

# **THE METAL WINDOW IN 19TH CENTURY INDUSTRIAL ARCHITECTURE ON THE EXAMPLE OF THE CITY OF ŁÓDŹ. Characteristics and conservation issues**

## **SUMMARY**

The growing interest in post-industrial heritage, the increasingly common adaptations and transformations of buildings that were formerly used for industrial purposes, lead to a rapid loss of original elements, including industrial window joinery. The basis of this dissertation has been to capture and describe this specific architectural element in the Łódź area, as long as there is still a chance to study it.

The dissertation opens with an introduction to the work, definitions of the terms accompanying the topic and an outline of the research problems. It outlines the scope of the dissertation and the methods by which it was possible to achieve the stated aims of this work. It closes with Chapter 7, which presents the state of the research so far based on the literature review.

The main objectives of the study are to gather information and expand knowledge on the history, use and characteristics of metal windows found around Polish lands, especially in Łódź between 1850 and 1914. Despite numerous works devoted to wooden window and door joinery, the issue of metal windows seems to be a neglected topic in Polish architectural and restoration studies. The work primarily examines industrial windows known from factories in Łódź. Apart from the theoretical and historical description of window metalwork and purely cognitive aspects, the study has a practical application by addressing the conservation issues of the detail in question.

The realisation of the above objectives is presented in three analytical sections: part I provides a general characterisation of European metal windows, which provides the substantive context for the subsequent descriptions and analyses. Chapter 10 focuses on the origins, development and characteristics of iron windows of the Industrial Revolution era. It provides an outline of information about 19th-century industrial architecture, providing the background for a more detailed presentation of the set of features of the window joinery used in it, summarised in Chapter 11.

Part II opens with a synthetic description of Łódź's legacy of factory architecture and local issues concerning the city's post-industrial heritage. Chapters 15-17 detail the window joinery used in Łódź factories, using a description scheme analogous to that adopted for the general characterisation of European industrial windows.

On the basis of analyses and compilations of the catalogued objects and the data collected for them, the typical features of the Łódź window metalwork of the industrial type were identified. The relationship between the features of industrial metal windows and the period of their creation is also

discussed, thus attempting to outline the evolution of factory window forms. Detailed descriptions of the parameters of Łódź windows are supplemented by comparisons with selected industrial-type windows in the country and in Western Europe.

Part III (Chapters 21 - 28) presents the problems and conservation practice related to the detailing in question. Ways of protecting and repairing metal windows and the phenomenon of their replacement with new elements are discussed based on a review of solutions in selected buildings adapted to new functions in Western Europe, Poland and especially in Łódź. An evaluation of these realisations is also made and basic postulates regarding the methodology of research and conservation of historical metalwork are presented.

The dissertation concludes with Chapter 29, which verifies the hypotheses in the introduction of the dissertation and presents the conclusions.

The main part of the work is complemented by Volume II containing Appendices, which present the initial research material collected for the surviving industrial windows in post-industrial buildings in Łódź, as well as a rich factography allowing for a more complete understanding and exploration of the issues described in the main text, without compromising its structure and logic.

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