner immediately began to develop the newly acquired land. On the plan attached to the project draft of 1833 it is said: “There are no obstacles to the construction of a stone factory and wooden buildings”. The project draft was signed by a “collegiate assessor Anisimov working as an architect at the Alexandrovskaiia manufactory.”[3]. An indication of the place of service signifies the experience of the author in a new specific area of construction. A graduate of the Saint Petersburg Academy of Arts Nikolai Yakovlevich Anisimov in addition to serving at the Imperial Alexandrovskaiia manufactory participated at the construction of a number of multi-storey spinning mills in the capital. In particular, the main building of the Nevskaiia manufacture, built according to his design in 1833-1834, was one of the earliest examples of multi-storey brick building with a metal framework. Symmetrical three-part composition of the plan, typical to the first factory buildings of the beginning of the industrial era, is justified by the location of the main and two flanking it volumes. A U-shaped building with two low wings was open to the river. The surfaces of the walls were quite austere with a clear rhythmic fenestration with rectangular windows of classical

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proportions; the facades were topped with cornice and a low attic. A number of buildings had been placed on the site as well: a premise for gas appliances and a steam engine, a detached stone smokestack, a stone warehouse — “magazine” (a store), sheds, and also two wooden houses “for tenants.”

“The history and typology of a large machine factory, in which the entire internal spatial structure was based on the use of a modular grid, begins with the Nevskaiia spinning mill. And yet, as the factory’s general plan clearly demonstrates, this was a type of factory-manor estate, which was consonant with Saint-Petersburg of the time.” [4] (See “Fig. 1”)



Fig. 1. Nevskaiia manufacture of baron Stieglitz. Lithograph of the 1880s.

III. JOINT-STOCK COMPANY FOUNDATION — CONSTRUCTION OF A NEW BUILDING: EARLY BRICK STYLE (1851-1859)

After the death of baron Ludwig Stieglitz in 1843, the company was passed to his son Alexander, who shortly began to expand the production. At the beginning of 1851 on the initiative of A.L. Stieglitz the Joint-Stock Company of the Nevskaiia spinning mill manufacture was created with a nominal capital of one million rubles; the largest shareholder of which became the factory owner himself [5].

In 1857 the company acquired an adjacent northern plot of land for the expansion purposes. A main five-story building, two three-storied wings, a building for a steam engine, and two storage structures were to be built here. Military engineer L.V. Glama submitted a master plan of the Nevskaiia spinning mill manufacture with the indication of newly proposed buildings for approval.

Leonard (Leontii) Vasilyevich Glama (1803-1876), in addition to designing revenue houses and mansions, also participated in the construction of the Stieglitz's Narvskaiia cloth factory in Ivan-gorod. The design of the Saint-Petersburg manufacture executed by him was approved with some minor adjustments. The main building with brick plastered walls, topped with a plain cornice, and rhythmic repetition of simple rectangular windows was completed in the orderless classicism style. It had an extremely austere appearance reminiscent of the captured in the drawings of Friedrich Schinkel Manchester factories circa the beginning

of the industrial revolution [6]. The five-storey building with two wings located perpendicular to the bank of the Neva was compositionally incorporated into the urban fabric of the city suburbs.

In the outbuilding steam engines were installed. One of them was called "Vera" (Faith), the other two set up a little later — "Nadezhda" (Hope) and "Lyubov" (Love). The smokestacks reminiscent of the giant columns became symbols of the enterprise, and often were depicted on commemorative medals. The construction of a new factory was completed in 1859, the most modern equipment brought from England was installed in its production buildings [7]. By the mid XIX century a residential block had been developed near Malaia Bolotnaia street adjacent to the Nevskaiia manufacture; wooden residential houses, a tavern, stores, and a gas plant for lighting the factory occupied the area [8] (See “Fig. 2”).



Fig. 2. The first spinning mill (in the foreground) by engineer L.V. Glama.

IV. SECOND SPINNING MILL FACTORY (1884-1896)

In 1884 after the death of baron Alexander Stieglitz the factory was passed into the possession of his adopted daughter Nadezhda Polovtseva. From this time until 1894 separate reorganizations of warehouses and industrial buildings were carried out at the manufacture. New stage of construction at the factory started due to the tragic circumstances of 1894, when a fire broke out on the fourth floor of the old mill building. As a result, only cracked carcass remained from the main building [9].

In 1895 architect L.L. Peterson produced a project for a new factory, according to which the main wing of the old mill (the one that was burnt down) and the adjoining auxiliary buildings attached to it were a subject to demolition; whereas the outbuildings were to be reconstructed. Ludvig Ludvigovich Peterson (1842-1902), academician of architecture, participated in the construction of other factories of the Stieglitz's heirs, in particular, the complex of the Narvskaiia flax-mill in Ivan-gorod [10]. Construction work was carried out at an accelerated pace and in December of 1896 the newly revived factory began to produce yarn. The same year Peterson designed a number of different small structures at the site: a boiler-house, a stone gatehouse, extensions for the stairwells, and a stone fence with a wicket from the Kalashnikovskaia embankment in front of the freshly built factory building.

The new main wing stood out with its rich attire of the brick wall surface, variety of window openings and windows' outlines, and extensive usage of forged decorative elements (external fire-escaping ladders, parapets and brackets). Large-scaled and now decoratively embellished it began to play a dominant role not only in the complex, but also in the panorama of the Neva river.

It became known as the Second spinning mill factory in contrast to the First spinning mill built in 1859. There was another name for it as one can judge from the archival document found during the technical survey of 1939: "The factory complex consists of four wings. The two five-storied main buildings are linked together and constitute a rectangle in plan, one of them is called American, and the second one - Egyptian; rectangle of these two buildings stretched along the embankment of the Neva river. The interfloor bridgings of the main buildings (American and Egyptian pavilions) are made in the form of reinforced concrete vaults on metal beams and cast-iron columns." [11] These two wings' names were probably determined by the origin countries from which raw materials and equipment entered the factory. (see "Fig. 3")



Fig. 3. The second spinning mill factory by architect L.L. Peterson.

V. NEVSKAIA THREAD-MILL MANUFACTURE FELLOWSHIP (1890-1913)

The accession of new land plots adjacent to the enterprise was required for the creation of a new production - a thread one, directly connected with the spinning industry. A large garden belonging to the merchant Kukanov full of green crowns of poplars, lindens, and maples stretched as far as Bolshaia Bolotnaia street. There were also bread barns and warehouses for the storage of porcelain clay on the site besides the garden and the bath-houses.

These plots of land were acquired by Polovtseva in 1887. In 1890 the charter of the Nevskaia thread-mill manufacture fellowship was established; it soon became the main company in the production of sewing thread and yarn in Russia. Nevskaia manufacture, Saint-Petersburg based Koenig factories and "Nevka" manufacturing plant, as well as thread-mills in Lodz and Riga were included in the fellowship [12].

Construction of the thread-mill manufacture began on the site of the old garden and small structures within it; the new building stretched along Malaia Bolotnaia street with a slight offset from the red line. The design project for the main four-storied with basement building and boiler-house with detached chimney elaborated by P.S. Kupinskii was reviewed and approved by the City council in 1887.

A civil engineer Petr Stanislavovich Kupinskii (1838-1923) is well-known as the author of the Finland train-station in Saint-Petersburg, stations in Gatchina and Krasnoe Selo (haven't survived to the present) [13]. In architecture of the factory building the engineer well acquainted with the modern European examples used the austere means of the "brick style." It is characterized by a big plane surfaces in the arrangement of volumes. The three-part composition is determined by the function: there is an engine room in the central part of the building, and production halls in two symmetrically located side wings. The central part of the facade is flanked by bay towers; the other two are towering at the corners of the extended elevation. It is the tent roofs with dormer windows at the top-end of the towers that give a peculiar expressiveness and colorful romanticism to the appearance of the building. The facade is distinguished by a uniform rhythm of its elements which can be explained by the geometry of the metal framework; large arch-shaped windows topped by the lintels with a keystone; metal window covers, window towels-shaped ledges. Firm brick unplastered walls are crowned with a simple cornice. (See "Fig. 4")



Fig. 4. Thread-mill manufacture by civil engineer P.S. Kupinskii.

In 1898 after reviewing the restoration project suggesting one storey build-up presented by L.L. Peterson the Technical department of the City council resolved: "The walls of the four-storey stone factory building, shown in the plan of the layout under the letter A, can be extended on condition of arranging six additional metal stairs with platforms in front of each floor, and the existing stone stairs are covered with vaults" [14]. Outside metal stairs with forged geometric railings enriched the sober facade. In the two flanking the front elevation towers iron water tanks were arranged. They were located in attics, so it took to change the configuration of the roof framing system. A few one-storey buildings, dye-and-bleach houses, as well as a three-story residential

building for employees at the corner of Kalashnikovskaia embankment and Bolshaia Bolotnaia street were designed and built by Peterson in a “brick style.”

In 1913 the main building was built-up by one storey on the sides. By this time the architectural ensemble consisted of two neighboring factories (spinning mill and thread-mill) had been formed. Multi-storey industrial buildings were located along the perimeter, enclosing one and two-storied buildings of workshops, warehouses, and boiler-houses with chimneys. Adjacent service buildings, for example, a two-story office with a thoroughfare on Bolotnaia Street designed by the architect A. R. Gaveman supplemented the complex.

VI. THE RECONSTRUCTIONS MADE DURING THE SOVIET PERIOD (1939, 1947, 1960-1970s)

On November 11, 1919 the Presidium of the Supreme Economic Council resolved a resolution on the nationalization of 19 textile factories. Nevskaia thread and spinning mills were included in that list. In 1927 with the replacement of steam engines and the rebuilding of the boiler-houses the oldest steam machine “Vera” was dismantled, under its foundation a commemorative tablet with the date of groundbreaking was found.

In the 1930-s during the reorganization of the textile industry in Leningrad reconstruction of the factories began: a long passageway was built, the floor and room divisions of the main building of the thread-mill were replaced, and new stone extensions were erected [15]. In 1938 the two mills were brought together as the Spinning and Threading Plant named after S.M. Kirov.

During the World War II the complex was damaged by direct hits of incendiary bombs and blast waves, thus in postwar time full restoration was required. All production and residential buildings of the factory were thoroughly reconstructed. Herewith, all the restoration undertakings were made within the old exterior walls without significant changes in the facades. The functional purpose of the production buildings also remained unchanged.

In 1969-1970-s the plant again held significant reconstructive activities. A new two-storey stone wing was erected at the place of the dyeing house and two storage buildings. In the same period, the old production buildings adjacent to the main building of the spinning mill from the western side were partially rebuilt. The historical ground plot decreased: the southwestern corner of the thread-mill factory's land and the northern part of the spinning manufactories were cut from it. However, all the changes in historical structures and new buildings have not significantly violated the general and urban importance of the complex.

VII. THE BEGINNING OF THE XXI CENTURY STATE OF AFFAIRS

By the early 2000-s on the territory of the Kirov Spinning and Threading Plant there had been two close in function ventures — the former spinning manufacture and the thread-mill. Dense historical development with its expressive multi-storey brick buildings along the perimeter of the urban block

determined the important compositional role of the complex in the panorama of the Neva embankment near the Smolny Cathedral. Multi-storey industrial buildings surrounded the plant's territory from three sides. The main facade of the most recent construction (second spinning mill factory by L.L. Peterson, 1895-1896) is facing the Neva river; the background to it is the building of the thread-mill factory by P.S. Kupinskii, 1888. The most austere and the earliest structure by L.V. Glama (1859) is located with its side-end to the shore. Behind these masses of brick workshops, boiler-houses, and office buildings are hidden. Three brick smokestacks on a tall podium shot up from the depths of the factory district. The high historical and architectural significance of the ensemble of the Nevskaia manufacture was appraised by inclusion of it into the list of cultural heritage sites in 2001 [16]. (See “Fig. 5”)



Fig. 5. Panorama of the Nevskaia manufacture before reconstruction work.

Important role in the urban fabric of the city and advantageous location predetermined the modern day reconstruction with reassignment of the manufacture. In 2007-2010 a full reconstruction of one of the factory's sections, the spinning mill — was carried out: production was withdrawn from two workshops, both buildings were reconstructed and adapted for administrative and business functions. Heritage protection specialists were able to protect from the demolition only the main buildings. At the same time, the inside yard territory was completely cleared from any buildings. At the insistence of the developer all the buildings were excluded from the List of Cultural Heritage Sites, which has led to a low quality reconstruction and irreplaceable losses. In particular, the workshops, a boiler-house, three smokestacks (“Vera”, “Nadezhda”, “Lyubov”) - key elements and skyline dominants were demolished in 2010.

The former thread-mill factory has retained its historical boundaries and original function. The monumental brick building with towers rises behind the historic stone fence forming the front of the Krasnyi Tekstilschik street (former Malaia Bolotnaia) and complementing the view from the Neva.

VIII. CONCLUSION

The architecture of the industrial buildings of the Nevskaia manufacture demonstrates an outstanding example of “brick style” in its different stages: early, transitional from classicism — 1859; austere, with a romantic undertone — 1888; late, with a noticeable influence of Art Nouveau —

1896. All of them, despite the different periods of their execution, formed a unified ensemble.

Despite numerous losses happened during different historical periods the manufactory still remains a prominent example of industrial architecture along the banks of the Neva river. The multi-faceted composition of the factory's complex opens frontally along the embankment and into the depth of the urban block. Large red-brick masses along with openwork farms of the Bolsheokhtinsky bridge and the silhouette of the Smolny monastery form a spectacular picture of the Neva river vista, although, after the loss of giant columns-like smokestacks the compositional role of manufacture is now reduced.

Analysis of the results of the transformations carried out at the Nevskaiia manufacture made it possible to reveal the potential possibility of partial reorientation of a large industrial complex. The combination of the surviving production and a new function contributes to the preservation of the authenticity of the complex in a new context.

In the modern scientific and practical spheres of national heritage protection there is a discrepancy between official and actual evaluation of monuments of industrial architecture. As a result, historical complexes emerge truncated, specific elements have been lost, and urban landscapes and skylines are violated. In the context of reorientation of industrial complexes, it is necessary to develop scientifically based optimal approaches that would take into account the assessment of the implemented transformations.

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