



Slika 1: Pariz 1798: Začasne zgradbe na prvi narodni razstavi industrijskih izdelkov. (Vir: Giedion, S., 1967: *Space, Time and Architecture. (the Growth of a New Tradition)*. Harvard University Press, Cambridge, str. 243.)
Paris 1798: Temporary buildings for the first Industrial Exposition.



Slika 2: Pariz 1855: Razstavne zgradbe na Elizejskih poljanah med svetovno razstavo. (Vir: Cornell, E., 1952: *De storia Utställningarna Arkitekturhistoria (arkitekturexperiment och kulturhistoria)*. Bokförlaget natur och kultur, Stockholm, str. 108.)
Paris 1855: Champs-Élysées exhibition buildings during the Exposition Universelle.



Slika 3: Pariz 1867: Pogled na razstavne površine. (Vir: Hix, J., 1996: *The Glasshouse*. Phaidon, London, str. 209.)
Paris 1867: Bird's-eye view of the exhibition site.



Slika 4: Pariz 1878: Pogled na razstavne površine s Trocadérom in Palais de l'Industrie. (Vir: Mattie, E., 1998: *World's Fairs*. Princeton Architectural Press, New York, str. 43.)
Paris 1878: Birds eye view of the exhibition site with Trocadéro and the Palais de l'Industrie.



Slika 5: Pariz 1889: Pogled na del razstavnih zgradb na Marsovem polju. (Vir: de Bures, C.: 1988: *La tour de 300 metres*. Editions André Delcourt, Lausanne, str. 58.)
Paris 1889: Bird's-eye view of the Champ-de-Mars exhibition site.



Slika 6: Pariz 1900: Pogled na razstavne površine med svetovno razstavo. (Vir: Durant, S., 1994: *Palais des Machines*. Ferdinand Dutert. Phaidon, London, str. 8.)
Paris 1900: Bird's-eye view of the exhibition site during the Exposition Universelle.

ARHITEKTURA SVETOVNIH RAZSTAV V PARIZU

THE ARCHITECTURE OF THE WORLD FAIRS IN PARIS

raziskava, research

povzetek

Pričujoči dokument je povzetek rezultatov raziskave o arhitekturi svetovnih razstav v Parizu. Glavni poudarek je na odnosu med arhitekturo in konstrukcijo zgradb na osmih razstavah, ki so se zvrstile v letih od 1855 do 1937.

V drugem podpoglavju raziskave z naslovom Arhitektura in konstrukcija so predstavljene železne konstrukcije štirih stavb: *Palais de l'Industrie* (1855), z do tedaj največjim razponom 48 metrov, ogromno ovalno stavbo s konstrukcijo iz železnega skeleta, katere del je bila *Galerie des Machines* (1867), *Halle des Machines* (1878) in kot zadnja *Palais des Machines* (1889) s konstrukcijo dolgo 429 metrov in visoko 45 metrov ter z ogromnim razponom 115 metrov brez vmesne podpore. Poseben dosežek tehnike je bil še tristometrski stolp. Za obdobje druge polovice devetnajstega stoletja je značilno začetno sodelovanje inženirjev in arhitektov ter pomeni pomembno novost pri načrtovanju zgradb.

Tretje podpoglavje z naslovom Arhitektura paviljonov predstavlja arhitekturno pomembnejše nacionalne paviljone s štirih svetovnih razstav, leta 1900, 1925, 1931 in 1937. Moderna arhitektura je doživela svoj razmah na razstavi leta 1937. Korak po moderni so bili: finski paviljon Alvarja Huga Henrika Aalta in Aino Aalto, španski paviljon Joséja Luisa Seta in Luisa Lacase in paviljon *des Temps Nouveaux* - projekt D Le Corbusiera. Za obdobje prve polovice dvajsetega stoletja je značilno iskanje uporabe novih materialov in s tem novega arhitekturnega stila ter posledično razvoj in dokončna uveljavitev funkcionalizma in moderne arhitekture.

doseženi cilji, namen in rezultati

V diskusiji je izpostavljeno vprašanje o sodelovanju med arhitektom in konstruktorjem ter nakazan je mo en odgovor na vprašanje. Eno od temeljnih teoretičnih izhodišč funkcionalizma je, da je glavni element arhitekturnega izraza konstrukcija, to je nosilno ogrodje ali skelet objekta. Torej je razvoj funkcionalistične arhitekture mogoče orisati tudi z razvojem konstrukcijskih sistemov.

problematika v arhitekturi, umestitev obravnavane teme v te tokove in njen pomen

Splošna ugotovitev raziskave je, da so svetovne razstave v Parizu pomemben člen k uveljavljanju moderne arhitekture. Pot uveljavljanja je bila težka. Prepričati arhitekta, da je lahko tudi vidna konstrukcija lepa in ne potrebuje ornamente, je trajalo pol stoletja. Prepričati konstruktorje, da lahko arhitekti prispevajo k smotrnejši organizaciji stavbe in boljši izrabi prostora, je bil časovno prav tako zahteven proces. Najtežja naloga pa je čakala laično občinstvo, ki se v novem oblikovanju ni znašlo in je proces dojetanja novega trajal še naslednjih 50 let, da je tudi javnost sprejela moderno arhitekturo, ki jo je potem spet prav hitro zavrnila, danes pa jo lahko zopet odkrije.

ključne besede

arhitekti, inženirji, enoprostorski objekti, paviljoni

summary

Paris. Emphasis is given to the relation between the architecture and structure of buildings built for eight fairs organised between 1855 and 1937.

The second sub-chapter of the research, titled *Architecture and construction*, deals with iron constructions of four buildings: *Palais de l'Industrie* (1855), 48 m wide, with the widest span until then, a huge oval building with an iron framework structure, part of which were the *Galerie des Machines* (1867), *Halle des Machines* (1878) and the last *Palais des Machines* (1889), whose structure was 429 meters long and 45 meters high, with an enormous span of 115 meters, without any intermediate support. A special technical achievement was the three hundred meters high tower. The second half of the nineteenth century was characterised by initial cooperation between architects and engineers, implying an important novelty in building design.

The third sub-chapter, titled *Architecture of the pavilions*, presents national pavilions from four exhibitions, held in 1900, 1925, 1931 and 1937, that are important from the architectural aspect. Modern architecture began to flourish with the exhibition in 1937. Just a step behind modernism were: the Finnish pavilion by Alvar Hugo Henrik Aalto and Aino Aalto, the Spanish pavilion by José Luis Sert and Luis Lacasa and the pavilion *des Temps Nouveaux*, a project by Le Corbusier. The first half of the twentieth century was a period typified by the quest for new materials and corresponding new architectural style and consequentially the development and definite acceptance of functionalism and modern architecture.

intentions, goals and results

The discussion stresses issues of cooperation between the architect and constructor and hints at a possible answer. One of functionalism's fundamental theoretical starting points is that the main element of architectural expression is the structure, meaning the load bearing framework or building's skeleton. Thus development of functionalistic architecture can also be described by developments of construction systems.

architectural issues, positioning the topic in ongoing debate and its' significance

The general research finding is that the World fairs in Paris were a significant link in promoting modern architecture. The passage was difficult. It took half a century to convince architects that visible structures could also be beautiful and didn't need ornamentation. Convincing structural engineers that architects can contribute to more rational building organisation and better spatial use took just as long. The hardest task was put before the lay public, which didn't feel comfortable with the new design, thus the process of perceiving novelties took another fifty years, when modern architecture was finally publicly accepted, and very quickly discarded, to be rediscovered again today.

key words

architect, engineer, single-space building, pavilion