obrazárny a sběratelským aktivitám Salm-Reifferscheidtů (Lubomír Slavíček – Petr Tomášek) s využitím nově objevených archivních pramenů, zejména inventáře a salmovské korespondence, upřesňuje a koriguje řadu dosavadních zjištění týkajících se jednotlivých členů rodu a jejich vkladu do utváření rájecké umělecké sbírky.

Po několikastránkovém přehledném shrnutí dějin rodu (Michal Konečný) začíná samotný katalog. Ten je rozdělen na dvě části: autorsky určená díla včetně kopií podle známých předloh a neurčené malby. První část, čítající bezmála tři stovky děl, je řazena abecedně podle autorů, druhá pak geograficky, podle předpokládaného místa vzniku. Již při letmém prolistování je patrné, s jakou důkladností se autoři svého úkolu zhostili, a postupné pročítání textů tento dojem jen umocňuje. Řada děl se dočkala nových, případně revidovaných připsání a upřesnění datace. V některých případech byly odhaleny předlohy, z nichž malíři vycházeli. U mnoha portrétů se podařilo nově identifikovat zobrazené osoby.

Jak již bylo naznačeno, autoři neomezili svůj zájem pouze na díla nacházející se dosud v prostorách státního zámku Rájec nad Svitavou, ale díky důkladnému archivnímu průzkumu se jim podařilo dohledat rovněž plátna, která byla v minulosti ze zámku odvezena a dnes jsou uložena v jiných památkových objektech (zámek Jaroměřice nad Rokytnou, hrad Pernštejn), muzejních institucích (Moravská galerie v Brně, Národní galerie v Praze, Wien Museum), případně v soukromých sbírkách. Mezi nejvýznamnější takto „objevená" díla lze bezpochyby zařadit dětský portrét Karla starohraběte ze Salm-Reifferscheidtu od Arnolda Böcklina, který se řízením osudu ocitl ve sbírkách třebíčského Muzea Vysočiny.

Systematičnost a důslednost celého projektu pak dokládá i poslední část textu, věnovaná přípisům, štítkům a značkám na obrazech rájecké obrazárny jakožto mnohdy důležitým informačním zdrojům o vzniku a pohybu děl (Lenka Kalábová – Lubomír Slavíček). V závěru publikace je zařazen vyčerpávající seznam pramenů a literatury, anglické resumé a pro lepší uživatelskou přehlednost rejstřík malířů a portrétovaných.

Katalog rájecké obrazárny představuje úctyhodný počin. Takto komplexní a ucelený soupis šlechtické obrazové sbírky nemá v rámci moravského prostředí obdoby. Obsáhlá publikace může směle posloužit jako vzor a inspirace pro zpracování dalších zámeckých uměleckých sbírek.

Zuzana MACUROVÁ

Tugendhat Villa – the first installed monument of modern architecture in the Czech lands

Iveta ČERNÁ; Lucie VALDHANSOVÁ

Keywords: Ludwig Mies van der Rohe – Fritz and Greta Tugendhat – Bauhaus –Tugendhat Villa – installed monument of modern architecture – heritage conservation – reconstruction – restoration

The Tugendhat Villa, as the only work of the world-famous German architect Ludwig Mies van der Rohe in Czechoslovakia, became his iconic work and is considered the architect's best preserved building in Europe. The villa was built in 1929–1930 by the Tugendhat couple who only inhabited it until the beginning of the Second World War, when they had to flee the Nazis. Their house was given first to the Nazis and later to the Russian army. After the war, the family never returned to Czechoslovakia. The villa was nationalized and used first as a dance school, then as a medical facility, then later, after necessary reconstructions in the early 1980's, as a municipal representative building closed to the public.

The ordeal of restoring the Tugendhat Villa and its accessibility as an installed monument of modern architecture lasted for more than forty years. The first time the house was considered for use was by František Kalivoda in the 1960's, even at the wish of Greta Tugendhat; this finally took place, albeit in imperfect form, in 1994. The long-term plan to restore the monument to its form after completion in 1930, eliminating inappropriate interventions from the Second World War and the second half of the 20th century as associated with other uses of the house, and thus to present the house as it was designed by German architect Ludwig Mies van der Rohe for Greta and Fritz Tugendhat, was finally fulfilled by 29 February 2012.

Illustrations: Fig. 1. garden facade in the 1930's; Fig. 2. the main living room in the evening light, 1930's; Fig. 3. main living area, garden facade of the villa, 1930's; Fig. 4. Greta Tugendhat's room, 1930's; Fig. 5 boys' instruction room, 1959; Fig. 6. main living space, 1969; Fig. 7. Greta Tugendhat and Jan Dvořák in 1969; Fig. 8. street frontage, 20 October 1980; Figs. 9–11. Plans of the 1st, 2nd and 3rd storeys; Fig. 12. garden facade; Fig. 13. dinette with restored original macassar veneer; Fig. 14. Hanna Tugendhat's room; Fig. 15. street frontage.

Garden villa of JUDr. Hynek Bulín in Brno

Roman ZÁMEČNÍK

Keywords: garden villa – landscape architect Josef Kumpán – composition analysis

This article focuses on an analysis of the historical composition of the villa garden commissioned in 1924 by the famous Brno lawyer and politician JUDr. Hynek Bulín in Brno's prestigious Masaryk residential area. The garden was designed by coveted landscape architect Josef Kumpán from Prague. Attention is focused especially on an analysis of the composing elements, thus documenting the richness of the garden creation. The article also discusses the current state of the garden, outlining the specifics of a possible renewal of such a work.

Illustrations: Images of the villa and garden of Hynek Bulín in Brno. Fig. 1. view from the west, 1930's; Fig. 2. Hynek Bulín and family – wife Zdena, born Fillová, and son Hynek; Fig. 3. aerial photograph from 1947. The scope of the historical garden is marked in red, while green separates the agricultural part from the ornamental, which is no longer part of the garden; Fig. 4. Josef Kumpán, design for modifying the garden of Dr. Hynek Bulín in Brno, 1924; Fig. 5 Josef Kumpán, design for extending the garden of Dr. Hynek Bulín in Brno (undated); Fig. 6. formal flower beds with central ornamental pool in front of the entrance facade, 1930's; Fig. 7. View of flower parterre from the northeast, 1930's; Fig. 8. detail of modification of flower parterre in front of the entrance facade of the villa, 1930's; Fig. 9. detail of the paved areas and flower beds in the immediate vicinity of the villa, 1930's; Fig. 10. detail of planted beds for a flower parterre in front of the villa, 1930's; Fig. 11. detail of shoulder bed with seasonal flowers (summer aspect) 1930's; Fig. 12. detail of shoulder of symmetrical circular beds with seasonal flowers (summer aspect) in the corners of the pool, 1930's; Fig. 13. detail of the formal ornamental pool in the middle of a sunken parterre in front of the western facade of the villa, 1930's; Figs. 14 and 15. details of modification of a large rock garden built behind the villa, 1930's; Fig. 16. detail of flowerbeds based in front of the northern facade of the villa, 1930's; Fig. 17. view onto the entrance facade of the villa from the south; Fig. 18. detail of the present natural swimming pool, situated behind the villa; Fig. 19. original wooden garden pavilion built on the highest spot in the garden; Fig. 20. Brno, villa of H. Bulín, drawing of tree inventory in the garden of H. Bulín from 2013; Tab. 1. Simplified inventory of roster to Fig. 20. Kateřina Sapáková, 2013.

Baba settlement and its heritage protection

Eliška VARYŠOVÁ

Keywords: Baba settlement – Werkbund – Union of Czechoslovak Work – functionalism – heritage protection of modern architecture

The core of the Baba villa residential area in Prague's Dejvice is an exhibition colony known as Osada Baba, a set of 40 houses built by the Union of Czechoslovak Work in the 1930's. The colony, as a stylistically unified aggregate of functionalist houses, is still visible in the area and for this reason the entire area is protected as an urban heritage zone.

The Union of Czechoslovak Work organized the exhibition of Osada Baba as a manifesto of modern housing in 1932, modeled after the exhibition colonies of the Werkbund in other European countries – especially the Weissenhofsiedlung colony in Stuttgart from 1927. The Weissenhof, organized by the German Werkbund with the international participation of leading contemporary architects (L. Mies van der Rohe, W. Gropius, Le Corbusier, H. Scharoun, etc.) was the first event of its kind; it presented contemporary architectural trends, new

designs, floor layouts, and architectural aesthetics in real form instead of in plans. Similar exhibitions then followed based on this pattern in Brno, Wroclaw, Zurich, Vienna, and Prague. The exhibitions were also intended to be a contribution to the current discussion about resolving the postwar housing crisis. The results were timeless and architecturally exceptional high--quality manifests of functionalist aesthetics in the form of residential neighborhoods.

While other colonies represented collective housing in various forms, the Baba settlement consisted only of individual houses primarily due to it being financed by private builders. Its construction was planned from 1928 and involved important Czech architects such as Pavel Janák, Josef Gocar, Oldřich Starý, and their upcoming colleagues Ladislav Žák and Hana Kučerova--Záveská. The objective was to present the public with newly organized living spaces, minimized and rationally designed housing, standardized elements in building, and austere functionalist aesthetics; terraced houses were originally intended to be presented as well. Due to problematic finances, however, many objectives were not met. For this reason, the entire event was later criticized, mainly by left-leaning architects headed by Karel Teige, as a bourgeois anachronism not reflecting the current demands of society.

An interesting chapter in the history of the settlement is not only its creation, but its later life as well. Unlike other European settlements, it was not damaged during the war but had to face numerous renovations, dispossessions, and lack of maintenance under the communist regime. Even though it received heritage protection in 1993, after the revolution, inappropriate modifications to the houses still continue today. In order to increase the operational standard of the houses, the owners install insulation, exchange the original windows for plastic, and remodeling, additions, and extensions of all kinds are increasing. This is resulting in the area gradually losing its authenticity, subtle construction, internal and external articulations, and ultimately considerable damage to the architectural qualities of the villas. Efforts are also increasingly emerging to completely reconstruct the houses; some are sensitive, while some result in devaluation. Given that heritage authorities are not always able to enforce heritage protection against the will of the owner, the future of the settlement is primarily in the hands of the builders and architects that they hire.

The protection and restoration of these functionalist houses and their technical and ideological issues are a very vivid illustration of the stories of the individual villas in Baba. Even so, Baba, in contrast to isolated functionalist heritage properties, is specific in that this is not a single building, but an urban and architectural ensemble of several dozen villas all with different owners. The preservation of the architectural and historical values of Baba thus depends on the owners' enlightenment and awareness of their properties' true values.

Illustrations: Fig. 1 Model of the Baba settlement, 1930; Fig. 2. Site plan of the Baba settlement from 29 March 1932; Fig. 3. Proposal to amend the zoning regulation of Baba, 1931; Fig. 4. General view of the Baba settlement from the south, 1930's; Fig. 5. Dejvice regulatory plan with the completed settlement drawn in, 1937; Fig. 6 Ladislav Žák, Zaorálka Villa, no. 1708, 1930's; Fig. 7. The same, after reconstruction; Fig. 8. Oldřich Starý, Sutnar Villa, no. 1790, visible postwar addition of a garage and new entrance; Fig. 9. The same, view from the north after reconstruction; Fig. 10. Josef Gočár, Glücklich Villa, no. 1798, in 1934; Figs. 11 and 12. The same, reconstructed; Fig. 13. František Kerhart, Jiroušek Villa, no. 1796, the view from the northeast, with additions from the 90's; Fig. 14. Mart Stam – Jiří Palička, Palička Villa, no. 1779, after reconstruction; Fig. 15. Ladislav Machoň, Špíšek Villa, no. 1777, after repairs to the facade with remodeled entrance; Fig. 16. Ladislav Žák, Čeněk Villa, no. 1793, the 1930's; Fig. 17. The same, before reconstruction; Fig. 18. The same, during reconstruction; Fig. 19. František Kerhart, Košťál Villa, no. 1791, before reconstruction in preserved original condition; Fig. 20. The same, during reconstruction.

Regulatory Plan for Litomyšl by Ladislav Machoň (1946–1948) – the collective vision of the New Town

Anna ŠUBRTOVÁ

Keywords: Litomyšl – Ladislav Machoň – Augusta Machoňová-Müllerová – two-year plan – regulatory plan – urban planning – housing estate – heritage conservation

The article presents the current state of knowledge of the regulatory plan of the town of Litomyšl that was developed between 1946 and 1948 by the Prague architect and urbanist Ladislav Machoň. The plan is characterized primarily by its three "non-traditional" aspects that reveal the architect's sensitive approach to urban planning. First is the "folk" method of collective vision of the future city, within which the architect, during the preparation, interviewed the local citizens on how they imagined the future growth of the city and encouraged them to contribute to the project's preparation. The second aspect is the architect's ability to work with the historical town on a small scale; respecting both the town's historical artistic character and individual heritage properties during the planning process so that the town's picturesque silhouette and its small-town layout with its characteristic architectural style are preserved in the future. The third is the natural protection aspect; during the project, Ladislav Machoň emphasized landscaping and care for the greenery not only in the existing urban "interior", but also in newly proposed block housing development zones in order to ensure a smooth transition of the urban landscape into the surrounding natural environment.

Illustrations: Fig. 1 Litomyšl, interwar built-up area in the newly founded Masaryk district on Osická hill, forming the counterpart to the castle hill, beginning of the 1930's; Fig. 2. Litomyšl, interwar Hus district inspired by the concept of garden cities, 1930's; Fig. 3. Ladislav Machoň, photo-portrait, 1951; Fig. 4. Josef Kumpán, proposed landscaping of the swimming pool in Litomyšl, 1948; Fig. 5 Ladislav Machoň, proposed parceling of the building perimeter to the west of the Masaryk quarter in Litomyšl (basis for the future Vertex housing estate), 1947; Fig. 6. Ladislav Machoň, Litomyšl Regulatory Plan, 1946-1948; Fig. 7. Litomyšl, Vertex housing estate, 1950's; Fig. 8. Litomyšl in the 1950's through the eyes of Josef Matička.

Sugar factories in South Moravia in terms of heritage preservation

Karel SKLENÁŘ

Keywords: sugar – industrial heritage – heritage conservation – South Moravia

The article aims to analyze the architectural heritage of the sugar industry from the perspective of contemporary heritage conservation. This is not only about evaluating the building fund or documenting disappearing structures, but also about identifying the original technical facilities, its relation to the entire production process, an urban evaluation of the effects of sugar factories on the surrounding area, and highlighting the exclusivity of the buildings related to this thriving industry.

South Moravia was one of the historic centers of the sugar industry in the Czech lands. In addition to its suitable climatic conditions and high-quality transportation networks, the close proximity of Brno was also a contribution as one of the centers of industrialization in Central Europe. The first sugar mills were established in the 1830's. The most important of these was established by Florentin Robert in 1838 in Židlochovice near Brno. The Robert family is associated with a number of technological innovations, especially the "Robert diffusion" which greatly simplify the extraction of juice from sugar beets. The sugar mill ceased operation in 1990. The later fate of the refinery did not go very well in terms of heritage conservation. The complex was demolished, and now all that stands is the remnant of the filter tower and the chimney.

The residences of the owners or managers of the sugar factories are often the only protected buildings. The exclusivity of such architecture highlights the wealth of the tycoons doing business in this field. One of the most famous sugar villas would be the work of Adolf Loos in Hrušovany near Brno.

The most intense demise of the sugar factories began in the 1990's. First, the operation was terminated, followed by the physical demise of the complexes. Their detailed documentation thus seems to be the only chance to preserve their memory within the landscape, indeed even from the general awareness of the disappearing

phenomenon of sugar mills.

Illustrations: Fig. 1 Rájec nad Svitavou, sugar mill, reproduction of lithograph by Jacob von Alt; Fig. 2. Židlochovice, overall view of the town with the sugar mill in the upper right corner; Fig. 3. Ibid, the chimney and filter tower are the last standing remnants of the sugar mill; Fig. 4. Ibid, typologically unique classicist "Robert's Villa" from the 1830's, main facade; Fig. 5 Hrušovany near Brno, refinery built in 1916, perhaps designed by Adolf Loos; Fig. 6. Ibid, state of the former refinery after liberation by the Red Army in 1945; Fig. 7. Slavkov near Brno, villa of Herman Redlich from 1884 by August Prokop, situated opposite the sugar mill on the road leading to Kyjov; Fig. 8. Ibid, current appearance of the former sugar mill; Fig. 9. Hrušovany nad Jevišovkou, exchanger building station of the old sugar mill built in modern style with elements of cubism; Fig. 10. Břeclav, Kuffner sugar mill complex, current condition; Fig. 11. Ibid, operational building of the former sugar mill, current condition; Fig. 12. Moravský Krumlov, historical picture of the now extinct sugar mill.

Heritage underground: historical underground mine works and the possibilities of understanding and protecting their values

Ondřej MALINA

Keywords: lignite monuments – heritage care system – mines – mining law – heritage law

The historic mining underground is a specific area in several respects, even though it is only one segment of technical monuments and only a part of the cultural heritage of the mining and processing of raw materials.

The growing interest of the general public in underground heritage is reflected in the number of newly accessible sites with historical underground mining as well as in the response in schools. Nowadays, for example, one can study Geoscience and lignite tourism at the Technical University in Ostrava.

The possibilities of montane heritage preservation are dramatically limited by mining legislation as almost a monopolistic legal framework, the most important laws and implementing decrees of which do not include the concept of a historical or heritage value of mine works. This leads to a situation in which the historical value of several dozens of mine works as a cultural monument (or inscription onto the ÚSKP Central Registry) is clearly declared, but their practical documentation or protection may not be possible at all.

Research of underground mines is also specific in terms of archeology. The low concentration of findings combined with the large sizes of caving or sedimenting limit the discovery of tangible artefacts but do not make it impossible. An understanding of the context of the findings is very important, however, leading to the determination, documentation, and correct interpretation of immovable technological traces and the overall character of a mine work in a finding site. The main task of underground exploration tends to be seeking out sites where the original situation associated with prolonged miners' stays is still accessible. The ideal situation is a discovery of hard to reach or remote areas where mining took place only in one brief period and later stages of exploration and mining did not remove the remains of older periods, most usually also the most valuable stages.

The discovery and interpretation of technological details, surfaces, structures, and spaces is the second major task leading to a successful evaluation of a mine's chronological and technological development.

Essential details also include various marks or pockets in hewn beams and timber. Among the most distinguishable surfaces are those equally modified by hewing, for which the direction of excavation is typically distinguishable. Lens-shaped dug areas of part the work or the whole area are frequent, created by fire. Constructions underground occur most frequently as dry-stacked foundation walls. Frequent immovable and movable findings are wooden parts of the original equipment such as mine supports. Another group is represented by components of water--based mining equipment (pumps), wooden troughs, or remnants of smoke levels.

The first step to successfully evaluating these phenomena is to map them out. A simpler method of surveying documentation is mapping using a mine compass and strip. The second common option is measuring the total station with a rangefinder that allows for a very detailed surveying of even more complicated shapes underground. At the Jeroným Mine near Čistá, most of the known space was measured in this way; digital documentation also allows for the easy creation of map atlases in a geographic information system (GIS) printed on A4 paper. Historically and heritage-valuable details, structures, surfaces, and spaces are subsequently drawn.

A major theme of the historical underground is securing them, a process carried out in order to limit the negative impacts of mining activities on the surface and to make the mine accessible to visitors. In terms of legislation, it is often not clear whether a certain mine endangers a public area or not. If possible, it is better to secure the entry into a mine before demolishing it, especially when thorough research was not carried out. The main part of constructional work is securing historical mines and equipping them to make them accessible to repeated visitor traffic.

The general problem with practically tying underground mines to heritage preservation is their initially temporary nature. The lifespan of most stopes and their equipment was intended to survive over the longer term and usually only had to allow for the extraction of ore. For regular visitor traffic, a mine requires stability. The final form of securing and localizing a mine is primarily defined by technical mining requirements; regarding heritage, the main question remaining is whether to admit such alterations and make it part of the exhibited mine, or to hide it and direct the visitors' attention only to the earlier stages of a mine's development.

Generally unstable areas need to be fully bracing using steel reinforcement ribbing. Theoretically, such places can be concealed using wood paneling that resembles wooden reinforcement. Here, however, we come to the question of authenticity and a discrepancy between how a mine looked during its operation and how it is perceived by the average visitor.

A key question in introducing new construction is reversibility, in other words the possibility of returning the site to its state prior to the insertion thereof. In terms of authenticity, the ideal situation is one in which the route naturally goes from more recent entrance spaces to more remote areas in the depths of the mine without modern interventions, areas which can be accessed only by more agile visitors and which require no support work. Transitions between different preserved spaces may be immediate, but they should not be frequent and should be based on an overall concept and not on how much of a budget needs to be spend in a given year. Comprehensive documentation and evaluations of sites which deserve more careful consideration for their preservation make the decision-making process much easier.

A specific and complex problem of making mines accessible in the broad sense, i.e. not just for tourists, is the recovery of older items. Re-opening old mines, or parts of them, carries the risk of damaging surviving historical situations and findings. At the same time, however, it presents a new chance to learn something about them and gain new knowledge that could be usable at other sites.

How much damage actually occurs to a historic mine by its disposal? This is a question whose assessment is impossible without research and documentation of the underground and therefore demands access to the sites by authorized persons. Examples of failed cases are numerous and varied, and this issue should be based on the correct questions. The NHI may guarantee heritage protection to a number of mines, but it still lacks the professional capacity for understanding and presenting their values. It is high time to approach this as an opportunity rather than a problem. The historical underground is a continuation of the unique architectural heritage fund of the Czech Republic. It has its own specific potential which, if we consider only individual mines, can not be fully expressed. The NHI is an organization with national authority, and the question arises as to whether its current minimal involvement in this area is a desirable situation. Making mines accessible may be understood as a continuation of mining by other means. The original raw materials are replaced by the unique experiences of its visitors. When modifying mines for operation, the result is usually an irreversible violation of at

least part of the authentic situation, but a greater awareness of the general public may be gained about the value of the historic underground, consequently leading to more meaningful and simpler ways to protect them.

Illustration: Fig. 1. Jeroným Mine near Čistá, rappelling into part SDD-3; Fig. 2. Jáchymov, unknown shaft uncovered during reconstruction of a bend in roadway I/25. Above, the contact between the vertically composed arches and walls, and a detail of the cover of the crown of arch by flat stones. Below, part of the profile of the shaft with visible structural joints possibly of technological origin (brickwork in sections); Fig. 3. Jeroným Mine near Čistá, torso of ceramic cup found in part SDD-2; Fig. 4 Mikulov in the Ore Mountains, Lehnschafter Mine, hewn year; Fig. 5. Jeroným Mine near Čistá, hewn corridor in part SDD-3; Fig. 6. Jeroným Mine near Čistá, ceiling chamber in part ODD; Fig. 7. Hřebečná, Mauritius Mine, Kryštof shaft. Brick part of closed chimney; Fig. 8. Mikulov in the Ore Mountains, Lehnschafter Mine, hewn steps, caving in the background; Fig. 9. Jeroným Mine near Čistá, partial interpretation of SDD-2. In both cases, the layout is of the same area. Above is level 1 and drawing of details, below is level 2 with assessment of the walls, ceiling, and floor; Fig. 10. Jáchymov-Točka, Turk shaft, entrance area below the retaining wall after securing; Fig. 11. Examples of shaft portals. Above left – Jílové near Prague, new portal of Václav shaft; Zlaté Hory, illustrative example of a simple portal structure in the area of the Zlatorudné Mills; nameless shaft near Jáchymov, sample of shaft entrance hewn in the rock. Center left – Měděnec, portal of the Virgin Mary shaft; Jáchymov, Heinz pond, drain shaft (the same technique as for the shafts found their application here in water management works as well); Alte Fürstenstollen, Freiberger district, Saxony, entrance typical for the 19th century. Bottom left – Mikulov, Lehnschafter Mine, transferred portal from a coal mine in Ohníč (the wide entrance allowed for the construction of small facilities in the portal); Zlaté Hory, Postal shaft, the design of the stone portal is similar to concrete blocks; Zlaté Hory, Starý Hackelsberg, example of a mine secured by cave-in against unauthorized entry; Fig. 12. Zlatý Kopec, Johannes Mine. Left, sample of timber reinforced hallway, right, newly built edges with crawl-space (front) and mining separation; Fig. 13. Obří Mine, Kovárna Mine. Above, an example of platform and stairs made of rust-proof material. Below, contact point of two methods of constructing, composite materials on left, stainless steel on right.

Geometric analysis of late Gothic vaulting in the chapel of St. Jerome in the Olomouc City Hall

Thomas BAUER; Jörg LAUTERBACH; Michaela PAVELKOVÁ RÝDLOVÁ

Keywords: Olomouc – City Hall chapel of St. Jerome – rib vaulting – geometrical analysis – late Gothic architecture

This article presents a study of the vaults in the chapel of St. Jerome at the city hall of Olomouc. The study used very exact methodological approaches, exploration of exposed stonework techniques of the individual parts of the interior walls, and research of archival sources, all resulting in following conclusions: the chapel of St. Jerome and its bay window were vaulted in the same period. The net vaulting does not represent, when compared with the rib vaulting, a significantly smaller part; instead, it is the original result of the processing of a demanding task due to the irregular ground plan of the chapel.

Based on the results of dendrochronological dating of the city hall trusses, the authors of the study believe that the most likely dating of the chapel vaulting is around 1505–1506. The builder, active in the construction of both arches, was most certainly trained in some of the more important transalpine medieval works. The local Olomouc formal repertoire corresponds to the stylish aspects of important late Gothic buildings from the 1480's and 1490's. The Olomouc chapel of St. Jerome as well as the nearby Mořice church were among the buildings following the modern deconstructive architectural language after the year 1500.

Illustrations: Images and illustrations to the chapel of St. Jerome at the Town Hall in Olomouc. Fig. 1. General view of the chapel; Fig. 2. Chapel oriel; Fig. 3. Net vaulting in the chapel and rib vaulting of the oriel with a connecting arch of triumph; Fig. 4. Construction of the chapel, step 1; Fig. 5. Construction of the chapel, step 2; Fig. 6. Construction of the chapel, step 3; Fig. 7. Construction of the chapel, step 4; Fig. 8. Geometric relationship between the chapel space and the apse; Fig. 9. Structural diagram of the chapel space and the rib vaulting of the apse; Fig. 10. 3D visualization of the construction of the net vaulting and the rib vaulting of the apse after tachometric survey; Fig. 11. Reference rib sketched as a broken arch with plotted reference curve; Fig. 12. Longitudinal developed section; here the side arches of the chapel are visible; Fig. 13. Longitudinal developed section at the ribs of the apse; Fig. 14. Parallel side view/section of identical arc lengths for shorter and longer diagonal ribs in relation to the console – both ribs here begin at the same height; Fig. 15. Senior keystone in the triumphal arch with the connection of the ribs and the passing profile of the frontal arc of the chapel inside the profile of the triumphal arch; Fig. 16. Senior keystone in the triumphal arch made from the same piece of craftsmanship as the side run of the rib vaulting; Fig. 17. Outer arc in the apse and ribbing – again made from a single piece of craftsmanship; Fig. 18. Bifurcated vault run at the base of the ribbed vault of the apse passing into similar details near the ribbed vaulting; Fig. 19. Protruding outer arc (left and right) at the triumphant arch, headed away from the chapel; Fig. 20. Console at the base of the longer diagonal longitudinally aligned section; Figs. 21 and 22. Marking the sampling points during dendrochronological analysis of the truss of the Olomouc Town Hall and Town Hall Tower; Fig. 23. Table with a list of all samples taken at the truss of the Olomouc Town Hall and Town Hall Tower with their dating; Fig. 24. Vaulting of the chapel of St. Jerome; Fig. 25. View of the masonry over the vaulting with seams made of rubble masonry; Fig. 26. View onto the ledge made of blocks on the eastern wall in the space above the chapel (part of the adjacent east buildings); Fig. 27. Brick base in the top of the net vaulting for the presumed placement of earlier wooden supports at earlier roof ties of the truss.

Long-term monitoring of defects in historic buildings

Ladislav KLUSÁČEK; Petr DUCHÁČ; Zdeněk BAŽANT

Keywords: historical structure – monitoring – stabilization – cracks – mechanism of failure – possibilities of repair – Baroque castle

Aesthetic and static reconstructions and rehabilitations of buildings were already carried in the distant past. There are a number of methods and technologies for ensuring the stability of buildings. All variants have a number of differences over one thing in common; their wrong choice for a particular case of failure may result in the deteriorating state of the structure. The article describes the long-term monitoring of the statically unbalanced castle in Vyškov. The results will serve as a general guide in understanding the behavior of the structure and its subsequent repairs.

Illustration: Images and diagrams relating to the castle in Vyškov. Fig. 1. Main facade of the castle – view from the Czechoslovak Army town square; Fig. 2. Schematic layout of the structure (first floor level) and the view from the Czechoslovak Army town square; Fig. 3. Cracks in the building in terms of their development over time; Fig. 4. Theoretical courses of the cracks in the building due to different methods of foundation settlement: A) drop in the central part of the building, B) drop in the rightmost part of the building, C) horizontal component of the displacement only, D) determination of the resultant vector of displacement in the crack; Fig. 5. Measurement center DataTaker and stringed tension gauge; Fig. 6. Diagram of placement of measurement bases in the Vyškov castle; Fig. 7. View onto base no. 1; Fig. 8. View onto base no. 2; Fig. 9. View onto base no. 3; Fig. 10. View onto base no. 4; Figs. 11, 12. View onto bases 5 and 6; Fig. 13. Continuous measurement – upper level of the building – base no. 2; Fig. 14. Continuous measurement – lower level of the building – base no. 6; Fig. 15. Continuous measurement – lower level of the building, across – base no. 4.