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The second life of industrial buildings and the process of their reuse

Summary

The social, economical, industrial-technological changes caused a significant part of American and Western European industrial buildings to loose their original function in the last third of the 20th century. This phenomenon became remarkable after the political change in Hungary. The dissertation deals with the change of function in vacant industrial buildings and their urban plots.

The reuse process of industrial buildings is described, looking for the technical-architectural-urban factors that determine decisions during refurbishment.

The research reveals the important urban aspects of brownfield renewal with the help of the literature and examination of selected areas in Budapest. The process of decontamination and its effect on revitalising brownfields are also described.

The dissertation summarises the examination of buildings: their measurement, survey, the diagnostics of building materials and structures, as well as value assessment. The aspects of decision about reuse (preservation) are presented.

The change of function is examined from several points of view through analysing caseworks. A new alignment of functions is used, which enables to consider architectural aspects. Relationships can be observed between the reuse and the urban position, layout structure, historical, architectural value of the building by utilising a building-function analysis matrix.

The dissertation gathers and catalogues – as a part of the research of technical interventions – the building structures characteristic of industrial buildings from the second half of the 19th century and the first half of the 20th century, as well as technologies available for renewal and strengthening these structures. The research provides a new method of evaluating the most important building materials used in the technical interventions of the refurbishment.

The necessary reconstruction, conversion needed in reuse is examined through case studies. A new classification is introduced to describe the degree of interventions. The results of case study analysis can be arranged in a matrix. This presents relationships between the degree of applied interventions and the urban position, layout structure and the new function of the building.