DEVELOPMENT OF STRUCTURAL FIRE ENGINEERING OVER THE PAST 25 YEARS AND ISSUES FOR THE FUTURE

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Abstract

This talk presents a series of thoughts of the author from his observation of the evolution of structural fire engineering since the beginning of his career.

Experimental research works are first discussed, on the behaviour of materials as well as on the behaviour of structures. The rest of the presentation is dedicated to calculation methods: tabulated data, simple calculation models and general calculation models. For numerical calculation models, the presentation contains a brief history of appearance of different software, of their objectives, of their capabilities. Some examples are presented of structures recently modelled in real applications. Possible abusive utilizations of numerical modelling are also shown.

The presentation ends with a presentation of some challenges that the discipline is facing for the future.

Keywords: fire, structures, calculation, numerical models