
ADAPTATION OF THE MACHINE LABORATORY OF FORMER SCHOOL OF BUILDING CRAFTS AND THE HIGHER SCHOOL OF MACHINE CONSTRUCTION INTO THE LIBRARY OF THE FACULTY OF ARCHITECTURE OF WROCLAW UNIVERSITY OF TECHNOLOGY

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ABSTRACT: The machine laboratory building was erected in 1905-1907, as the last element of the complex of the former School of Building Crafts in Ołbin in Wrocław. The building was quite badly damaged during World War II. In the 1960s, the preserved remains of the building were, quite provisionally, rebuilt and adapted to a precision mechanics workshop for the Wrocław University of Technology. At the beginning of the 21st century revitalization activities were started to transform the historic complex into a modern educational campus. The building of the former machine laboratory was designed for reconstruction and adaptation into the library of the Faculty of Architecture at the Wrocław University of Technology. The project was preceded by historical research and analysis. The works were conducted in the years 2014-2017.

KEY WORDS: Faculty of Architecture, adaptation, Karl Klimm, School of Building Crafts

Introduction

The Polish tradition of the Faculty of Architecture at the Wrocław University of Technology was mostly built by the academic staff coming from Lviv after the end of World War II, as part of forced repatriations. The reviving university took over the premises and technical facilities of the former *Technische Hochschule*. Until 1968, the Faculty of Architecture occupied part of the building at 27 Wybrzeże Wyspiańskiego Street, when it was transferred to one of the buildings at 53-55 Bolesława Prusa St., which before the war belonged to the School of Building Crafts and Higher School of Machine Construction (*Baugewerk- und Maschinenbauschule*). Initially, the Faculty occupied the main building, together with the Faculty of Electronics. At the beginning of the 21st century Wrocław University of Technology acquired the entire area, together with other facilities once belonging to the School. Since 2007 intensive revitalization activities were carried out to create a modern educational campus, educating future architects¹. One of its stages was the work carried out in the years 2011-2016 on the former building of the machine laboratory, aimed at adapting it for a library.

1. Historical background

The School of Building Crafts and the Higher School of Machine Construction was built between 1902 and 1907 in a quarter designated by Chemiczna St, B. Prusa St., Ł. Górnickiego St and Rozbrat St, according to the design of Karl Klimm, who implemented Richard Plüddemann's concept to make the buildings of the new school a teaching aid for the students². The complex consisted of the main building, located in the north-western part of the plot, a one-storey toilet building (demolished after 1945), the director's villa and a machine construction laboratory. Due to the size of the investment, the works were conducted in stages. The machine building laboratory was the last building of the School, completed in 1905-1907. Initially, the possibility of connecting it with the main building³ in its south-eastern corner was considered. Eventually the laboratory was built as a free-standing object in the southern part of the plot of land at the end of the view corridor of today's Ukryta Street (formerly *Fiedlerstrasse*). In the building there were different functional zones, separated not only in the plan, but also in the body, by different

¹ The area occupied before World War II by the School of Building Crafts and the College of Machine Construction was divided in the late 1940s between the Wrocław University of Technology and the University of Life Sciences (then Faculty of Agriculture of the University of Wrocław, transformed in later years into a separate university). Since then, utilitarian transformations took place in this area, which gave an unfavorable urban and architectural effect, such as the construction of the two so-called "Namysłów pavillions" in the 1970s. At the beginning of the twenty-first century, the area of the former School was merged under one ownership, which gave rise to the revitalization of the entire complex, and in 2010 the pavillions were demolished.

² Cf. Gryglewska A., *Architektura Wrocławia XIX-XX wieku w twórczości Richarda Plüddemanna*, Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 1999, pp. 160-161.

³ Spatial development plan of the area from 1902 r., Building Archives of the city of Wrocław, ref. no. 2159.

height, type of roof, type of woodwork⁴. From the south, on the first floor there was a pump room with a water tower, above - in the attic covered with a gable roof with brick dormers, there was a mechanic's apartment. The northern wing housed a one-storey machine hall with a multi-pitched roof. On the eastern side there were two one-storey *avant-corps* housing a machine room and a coal-fired steam boiler room. Both parts were covered with a mono-pitched roof. In the vicinity of the boiler room there was a quite high exhaust chimney. The windows in the halls and technical rooms were made of iron with a fairly large surface area. In the residential part, wooden joinery was used.

In the machine laboratory building, the same external finishing materials were used as in the case of the other facilities of the complex. The elevations were plastered⁵, with elements made of sandstone such as the plinth in the south-western corner, lintels, window sills and gable edges. From the south, there was an entrance to the mechanic's apartment, in the form of a Gothic portal⁶. The roof was covered by a carp tile. The sculptural decoration of the machine laboratory building was not as rich as in the main building or the directors' villa and was limited to the letter "W" (symbolizing Wrocław, Latin Wroclavia) and "Erbaut 1905". (commencement of construction)⁷. The facility was connected to the municipal water supply, sewage system and electrical grid. During World War I the buildings of the School were handed over to the army. After the end of the war the buildings had to be renovated. In the laboratory halls, classes were held mainly for students of the Machine Construction School. Inside there were such machines as lathes, milling machines and machine tools, where students performed exercises under the teacher's supervision. The exterior of the building served as a didactic aid for the students of the School of Building Crafts, by exposing various ways of making stone rustication on a fragment of the elevation near the water tower.

2. Destruction of the building in 1945 and the post-war reconstruction

During World War II the buildings were used by the army, for instance, a field hospital was set up in the main building. During the siege of *Festung Breslau* (Wrocław Fortress), probably between March 11 and 15, the machine hall and the boiler room with a chimney were destroyed in the bombing of Ołbin⁸. After World War II, the facilities were divided between various state

⁴ A detailed historical study with a list of preserved archival materials, covering the years 1902-2009 for the main building, the directors' villa, a non-existent sanitation facility and a machine laboratory was made by Agnieszka Gryglewska and Wojciech Brzezowski in 2009. The above description of the object's history is based on this study, cf. Gryglewska A., Brzezowski W., *Historical Study with Conservation Conclusions of the former Baugewerk und Maschinenbauschule, currently buildings of the Wrocław University of Technology at 53/55 B. Prusa Street in Wrocław, Report from the series no. 029/09*, manuscript, Wrocław 2009.

⁵ The plaster had horizontal grooves. The plinths in the rest of the building were made of brick.

⁶ The portal probably came from one of the Wrocław tenement houses demolished at that time, Gryglewska A., Brzezowski W., *op cit* p. 74.

⁷ The remaining buildings of the complex of the School of Building Crafts and the Higher School of Machine Construction had much richer sculptural decorations, referring to plant motifs and allegorical ornaments connected with craftsmanship.

⁸ Gryglewska A., Brzezowski W., *op cit*. p. 33.

institutions: the University of Wrocław, Wrocław University of Technology, and the University of Life Sciences (former Agricultural Academy). The building of the former machine laboratory, which was 75% destroyed, was taken over by the University of Technology⁹.

In 1963, the adaptation of the preserved remains of the building for a precision mechanics workshop, according to Czesław Oleksy's study¹⁰, began. At that time, the object was not under any conservation protection¹¹ and the project was not preceded by studies and research on its historical value. The planned adaptation procedures were of utilitarian nature only and were carried out with the cheapest possible construction methods.

The fragments of the building which were in a bad technical condition, such as the remains of the roof truss or the walls above the first floor level with the water tower, were dismantled. Inside, numerous brickwork modifications were made, including the reduction of the existing window openings and the rearrangement of door openings. From the single-space interior of the former pumping station, a room for manual processing was separated, another one for secondary processing and a sanitary point. The Koenen type ceiling, supported in the middle of the room by an iron column, was preserved. The machine tool hall (on the eastern side) was transformed into a storage facility, together with a painting and electroplating plant. Above the pumping station's first floor, one storey was added for the measurement laboratory, assembly room, technical workshop, warehouses and a small sanitary facility. The body of the building was very much simplified. The superstructure was covered with a DZ3 roof with a small slope of 5%, covered with bituminous tar paper on. The existing sectional ceiling supported by steel beams, and the wooden rafter truss, which is the structure of the mono-pitched roof over the machine tool hall, were preserved. The joinery was replaced and new stairs with steel construction were made. The elevation has been plastered over with brick plinth and stone rustication in the southwestern corner. The bas-relief with the letter "W" was left, while the German inscription "Erbaut 1905" was covered with plaster. At the end of the 1970s, modernization or possible extension or floor addition to the object was considered, but due to technical limitations of the existing structure and the necessity to incur considerable investment costs, this idea was not implemented¹². The building served as a workshop until about 1980, in 1981 it was a utility building, and in the 1990s and on until 2006 the building was a workshop pavilion for the Institute of Metrology and Telecommunications and Acoustics of the Faculty of Electronics of the Wrocław University of Technology.

⁹ Gryglewska A., *Gmach dawnej Szkoły Rzemiosł Budowlanych – siedziba Wydziału Architektury Politechniki Wrocławskiej. Idea projektu* [in:] *Schola Architecturae Budynki Szkół Architektury*, ed. O. Czerner, A. Gryglewska, Publishing Office of the Wrocław University of Technology, Wrocław 2005, p. 89.

¹⁰ Technical and detailed project - precision mechanics workshop, designed by Czesław Oleksy, ul. Chemiczna 4, Wrocław 1963, Archive of the Department of Technical Infrastructure of the city of Pwr (ADITPwr), ref.no. ACT/AR-E3/1, items 1, 3.

¹¹ In the 1960s, objects from the 19th and early 20th century built in the historicism or Art Nouveau style were not considered monuments.

¹² Minutes no. 14/78 from the meeting of the Scientific and Technical Council of 21.06.1978 at the Department of Studies and Design of the Wrocław University of Technology, ADITPwr, ref. no. ACT/AR-E3/2, item 2.

3. Conservation guidelines for the reconstruction and adaptation of the building for the faculty library

The starting material for the works on the project of reconstruction and adaptation of the remains of the former machine laboratory for the library for the Faculty of Architecture of Wrocław University of Technology was a study made in 2009 by Agnieszka Gryglewska and Wojciech Brzezowski. It contained in-depth historical studies of the entire former school complex as well as conservatory conclusions and guidelines¹³. The research conducted in this study on the historical value of the former laboratory resulted in the entry of the preserved remains of the building into the register of monuments of the city of Wrocław. As a result of the study, the authors of the study concluded that *the residual state of preservation of the authentic substance, deprived of its original function, does not give rise to a categorical requirement to preserve, let alone reconstruct the original building, although it was an important compositional element of the complex*¹⁴. As a result, the main design problem was to juxtapose the preserved relics of the building with the new part in such a way that the whole created a harmonious picture with the remaining buildings of the former campus.

4. Realization - the applied conservation procedures and adaptation to the modern requirements of use

The conceptual design of transforming the object into a modern university library was created in 2011 in Creoprojekt studio from Wrocław¹⁵. The authors' main objective was to reconstruct the original body of the building with a turret and incorporate a new function¹⁶. The result of the works was a concept of arranging new teaching rooms with the necessary storage and archive facilities, dressed in a contemporary interpretation of traditional architectural patterns¹⁷. The existing cellars are to be buried¹⁸. The entire utility program was to accommodate the above-ground part of the building: the former pump station with approximate dimensions of 13x15m, together with a 7.7x11m machine tool hall. The main storage part with a rental desk and a

¹³ Por. Gryglewska A., Brzezowski W., *op. cit.*

¹⁴ Gryglewska A., Brzezowski W., *op. cit.* p. 106.

¹⁵ Conceptual design of the superstructure together with reconstruction and change of use of the former E3 laboratory building into the library building of the Faculty of Architecture at 4 Chemiczna Street in Wrocław, designed by Bartosz M. Żmuda, Wrocław, March 2011, ADITPwr, syg ACT/AR-E3/5, item 1.

¹⁶ Statement from the office fanpage, <https://www.facebook.com/biurocreoprojekt> [access: 29.01.2019].

¹⁷ In the initial stages of the conceptual design, various concepts of shaping the body of the building were considered, from the complete abandonment of the historical form and preservation of the 1960s form, to the faithful reconstruction of the object in its pre-1945 form. The acceptance by both the Investor and the Conservator of the Monuments of the City of Wrocław gained a partially historicising version. – based on the interview conducted by the author with one of the designers – B. Szczepański on 21 July 2020.

¹⁸ "The basement was located only under the part of the building without access to the internal staircase. It was in a very bad technical condition, the height of the rooms would have required deepening of the floors, which would result in huge repair costs. Therefore, the Investor resigned from its further use". - on the basis of an interview conducted by the author with one of the designers B. Szczepański on 21 July 2020.

workplace adapted for the disabled was located on the first floor. The character of the single-space hall, however, was restored, as a vestibule at the main western entrance for readers was separated, and the storage area was partially separated from the rental office. The stairs from the 1960s leading to the mezzanine were dismantled. The staircase on the southern side remained, while the number of flight of stairs was increased to lead to the tower. In the space on the first floor, under the staircase, a toilet for the disabled was designed. The backroom for offices, a heating substation, social rooms and an entrance for the library's staff were located in the former machine tool hall. On the first floor there is a reading room with the necessary sanitary facilities, connected to the terrace on the roof of the former machine tool hall. In the course of operation, it turned out that the storage space provided in the project was not sufficient. It became necessary to place additional storage racks in the reading room, slightly reducing its area. The adopted conservation program included conservation and exposition of the relics of the first floor walls, especially the south-western corner with stone rustication and the preserved relief of the letter "W". The inscription "Ergebaut 1905", also discovered during the works was uncovered and preserved. The southern wall with a preserved Gothic portal was similarly treated. In the way of shaping the form of the object, it was decided to partially reintegrate the original body. It was not decided to reconstruct the body of the machine hall and boiler room, which were destroyed in 1945, but a 17.75 m high water tower was reconstructed as an important element closing the composition axis of Ukryta Street. The gable roof over the former pumping station, with a slope of 45°, was restored, along with dormer windows lighting the reading room¹⁹. The elevations were shaped differently depending on the degree of preservation of their original details. On the southern exterior wall, which houses the Gothic portal and stone rustication, the stone decoration of the gable was reproduced. Building materials and technologies similar to the original ones were used, such as plaster grooved with an oblique tooth comb (with uneven angles), wooden, stylized window woodwork, made according to contemporary standards, but with historical divisions). The original shape and size of the window openings have been restored.

The artistic expression of the southern elevation is complemented by steel elements such as handles and iron bars, made according to preserved copies from the main building. The remaining elevations were shaped in a contemporary way²⁰. From the east and west, Corten steel cladding was used, which smoothly leads to roofing and aluminum doors and windows. The traditional eaves were abandoned and a covered gutter was used²¹. The northern elevation was plastered in the same color as the southern side, while the windows were given a contemporary feel through the use of gray, aluminum frames and large-format glass. Sandstone identical to

¹⁹ Detailed design of the superstructure together with reconstruction and change of use of the former E3 laboratory building to the library building of the Faculty of Architecture at 4 Chemiczna Street in Wrocław, designed by Bartosz M. Żmuda, Beata Pawelec, Bartosz Dereń, Bartosz Szczepański, Wrocław, March 2012, ADITPwr, syg ACT/AR-E3/5, item 3.

²⁰ The designers' vision was "to introduce a soft, curved line of copper-colored steel sheet - contemporary and consistent, without recreating the original plaster, eaves and red tile, of which there is nothing left" - on the basis of an interview conducted by the author with one of the designers B. Szczepański on 21 July 2020.

²¹ The designers assumed partial perforation of the metal sheet, but this was not realized.

that used on the southern elevation was used for a band for the northern gable, and for the plinth, but with simple, geometric divisions. Air intakes, located at ground level, and balustrades were eliminated. The structural walls of the first floor and the Koenenen type ceiling over the former pump station have been preserved. The mono-pitched roof above the former machine tool hall was dismantled, designing in its place a new reinforced concrete slab for the utility roof. The new brick walls were made of SILKA type blocks. The attic, housing the reading room, and the roof were made on the basis of a steel supporting structure. The external walls, without preserved valuable historical details, were insulated with mineral wool, located between the steel substructure of the sheet metal coverings, while the new, brick gable wall on the north side was insulated with polystyrene foam. In the rooms, it was postulated, as far as possible, to leave the original plasters, cleaned from peeling paint coatings and to use breathable plasters. In the case of revealing the original paint decoration, it was proposed to uncover and expose it or to preserve and cover it with new plasters. The newly designed interior colors were modeled on the research of corridors and halls of the E1 (main) building, conducted in 2010 by Agnieszka Witkowska²². A new cargo elevator for transporting books and sliding storage racks were introduced. Reconstructions and adaptations are associated with the need to adapt the facility to current regulations in the field of fire protection, health and safety at work and accessibility for the disabled. In the case of the new departmental library, where the scope of interference was quite large, the requirements could be met without the need for derogations and replacement solutions. The main entrance was located at ground level. The rooms for the disabled were located on the first floor of the building, eliminating the need to install a passenger crane²³. The requirement to introduce barriers on the roof of the former machine tool hall slightly changed the original proportions of the building's body from the south, but thanks to the use of Corten steel, contrasting with the façade plaster, it is still legible. The building was completed in 2016 and since then has functioned as a university library. The project also won an award in the competition for the Lower Silesia Building of the Year.

Conclusions

The adaptation of the former machine laboratory building for the library is an example of an individualized approach to the design process. Preparation of the concept was preceded by a historical study of the entire educational complex of the former School of Building Crafts and the College of Machine Building. Architectural and stratigraphic studies of plasters had been carried out, and the urban context, which is usually overlooked, such as the view axes, closing the perspective of the surrounding streets, had been thoroughly analyzed.

²² The results of the research showed that the door joinery had been brown, while the internal walls had been in shades of broken white, creamy broken pink, creamy orange, gray and olive hues. A detailed description of the interior colors can be found [in:] Witkowska A., *Conservationist's recognition of selected elements of the interior design of the building E1 and E5 of the Faculty of Architecture of the Wrocław University of Technology, Wrocław, 53/55 B. Prusa Street, Wrocław, February 2010, manuscript.*

²³ In the attic there is a reading room with a functional terrace and sanitary facilities. Rooms with the same function are also located on the first floor.

On the basis of the studies and research, attempts were made to determine what constituted the greatest value in the remains of the former building. The conclusions regarded both urbanistic and architectural as well as conservational aspects of the project. In this case it was decided to preserve the original composition of the school campus. The reconstruction of the entire building with its former detail was abandoned, while its historical form served as a material and structural inspiration²⁴.

for a newly designed form. All these activities were dictated by the adopted philosophy of harmonious composition of the preserved remnants of the building and distinguishing the newly designed part.

When trying to evaluate the adaptation, seven conservation principles can be taken into account, quoted, among others, by Bogumiła Rouba²⁵:

1. Primum non nocere
2. Maximum respect for the original substance of the monument and its tangible and intangible assets
- 3 Minimum interference
- 4 Removing what is detrimental to the original (exclusively that)
- 5 The legibility and distinction of the interference and aesthetic subordination to the original (non-competitive character)
- 6 Reversibility of methods and materials
7. Execution to the best of our knowledge and state of the art combined with documentation of research results and the course of subsequent actions.

In the case of the building of the former machine laboratory, the most damage, apart from World War II, was caused by an adaptation from the 1960s, carried out without any studies on the historical value of the object. The last activities were aimed at uncovering, conservation and exposition of the preserved relics of the building, reintegration of the southern elevation and reconstruction (in a simplified shape) of the water tower. The legibility of the contemporary elements added and those preserved was ensured, but it should be noted that due to the relatively small part of the original walls, the range of interference was quite large.

As regards adaptation of the historic buildings to the contemporary needs, we are dealing not only with complex conservation issues, but also with issues concerning fire protection, sanitary requirements and adaptation of the object for the disabled. In order to maintain the principle of minimum interference, the functions of the rooms should be strategically designed so that the adaptation procedures are limited to the necessary minimum. In the case of the former

²⁴ Kadłuczka A., *Problemy integracji architektury współczesnej z historycznym środowiskiem kulturowym*, Politechnika Krakowska, Kraków 1982, p. 121.

²⁵ Rouba B., *Dlaczego adaptacje niszczą zabytki i czy tak być musi? [in:] Adaptacja obiektów zabytkowych do współczesnych funkcji użytkowych*, ed. B. Szmygin, Wyd. Lubelskie Towarzystwo Naukowe, International Council for the Protection of Monuments ICOMOS, Lublin University of Technology, Warsaw-Lublin 2009, p. 114.

laboratory, the idea of creating rooms with capacity of over 50 people was abandoned, which made it possible to reduce the fire resistance requirements of the building partitions. Historical buildings of relatively small size, where for various reasons it is impossible to design a ramp or build a lift, should have rooms adapted for the disabled on the ground floor.

The greatest design challenge for the architects was to fit the entire assumed utility program into the contour of the surviving part of the building²⁶.

The scope of the study was imposed on the designers by the Investor already at the stage of conceptual elaboration. It was possible to consider extending the scope and restoring a non-existing machine hall in its former size. Such a solution would certainly be beneficial, as the functional needs of the library are greater. The architects tried to use the space in the most economical way by placing the technical equipment of the ventilator room within the structure of the reproduced tower, creating the toilet for the disabled under the stairs, using the terrace for the external reading room in spring and summer. Nevertheless, even designers admit that "the library should be larger"²⁷.

An important issue was solving the problem of thermal insulation of the building partitions. Although historic buildings do not have to meet the standards analogous to new realizations, complete omission of this issue affects the comfort of use of the object and may lead to lack of compliance with the building law. It is necessary to carefully design the way of introducing modern installations in historic buildings to possibly avoid disturbing their structure.

The dialogue between the old form and modern needs can certainly lead to an agreement that combines the needs of both. However, for this to happen, it is necessary to carry out research and historical studies within the framework of pre-project work. The obligation to carry out such studies should be reflected in the applicable laws.

²⁶ On the basis of an interview conducted by the author with one of the designers B. Szczepański on 21 July 2020.

²⁷ On the basis of an interview conducted by the author with one of the designers B. Szczepański on 21 July 2020.

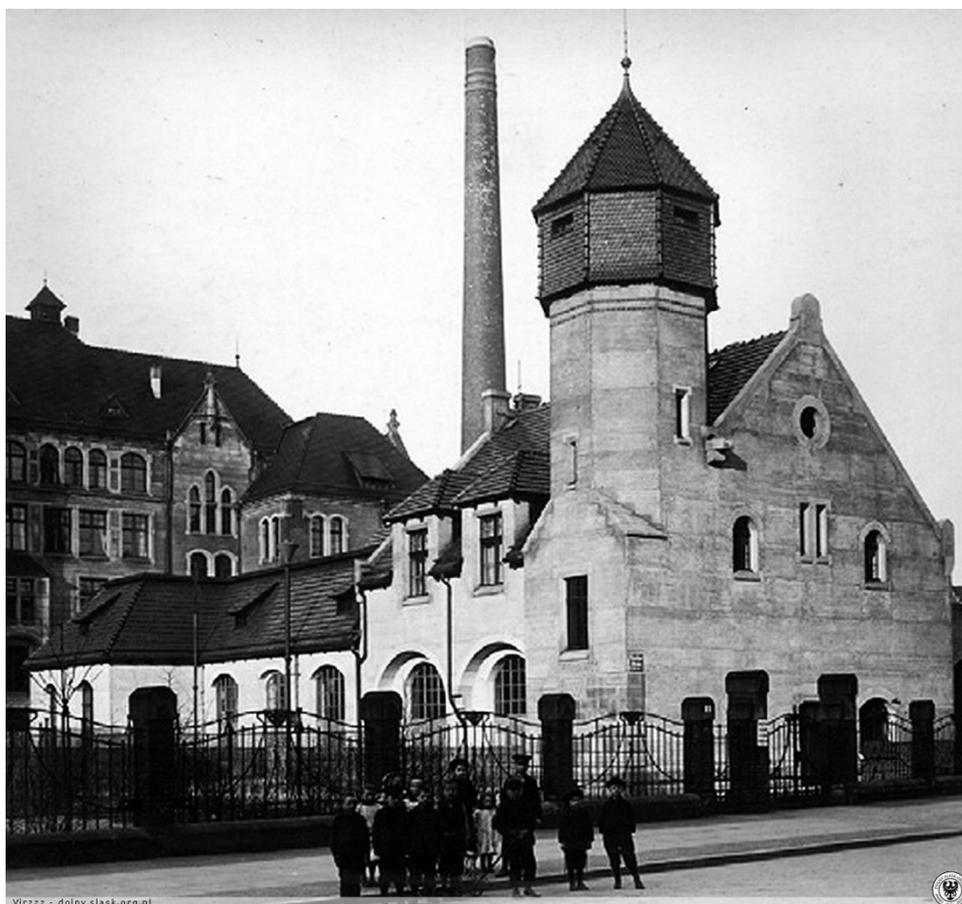


Fig. 1 The building of the former machine laboratory, in 1907, source: University Library na Piasku in Wrocław, Department of Graphic Collections, ref. no. 818, access from the portal <https://polska-org.pl/>, [10.12.2018]

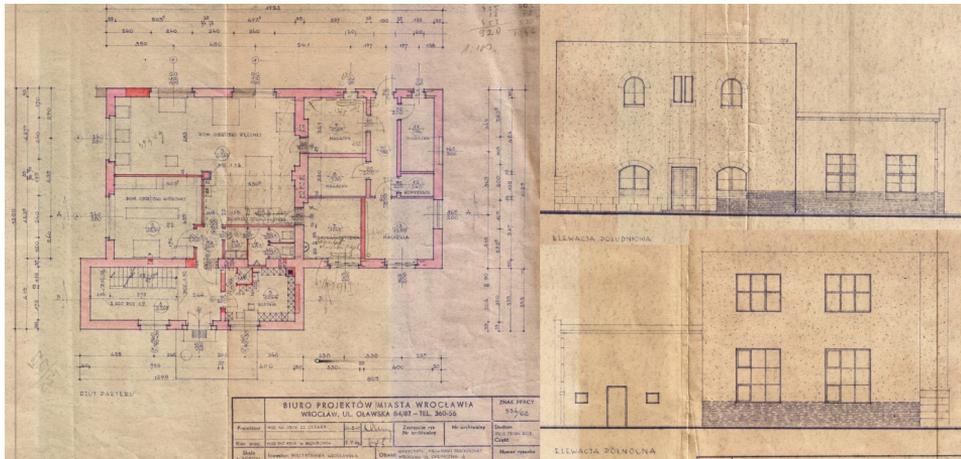


Fig. 2 The design for adaptation and reconstruction of the former machine laboratory from 1963 into a precise mechanics workshop for Wrocław University of Technology, source: Archive of Technical Infrastructure Department WUT (ADITPwr), ref. no. ACT/AR-E3/1, items 1, 3

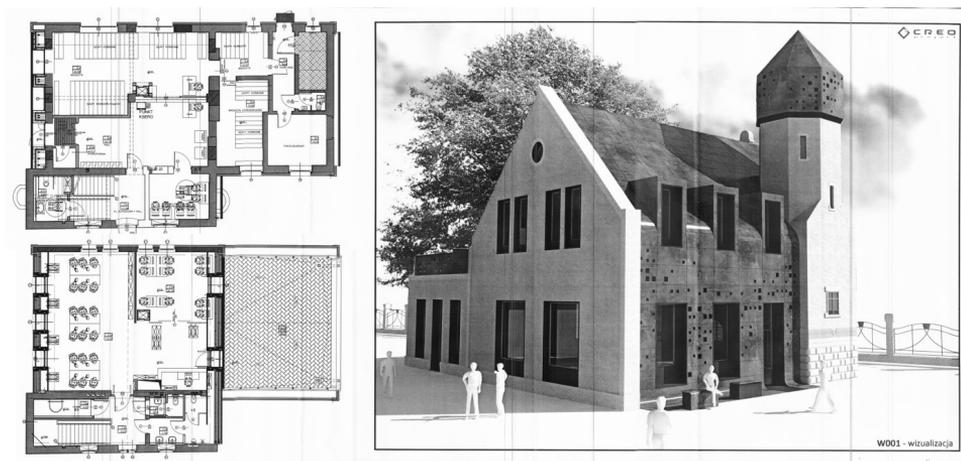


Fig. 3 The concept design for the reconstruction and adaptation of the former machine laboratory into a library of the Faculty of Architecture of WUT, Creoprojekt, 2011, source: Archive of Technical Infrastructure Department WUT (ADITPwr), ref. no. ACT/AR-E3/5, item. 1



Fig. 4 The building of the former machine laboratory, condition before commencement of works in 2009, photo. A. Grylewska, source: Grylewska A., Brzezowski W., *Studium historyczne z wnioskami konserwatorskimi kompleksu dawnej Baugewerk und Maschinenbauschule, obecnie budynków Politechniki Wrocławskiej przy ul. B. Prusa 53/55 we Wrocławiu*, Report from series no. 029/09, manuscript, Wrocław 2009



Fig. 5 The building after reconstruction and adaptation into a library of the Faculty of Architecture of Wrocław University of Technology, December 2018, photo. E. Grodzka

Bibliography

Gryglewska A., *Architektura Wrocławia XIX–XX wieku w twórczości Richarda Plüddemanna*, Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 1999.

Gryglewska A., Brzezowski W., *Studium historyczne z wnioskami konserwatorskimi kompleksu dawnej Baugewerk und Maschinenbauschule, obecnie budynków Politechniki Wrocławskiej przy ul. B. Prusa 53/55 we Wrocławiu, Sprawozdanie z serii nr 029/09*, manuscript, Wrocław 2009.

Gryglewska A., *Gmach dawnej Szkoły Rzemiosł Budowlanych – siedziba Wydziału Architektury Politechniki Wrocławskiej. Idea projektu* [in:] *Schola Architecturae Budynki Szkół Architektury*, ed. O. Czerner, A. Gryglewska, Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 2005, pp. 75-92.

Kadłuczka A., *Problemy integracji architektury współczesnej z historycznym środowiskiem kulturowym*, Politechnika Krakowska, Kraków 1982.

Rouba B., *Dlaczego adaptacje niszczą zabytki i czy tak być musi?* [in:] *Adaptacja obiektów zabytkowych do współczesnych funkcji użytkowych*, ed. B. Szmygin, Wyd. Lubelskie Towarzystwo Naukowe, Międzynarodowa Rada Ochrony Zabytków ICOMOS, Politechnika Lubelska, Warszawa-Lublin 2009, pp. 113-128.

Archival materials

Spatial development plan of the area from 1902 r., Building Archives of the city of Wrocław, ref. no. 2159.

Technical and detailed project - precision mechanics workshop, designed by Czesław Oleksy, ul. Chemiczna 4, Wrocław 1963, Archive of the Department of Technical Infrastructure of the city of Pwr (ADITPwr), ref.no. . ACT/AR-E3/1, items 1, 3.

Detailed design of the superstructure together with reconstruction and change of use of the former E3 laboratory building to the library building of the Faculty of Architecture at 4 Chemiczna Street in Wrocław, designed by Bartosz M. Żmuda, Beata Pawelec, Bartosz Dereń, Bartosz Szczepański, Wrocław, March 2012, ADITPwr, syg ACT/AR-E3/5, item 3.

Minutes no. 14/78 from the meeting of the Scientific and Technical Council of 21.06.1978 at the Department of Studies and Design of the Wrocław University of Technology, ADITPwr, ref. no. ACT/AR-E3/2, item 2.

Archival materials

<https://www.facebook.com/biurocreoproject> [DOA: 29.01.2019].

An interview conducted by the author with one of the designers, B. Szczepański on 21 July 2020.