MODERNIST, 1920S AND 1930S INDUSTRIAL ARCHITECTURE OF THE PORT OF GDYNIA - IN SEARCH OF AN AESTHETIC LANGUAGE FOR UTILITARIAN BUILDINGS OF THE POLISH GATEWAY TO THE WORLD

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ABSTRACT

The purpose of the article is to present the results of the research on the aspects of the Port of Gdynia modernist architecture aesthetics.

Its construction was one of the two major projects carried out in the interwar period in Poland. In the course of analyses it has been attempted to answer the question whether an individual aesthetic language has been created in the 1920s and 1930s for the industrial architecture of the Polish port.

The basis for the characteristics is the comparative analysis of the archival design documentation and photographs, presenting the designers’ ideas and the buildings’ condition soon after their construction. The background of the analyses were the changes taking place in architecture in the first half of the 20th century.

Mainly of industrial character, the port complex has been filled with buildings in which purely utilitarian elements are predominant, but a deeper analysis has also proved a broad aesthetic dimension of this architecture. The examples of facades and interiors have shown a wide range of stylistic measures, both universal for the modernism period, as well as ones dedicated to the Gdynia’s port architecture. The discussed issues aim at a better recognition of the Port of Gdynia, which is a significant part of the national cultural heritage.

Keywords: modern movement, architectural heritage, harbour buildings, aesthetic values, interwar Poland 1918-1939

INTRODUCTION

The construction of the Port of Gdynia, one of the two major projects carried out in the interwar period in Poland, became an excellent training ground for innovative, dedicated to this special venture, technical solutions, but also for a highly successful architectural creation. In terms of architecture’s aesthetics, we have to do with an extremely interesting complex of buildings which reflect perfectly the style trends of the interwar period. Alongside solutions deriving from worldwide trends in industrial architecture, a number of examples showing search for an individual aesthetic language for the Port of Gdynia complex can be observed. But before the construction work of this architectural and infrastructural complex began, it is worth presenting the historical background of the whole enterprise.

During the period of Partitions, Poland was divided and it coexisted artificially with economic organizations of foreign countries. When World War I ended, the Polish State reappeared on the map of Europe after 123 years and regained its political and economic
sovereignty. Under the terms of Versailles peace treaty signed in 1919 Poland was assigned an access to the sea which was a bit more than 70km long stretch of the Baltic Sea coast. As there was no port in that area, Poland received the guarantee to use the seaport in the Free City of Danzig, which had medieval traditions of maritime trade. This city, in which 90% of population was German, was an autonomous city-state under League of Nations protection. This situation did not give full independence and possibility to develop an international trade which was of crucial importance for a reviving country. Soon, because of adverse Polish-Danzig relationships, the decision to build a new port was taken.

The search for an architectural form. The buildings from the initial period of port’s construction (1925-1930) are characterized by temporariness and pioneering on the one hand, and economics of the whole investment and rationality on the other. It is hard to notice an individual stylistic design of the first large-size structures from that period. Their designers, who did not assume the scale which the port within next a dozen or so years was to achieve, used the well-established traditional aesthetics. The back-up infrastructure facilities, designed and built between 1922 and 1925, like for instance the first small-scale electric power-station, or the water tower, possess features of historicism, a style already anachronistic at that time. Also looking at the public buildings, like The First Customs Office (Kazimierz Milewski, 1925) or The Harbour Master’s Office (Jan Broda, 1927) [1], we will not see any creative approach to the form, or even the slightest aesthetic search.

Brick as the material of architectural expression. The Rice Mill (Kazimierz Krzyżanowski, 1927) was definitely the ground-breaking building in the port, which outlined the future scale and importance of the aesthetic resolutions to come (Fig.1). This first, large-sized industrial building overcomes successfully the previous imitation of historical forms and initiates an epoch of modern aesthetics in port’s architecture. The buildings belonging to the Rice Mill complex have been put together as a solid composition with a distinct gradation of function and form. The cubic aesthetics of this architecture has been highlighted by a homogenous stylistic concept in a form of horizontal stripes. The stripes, covered with ceramic brick, have been divided by smoothly plastered ones, that join simultaneously the window openings.

It is hard to find any conventional architectonic details when we look at the façades decorations of the Rice Mill complex. Apart from a very carefully designed woodwork of the window frames and two-coloured, striped gates leading to warehouse buildings,
our attention is drawn by the entrance finishing of a small administrative building. The decoration of the entrance has been accentuated by a geometric brick composition which refers to the so-called “Hamburg School” of German Expressionist trend [2][3]. The central part of the façade has been additionally emphasized by an interesting metal work. Wall lamps, designed especially for this particular building, have been made of black metal discs fixed concentrically to a mandrel. The stylistics of these unusual luminaires shows some relationship with Wiener Werkstätte workshop products signed by Josef Hoffmann. Finally, the railings running along the stairs that lead to the entrance have been finished with details in Art Deco style.

The Rice Mill, as the first so expressive industrial building put up in Gdynia, became a meeting showpiece of the growing port. Moreover, as the publicists of the time pointed out, the white and red stripes of the building referred to Polish national colours, which emphasized even more explicitly not just aesthetic significance of Rice Mill’s architecture [4].

An analysis of the buildings that appeared in Gdynia’s port in the following years, confirms the designers’ choice of brick as the material producing aesthetic effect. Modern, cuboid spatial forms, at the same time covered with traditional building materials, reappear in a few outstanding buildings of Gdynia’s port of the late 1920s until the middle 1930s.

The first facility of this kind was Cold Storage warehouse (Atelier Bruno Le Brun Societe Anonyme, Nîmes, 1928-1930) (Fig. 2) [1][4]. The main body is a cuboidal block without windows. The curtain walls of this aesthetically modest building are accentuated by vertical, plastered stripes which duplicate the internal frame. The visual effect is highlighted by the contrasting colour of the brick. As in the case of the Rice Mill, the designer let himself soften the avant-garde image of the Cold Storage by applying moderately modernist solution in the administrative and technical part of the building. He decided to use simplified brick pilasters and dynamic surface ornaments.

The architects of the Long-term Storage No5 (Konstanty Jaskulski, Engineers Office K. Jaskulski & K. Brygiewicz, 1931, 1934) (Fig. 2) show a step further and reveal the modern construction system of the building [4]. All the four elevations of this coherent cubic block are marked out by a distinct design of structural frames. The spaces between the frames have been filled with brick and glass in metal frames. An avant-garde constructivist image of the building is broken by a composition of symmetrical, plastered
stripes which define the vertical glazing along the staircases. The whole aesthetic concept has been undoubtedly based on the construction’s sincerity which also translates into a clear solution of the internal spatial and functional arrangement.

A sort of combination of the two previously discussed methods of creating a building’s aesthetics has been applied in the project of The Herring Cold Store (Railway and Building Construction Company „TOR” SA, 1935-36, 1960-65) (Fig.3) [1]. A cubic structure is outlined by a reinforced concrete skeleton with fillings of contrasting ceramics [6]. As it may be expected of this function of a building, the façades have practically no windows; lighting is delivered through narrow, vertical stripes of glass hollow bricks which have been arranged symmetrically. In case of two side façades, the location of communication plumb-lines has been emphasized by discreet risalits. In terms of style, the architecture of the Herring Cold Store is one of the most consistent examples of modernist avant-garde promoting the unity of construction and form.

![Image of The Herring Cold Store](image.jpg)

Fig.3. The Herring Cold Store („TOR” SA, 1935-36, 1960-65). Building of Consumers Cooperative Union „Społem” (Eliza Unger, Edward Fuhrshned, 1935-1936).

Brick as the main means of architectural expression was used not only for large-space facilities of Gdynia’s port. An interesting artistic usage of ceramics can be observed in case of two buildings that appeared in the 1930s along the main traffic route of the port, called Polska street. Looking at the first one, the Building of Consumers Cooperative Union „Społem” (Eliza Unger, Edward Fuhrshned, 1935-1936) (Fig.3), we can observe that the architects propose a solution typical for modernism, that is a prism-shaped structure with a protruding main body of the staircase. The façade planes are partly clad with smooth, bright red brick and the area of vertical lighting and the entrance has been emphasized with a three-dimensional ceramic composition. The second building, the port’s ripening depot for bananas built for “Bananas” company (Eliza Unger, Bronislaw Wondrauch, 1938-1939) (Fig.4), also received a very meticulous ceramic finishing of façades.

A cuboidal, elongated structure is highlighted in the central part of the façade by a vertical composition of pilaster strips placed between the windows and the entrance arcade supported by slender pillars running along side elevations. The top part of the building is girded with a quite high, flat frieze placed under the cornice. The frieze received a form of an expressive brick ornament. In order to strengthen the façades’ articulation, two different colours of clinker brick have been used: a classical, bright orange-red and a red-brown one.
A completely different design task concerned the question of elevation gables of general cargo warehouses which were being built along the quays. They were flagship buildings of Gdynia’s port for which technologists had to develop tailor-made solutions of the spatial and functional arrangement, as well as the equipment.

However, it was the aesthetic finishing of elevations that allowed for the distinction of the warehouses located in a row of buildings of similar size.

The first building noticed from the ships entering the port was „Fruit Auctions” and „Warta” Warehouse (Waclaw Tomaszewski, 1933) (Fig. 4). Its stepwise gable has been designed in such a way that a curtain masks the warehouse’s roof slopes. An elaborate brick composition highlights a distinctive image of pillars densely placed between the windows, additionally emphasised by a smooth plaster texture. A complement of the architectural composition, as it was frequently practiced at the time, was an imposing flag pole and a large signboard. In this case, it was a graphically sophisticated inscription which read “FRUIT AUCTIONS”, made of open-work, spatial letters. This construction, very much under the influence of tendencies connected with emphasising a vertical elevation image, should be attributed to the moderate modernism trend [1][5].

The other two warehouses taken into consideration in this overview also use ceramics as the main finishing material. However, they present a more avant-garde approach when we look at the form of the gable walls.

In case of Warehouse No 8 project (Michał Paszkowski, 1934) (Fig.5), the designer decided to reflect in the façades the spatial and functional structure of the interior. The warehouse’s interior is covered with a modern spatial system of reinforced concrete arches. Similarly, as it has been practiced from the times of ancient Egypt, a lowering of side parts of the wide building has been made in order to let the sunlight through an indirect window strap. The visibility of this idea’s logic, when looking at the façades, lets us attribute the warehouse to constructivism trend. A clear picture of the framework emphasises a minimalist filling of the surfaces between the framework and a smooth face brick. The only accents integrated in the gables are very simple in their form, corrugated entrance gate frames and flagpoles at the top.

When looking at the project of Warehouse No 10 (Piotr Sakowicz, 1937-1938) (Fig.5) we can discern a similar sincere approach to the spatial-structural layout of the building.
The elevation gables, all covered with brick, show a pitched roof made on the basis of a light, metal framework. Only two entrance gates, moved away from the brick elevation, plastered and additionally enhanced with horizontal rustication, have been highlighted in the main façade. This remarkably restrained project, characteristic of Gdynia’s port buildings from the 2nd half of the 1930s, is closed by a longitudinal ribbon of windows and a mast.

Play of masses brought together in light. Among buildings designed for the port of Gdynia, apart from the ones that received their stylistic character thanks to ceramic elevations, there also appeared stable, smooth-surfaced buildings. Simple geometric shapes, as if born to be watched in the sunlight, fitted into Le Corbusier’s first reminder [7] about the role of a bulk in architectural design. Although they made an impression of extremely stable and well-balanced, they went at the same time hand in hand with industrial aesthetics based on reinforced concrete constructions and technological innovations of construction engineering.

It is worth noticing that the projects of port of Gdynia buildings were carried out by world-famous companies which specialized in the most modern reinforced concrete technologies, as well as Polish construction engineers who were supported by a new generation of architects [1].

A building that perfectly conformed to these tendencies was a complex of Oil Mill (1930-1931) designed by Wayss & Freytag AG. The most notable, from an architect’s point of view, was a 32 meters high silos for oilseeds, accomplished in reinforced concrete technology. This solid building that actually had no windows, was designed as an elongated cuboid. The front part, facing the port basin, is arranged in a form of three pseudo – towers. Their symmetrical composition has been accentuated in the central part by a system of slotted window openings. In terms of an architectural form, the Oil Mill’s silos is characterised by an uncompromising simplicity of functionalism, the avant-garde trend in modernism.

Another, exceptionally important on the port’s map is the building of the Marine Station (1932-1933) [1]. The modern reinforced concrete technology has a major impact here on the artistic effect. This facility was designed by Katowice branch of Dyckerhoff & Widmann design studio, which was yet another big company that specialised in modern reinforced concrete technologies. When looking at this structure built along the port’s pier, we notice a clear distinction of various functions it fulfilled.
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In the front side, at the base of the pier, we can see the so called Main Departure Hall, marked by a characteristic vertical composition of little pillars placed between the windows. On the sides of the façade there are smooth wall surfaces with bas-reliefs in Art Deco style, presenting the eagles from the national emblem [5].

The building of the Transit Warehouse, connected with the Passengers Hall, was designed using a bit different, typical for constructivism means of expression. Its strongly elongated structure has been emphasized by a horizontal outline of; very clearly visible elements of the construction frame, a stretch of connected sliding gates, and elongated windows in metal frames that filled the construction.

Everything is covered with a „wave” of ten cylindrical barrel vaults with longitudinal strings of lighting. It is the element, revolutionary at that time, patented as Zeiss-Dywidag System that distinguishes this building so much. The construction of roof coating, in a form of a thin-shell dome structure with a pyramidal skylight, has been also applied above the representative hall in the front part. Due to its prestigious public utility function, the interior of the Marine Station has been designed as carefully as its exterior.

Fig.6. Oil Mill (Wayss & Freytag AG, 1930-1931). Grain Elevator (Michał Paszkowski, Bolesław Schmidt, 1935-1937). Marine Station (Katowice branch of Dyckerhoff & Widmann design studio, 1932-1933).

Spanning three storeys of open space, the Passengers Hall is entwined from three sides by galleries that open to a culmination accent in a form of representative stairs and a smooth wall with an artistic decoration in a form of commemorative bas-reliefs.

The last large scale enterprise accomplished before the outbreak of the World War II was the Grain Elevator (Michał Paszkowski, Bolesław Schmidt, 1935-1937) [5]. The project of this monumental and very rational building, but also linked with style models of the epoch, was prepared by a team of two people, just perfect for this kind of task: an excellent specialist in the field of reinforced concrete constructions [6] and a fresh graduate of the Architecture Department at the Warsaw Technical University.

The shape of an elongated, boxy structure of the elevator, divided according to its functional disposition, has been emphasized by varied, but at the same time very modest, means of expression characteristic for the late functionalism.
In the tower part it is a dense vertical fluting, and in the side wings these are evenly spaced small windows on the one side, and distinctive, rhythmically placed pilaster strips on the other.

Following the interpretation of new architecture by Le Corbusier himself, “mass and surface are the elements by which architecture manifests itself” [7]. It is not surprising that these two components, also in case of the Grain Elevator, became the basis for the search of aesthetics that was to make certain impressions on recipients.

**CONCLUSION**

Summing up, it should be stated that the main areas of aesthetic explorations by designers of utilitarian buildings in the port of Gdynia constitute: geometric, solid constructions, disapproval of traditional design, resignation from typical ornaments and a paramount principle of material’s and construction’s sincerity.

As part of the examples presented above, two fundamental aesthetic trends which designers followed, can be distinguished: (1) a distinctive, artistic articulation obtained thanks to the usage of brick in the façades faces, contrasted most frequently with a smooth skeleton construction, and (2) geometric, solid compositions emphasized with bright and luminous façades. The modern port of Gdynia, built absolutely from scratch, played a significant role in supporting the reconstruction of the state’s economy and international trade. It became a Polish window on the world. A complex of port and industrial buildings is a set of diverse and bold, in terms of function and form, architectural designs that were consistent with postulates of modernism, but also used their individual aesthetic language. The fact that the investment implementation overlapped with an important period of modern architecture development, connected with experimenting with new aesthetics that was under the influence of discoveries in the field of engineering and construction, had a major impact.

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