



TWENTY TWO YEARS OF STRUCTURAL FIRE ENGINEERING IN CZECH REPUBLIC

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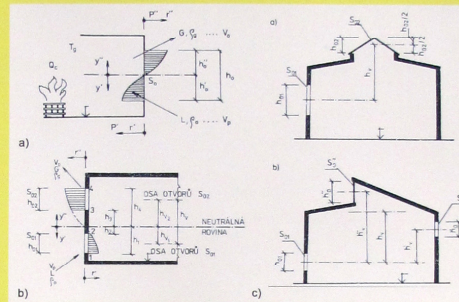
SUMMARY

The paper summarised the history of the structural fire engineering in the former Czechoslovakia. It is stressed the start of dissemination of the knowledge based on the publication Reichel V.: Fire design of industrial structures. The application of the simple prediction models of gas temperature by parametric fire curve and by the zone model is described. The shearing of knowledge with the young colleagues at the Faculty of Safety Engineering of Ostrava University, see www.fbi.vsb.cz, for forty years already and in the part of the safety and risk engineering related to the structures at Czech Technical University in Prague as well, see www.fsv.cvut.cz/baris is introduced. The importance of foundation of the research centre in Veselí nad Lužnicí for fire safety of structures, today PAVUS a.s., see www.pavus.cz, is demonstrated. The end of the paper is focussed to the features of the new regulation No. 23/2008 and the reconstruction of the basic fire engineering standard ČSN 73 0810, which is like in another European countries focussed to fulfil the current new needs in the advanced structural fire engineering by exploring the knowledge in the integrated international standard ISO/TR 13387-2.

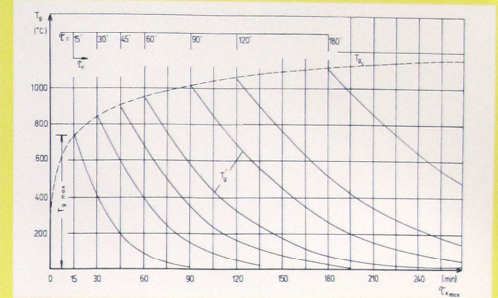
FIRE DESIGN IN FORMER CZECHOSLOVAKIA



The first introduction into structural fire design, Reichel V.: Fire design of industrial structures, ČSP, vol. 17, Prague 1987.



Example of application of the zone model for prediction of temperature in the industrial building, a) model, b) openings in different heights, c) application to industrial hall



Structure of the parametrical fire curve based on the time of the maximal temperature

SUCCESSFUL APPLICATION



The building of the Main Post Office in Jindřišská street was constructed between 1871 and 1874 by architect J. Bělský. The oblong hall was provided with a glazed roof, while the vestibule was adorned with allegorical paintings on the theme of postal services and transportation, the work of K. V. Mašek. The construction site installations caught the fire during the building reconstruction 15 October 1998. The structure of the site accommodation, protected by intumescent coating, survives the serious fire. The spread of the fire was prevented.

UNSUCCESSFUL EVENT



Industrial palace at Fairground Prague Holešovice was erected in 1891 in the art nouveau style according the design of architect Bedřich Münzberger. The steel structure carried the glass façade. The building was reconstructed in 1952 - 1954 and rename to the Convention hall, in 1900 back to Industrial palace. The left wing of the structure was caught by the fire 16 October 2008. Due to the fire unprotected original timber form work, caused by the preservationist position, the fire spread in five minutes to the whole structure and the entire left wing collapsed.

