
ABSTRACT

Adaptive-reuse possibilities of energy infrastructure facilities built between 1846 and 1955 in large urban centers in Poland

Studies on the protection of industrial heritage reveal that despite extensive analysis and preservation efforts, many areas remain unexplored. Research in the conservation of industrial heritage, particularly in the textile, metallurgical, and chemical industries, is well-established. However, there is a notable gap in studies on the new power sources introduced during the 19th and 20th centuries in Poland, critical developments in the industrial revolution. Much of this heritage has been transformed or destroyed, with few production sites still operating, underscoring the need for further research in this field.

The main aim of this dissertation is to assess the current state of preservation of complexes and individual objects related to gas, electricity, and heating, developed for urban needs between 1846 and 1955. The analysis covers all major cities in Poland, focusing on identifying values, typological features, and differences in the preserved heritage across various industry sectors. The goal is to classify these objects and conduct a detailed analysis of their cultural significance. The research findings will help identify features to be preserved in future adaptation works. The dissertation is structured into five chapters:

Introduction – Presentation of the dissertation topic, research methodology, and analysis of the legal situation regarding industrial heritage protection. Definition of the scope, timeframe, and scientific theses, along with a review of relevant definitions and concepts.

Chapter I – Explanation of the selection criteria for objects/plants included in the study, list of objects under research, preliminary analysis of buildings for selection, and a comparative data analysis in the context of the entire collection of discussed heritage.

Chapter II – Detailed descriptions and characteristics of the listed facilities. Historical overview and analytical part covering aspects like size, contemporary location, and urban context. Examination of operational methods, architectural, and construction solutions for each facility.

Chapter III – Analysis and comparison of selected objects within urban planning contexts, plant area development, architectural and technical values, and cultural significance. Comparison of complexes by function, size and construction period.

Assessment of permissible changes based on transformation potential. Categorization of buildings by adaptation feasibility and challenges.

Chapter IV – Comparison of adaptation solutions in Europe. Summary of research results in the context of the dissertation's assumptions. Comparison of findings with the initial research theses.

The dissertation concludes with proposed solutions for implementing new procedures in monument protection and investment processes in historic buildings. These proposals aim to enhance the effectiveness of protection and management of cultural heritage resources in Poland.

