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The Industrial Palace at the Prague Exhibition Centre : Traditional symbolism and modern construction

ANNOTATION

The article deals with the political and social background of the General Land Centennial Exhibition, held in 1891 in Prague (Prague Jubilee Exhibition), and interprets the central structure of the exhibition – the Industrial Palace. Technical models of this building are searched for, other than in Paris, which has been unilaterally highlighted in present publications. The design of the Industrial Palace was based on wider tradition of typology, construction practice and related theory connected with the construction of large glass halls, mainly railway and exhibition halls, developed in the third quarter of the 19th century not only in England (Crystal Palace, 1851) and France (Galerie des Machines, 1889), but especially in areas linguistically and geographically much closer, in neighbouring Germany especially. Czech designers and builders, as Bedřich Münzberger, the author of the Industrial Palace, almost undoubtedly knew German publications and, of course, related buildings such as the monumental railway station in Berlin (old Ostbahnhof, 1866/1867) or the brand new railway station in Frankfurt am Main (Centralbahnhof, 1888), and could be inspired by their technical potential. The embellishment of the Industrial Palace, which could have been developed because of its massive walled parts, reflected the political program of the Czech conservative nobility, postponed to oblivion by electoral reforms at the beginning of the 20th century and later by the proclamation of the Czechoslovak Republic in 1918.

SUMMARY

The Industrial Palace, exceptional technical monument of Prague architecture of the late 19th century, was built as the central building of the General Land Centennial Exhibition (Prague Jubilee Exhibition), which was held from 15th May to 18th October 1891 in the Royal Game Preserve in Bubeneč, just outside Prague at that time. At the turn of 2018, the palace was subjected to extensive building-historical survey (holeček et al. 2018), instigated by its planned reconstruction and completion of the western wing, which burnt down in 2008. The present study goes beyond the structural and technical evaluation of the building, and considers the wider social, political, technical and cultural context of its creation, emphasising the role of similar buildings in shaping the modern city in comparison with other European capitals.

The construction of the palace and the exhibition attracted appropriate attention in its period. In 1891 and the next few years, publications relating the General Land Centennial Exhibition and the Industrial Palace (today Prague 7-Bubeneč No. 416 on plot no. 1845) literally flooded out. Alongside a special exhibition magazine the cardinal source undoubtedly is *The One Hundred Years of Work: Report on the General Land Exhibition in Prague 1891: To commemorate the jubilee of the first industrial exhibition in 1791 in Prague*. To date, countless publications have been produced reflecting the research on world or land exhibitions (sometimes referred to as exposition studies), which have been experiencing a real boom in recent decades (Geppert 2010, 9–12).

The second half of the 19th century was a period of complex changes on the European continent, today referred to as modernization, involving extensive urbanization, democratization, secularization and bureaucratization of previously hitherto agricultural, hierarchical societies (FuJda 2010, 23–67; review by HlaVačka et al. 2016, 135–141). At the end of the 19th century, the Czech lands belonged to areas where these complex and non-linear changes were of relatively dynamic nature, mainly due to extensive industrialization, the consequences of which changed the demographic and social structure of society. One of the most noticeable manifestations of these changes was The General Land Centennial Exhibition in 1891. The preparation and realization of the exhibition took place at a time when the modernization processes in the Czech Lands were accelerating and at the same time the political framework for their further development was highly conflicting. The exhibition was held exactly one hundred years after one of the first industrial exhibitions in Europe took place in Prague, on the occasion of the coronation of Leopold II the King of Bohemia at the beginning of September 1791. The organizers of the Land Exhibition consistently and proudly reminded the jubilee character of it and referred to it in every speech. In this context, it is necessary to perceive the iconographic program of the Industrial Palace as well as the entire exhibition.

The political conviction of the exhibition organizers was undisputedly demonstrated by placing a large replica of St.

Wenceslas crown on the tower of the central part of the Industrial Palace, at the highest, and therefore dominant, location at the Prague Exhibition Centre. The symbolic role of St. Wenceslas Crown in promoting Czech interests increased after the Austro-Hungarian settlement in 1867, and was naturally accentuated in many forms in promoting national and political demands through the Land Exhibition. Equally eloquent was the placement of monumental statues of Leopold II and Franz Joseph I in niches of high corner pylons of the Industrial Palace facade and repeated use of the years "1791–1891" and the initials "RB" (*Regnum Bohemiae*).

However, the embellishment of the Industrial Palace can be considered a swan song of a traditional type of Czech political representation whose influence was buried forever by the progressive democratization of modern Czech society. This certainly contributed to the gradual degeneration or actual removal of the original embellishment of the palace after the establishment of the Czechoslovak Republic and later in the 20th century.

The Jubilee Exhibition in Prague in 1891 succeeded to be realised in such a scale after decades of efforts. A large plot in Bubeneč, an independent municipality outside Prague then, was chosen for the exhibition grounds. The overall layout of the complex was the work of Bedřich Münzberger (1846–1928) and Antonín Wiehl (1846-1910), the landscaping was planned by František Thomayer (1856–1938). The central building – the Industrial Palace – was built according to a design by Bedřich Münzberger, a Prague architect and a pioneer of steel architecture. The Industrial Palace was a symmetrical structure consisting of three essentially independent steel structures, combined with substantial units of masonry: two side three-aisle wings were loosely attached to the glazed construction of the main central hall with four large corner towers made of masonry.

The construction of the Industrial Palace is associated with a world exhibition held in Paris in 1889 and its dominant features - the Eiffel Tower and a large exhibition machine hall – Galerie des Machines. The tradition of large exhibition halls was undoubtedly started by Crystal Palace, built in 1851 in London's Hyde Park for the first world exhibition. However, important precursors for this system also existed in Central Europe. Let us mention the railway station of the old Ostbahnhof in Berlin (1866/1867), the Alexanderplatz Bahnhof in Berlin (1882) or the Centralbahnhof railway station in Frankfurt am Main (1888) at least.

The 19th century society has long sought a relationship to the aesthetics of iron, first cast iron, later steel constructions. Throughout the second half of the 19th century, there was a clash between traditional aesthetics and the new logic of these buildings, abolishing the difference between exterior and interior. These theoretical problems were pursued by Richard Lucae and Gottfried Semper in their treatises. Even the designing of the Industrial Palace was not without hesitation between masonry and steel construction, but eventually it became a great example of combining old and modern procedures. The construction of the Industrial Palace was evidently based on a broad tradition of typology and construction practice associated with the construction of large glass halls, mainly railway and exhibition halls, and also bridges and other objects such as gas tanks, or wherever a large span was to be bridged over. This theory and practice developed in the third quarter of the 19th century not only in France and England, but especially in linguistically and geographically much closer areas, in Central Europe, in Germany especially.

Prague Jubilee Exhibition was to present the level of technical progress in the Czech lands and demonstrate Czech national self-awareness. It is considered to be one of the most successful public events ever in the 19th century history of the Czech lands (purely statistically it was probably the greatest social event of the time). The buildings associated with it, which the Executive Committee handed over on 14 April 1892 to the ownership of the Provincial Committee as the legal representative of the Bohemian Kingdom, deserve our utmost care if they have been preserved, all the more so since many similar buildings have already disappeared.

Fig. 1. The front cover of the three-part proceedings *Hundred Years of Work: Report on the General Land Exhibition in Prague 1891*, published by the Executive Committee of the General Land Jubilee Exhibition in 1893 and 1895 in two volumes of a representative extensive collection of texts and pictorial documentation.

Fig. 2. Prague 7-Bubeneč, Výstaviště. General view of the Jubilee Exhibition in 1891 not long before the grand opening. Period photo, unknown photographer, April 1891 (taken from *sine* 1893, without pagination).

Fig. 3. Vojtěch Hynais, 1891: the official poster of the Jubilee Exhibition based on accepted design (*sine* 1893, 50; taken from <<http://www.payne.cz/3xS43787/Vystava.htm>> [vid. 2019-09-24]).

Fig. 4. Praha 7-Bubeneč, No. 416, Výstaviště. The main facade of the Industrial Palace, before 1895, general view. The iconographic program of the palace from the 1891 Jubilee Exhibition is still completely preserved: the sculptures of Bohemian kings Leopold II (on the left) and Franz Joseph I (on the right) in niches of high corner pylons, the gallery of arms of Bohemian towns and the coat of arms of Bohemian Kingdom, topped by St. Wenceslas crown, on the central arch, statues above the main portal with initials „RB“ and „1791–1891“ and St. Wenceslas crown at the top of the observation (clock) tower. Period photo, unknown photographer, before 1895

(NPÚ GnŘ, photo archive, sign. N014919).

Fig. 5. Praha 7-Bubeneč, No. 416, Výstaviště. Park landscaping in front of the main facade of the Industrial Palace with the coat of arms of the Bohemian Kingdom and St. Wenceslas crown composed of flowers, with an equestrian statue of King George of Poděbrady in the background in front of the main portal of the palace. Period photo, unknown photographer, 1891 (taken from *sine* 1893, 65).

Fig. 6. Praha 7-Bubeneč, No. 416, Výstaviště. Detail of the main facade of the Industrial Palace, before 1895. **A** – St. Wenceslas crown above the central arch; **B** – the central arch with the gallery of arms of Bohemian towns. Period photo, unknown photograph, before 1895 (NPÚ GnŘ, photo archive, sign. N014919).

Fig. 7. Prague 7-Bubeneč, No. 416, Výstaviště. Royal Pavilion in the Interior of the Industrial Palace at the Jubilee Exhibition 1891, period photo, Jindřich Eckert, 1891 (Prague City Archives, Collection of Photographs, sign. VIII 1150).

Fig. 8. A. Planck, 1873: the commemorative certificate from the Vienna World's Fair in 1873, rotunda surrounded by Viennese monuments, medallions of members of the ruling dynasty, memorials and a portrait of Wilhelm von Schwarz-Senborn, the general director of the exhibition. Colour lithography, 22,5 × 27,5 cm, published by A. Planck & Sohn, Wien, 1873. Author's private archive.

Fig. 9. Miklós Ybl, 1884: the main facade of the Royal Pavilion at the 1885 Provincial Exhibition in Budapest (Budapest Főváros Levéltára [Archives of Budapest], fund Ybl-hagyaték, sign. HU BFL XV.17.f.331.b – 143 / 6; copied from <<http://ybl.bparchiv.hu/vegleges-fohomlokzat>> [vid. 2019-09-09]).

Fig. 10. Prague 7-Bubeneč, No. 416, Výstaviště. Crowds of visitors on the slope below the rear facade of the Industrial Palace on Sunday, 26 July 1891. The millionth visitor of the exhibition was welcomed that day – the expected event attracted 82038 paying visitors in a single day. Period photo, unknown photographer, 1891 (taken from *sine* 1893, 311).

Fig. 11. Jan Koula, 1891: a view of the Industrial Palace from the north. An idyllic picture of everyday life at the exhibition grounds with the Křižík's Fountain and visitors in national costumes. Printed reproduced watercolour, 1891 (taken from *sine* 1893, 89).

Fig. 12. Praha 7-Bubeneč, No. 416, Výstaviště. The main facade of the Industrial Palace at the Jubilee Exhibition of 1891, detail of the niche with the figure of Leopold II. Period photo, Jindřich Eckert, 1891 (Prague City Archives, Collection of photographs, sign. VIII 1160).

Fig. 13. Bohumír Roubalík, 1891: the perspective Plan of the Jubilee Exhibition in 1891. Drawing (taken from *sine* 1893, without pagination).

Fig. 14. Josef Böttinger after Bedřich Münzberger and Antonín Wiehl, 1891: the situation plan of the Jubilee Exhibition reflecting the state of its opening on 15th May 1891 (taken from *sine* 1893, without pagination).

Fig. 15. Bedřich Münzberger (1846–1928), architect of the Industrial Palace. Period portrait photo, perhaps Jindřich Eckert, 1891 (taken from *sine* 1893, 98).

Fig. 16. The interior of the Crystal Palace transept with galleries on both sides, a fountain and a living tree. The palace was built in London's Hyde Park for the first world exhibition in 1851 as a massive glass structure on cast-iron columns, designed by Joseph Paxton in cooperation with engineer Charles Fox. An illustration by an unknown author (19th century English School) "The Last Promenade at the Crystal Palace", printed in *Illustrated London News*, May 1, 1852, as a supplement to an article on pp. 350–351. Taken from <http://www.ric.edu/faculty/rpotter/Cpal_fnal_versm.jpg> [vid. 2019-09-18].

Fig. 17. George Baxter, circa 1854: a view of the gardens around London's Crystal Palace after its relocation on Sydenham Hill. In the foreground visitors admire statues of dinosaurs, in the background looms the palace's own mass. Coloured print, 109 × 160 mm (Wellcome Library no. 39566i; taken from <<https://wellcomecollection.org/works/c7nzvug2>> [vid. 2019-09-09]).

Fig. 18. Galerie des Machines (Palace of Machines) at the Paris World's Fair in 1889. General view of the interior (taken from Monod 1890/I, 249).

Fig. 19. Galerie des Machines (Palace of Machines) at the Paris World's Fair in 1889. Cross section of the truss (taken from Monod 1890/I, 235).

Fig. 20. Former building of the old East railway station (Ostbahnhof) in Berlin, general view. Taken from

hassenkaMp 1870, Tafel 1 (Atlas zur Zeitschrift für Bauwesen).

Fig. 21. The former building of the old East railway station (Ostbahnhof) in Berlin, a section of the truss. Taken from hassenkaMp 1870, Tafel 6 (Atlas zur Zeitschrift für Bauwesen).

Translation by Linda Foster