

3.7 Applications of fire engineering in the Czech Republic (short version)

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Applications of Fire Engineering in the Czech Republic

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Regulation

- Levels
 1. Legislature laws
 2. Decrees
 3. Standarts
 4. Commentary
 5. Publications

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Legislature in the Czech Republic

- Change law No. 133/1985 Sb., about fire protection
 - In the year 2006 facilitation use FSE. That was the first move legislature for usage FSE.
 - The new law enables to the appointed FSE to criticise construction not only according to FSE procedures.
- Decree Ministry of the Interior No. 23/2008 Sb., about technical requirements for the fire protection of buildings
 - Described legal regulations with structure on changes codex norms fire building safety makes it possible to application methods fire engineering in Czech republic.

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Czech codex of fire standards

- Recommended progress while using devious solving is more closely divorced in enclosures I ČSN 73 0802 plus J ČSN 73 0804. Aim enclosures is above all creation guides, eventually definite balk, at processing these substandard appreciation.
- CSN 73 0802 Non-industrial buildings
- CSN 73 0804 Industrial buildings
- CSN 73 0810 General requirements
- CSN 73 0831 Assembly rooms
- CSN 73 0833 Buildings for dwelling and lodging
- CSN 73 0834 Changes of buildings
- CSN 73 0835 Buildings for sanitary maters and social care
- CSN 73 0845 Storage rooms

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Application

- Field of application methods different progress from progress, generally determinate cl. 5.1.3. norms,
 - advises their application near objects higher than 60 m, near objects, where's concentrated big body count or near objects, which character running or conducted by building change demand application more detailed evaluation.
 - It stands to reason, that the mentioned article is *field of application different progress determinate only for guidance plus practically will his application depend upon consideration designer, owner or operator construction, eventually organ performing state fire supervision plus their dependent conditions.*

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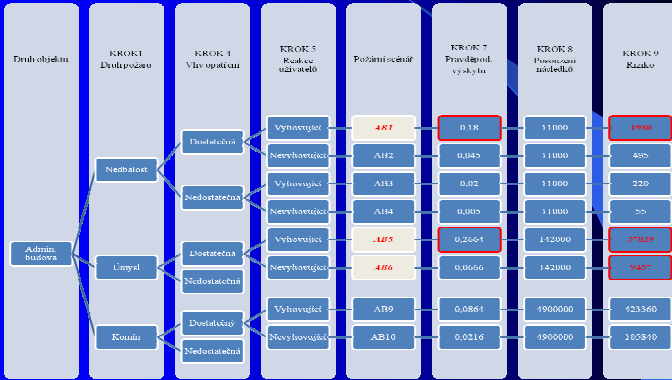
Example of selected scenarios

- Analysed building
- Type of building **Administration building**
- Period under consideration year 2007
- Territorial range Moravskoslezsky region
- Number of fires 8
- Total loss 5 338 000, - Kc
- Causes of fires:

technical fault	2	0, - Kc
negligence	2	12 000, - Kc
arson	3	426 000, - Kc
chimneys	1	4 900 000, - Kc

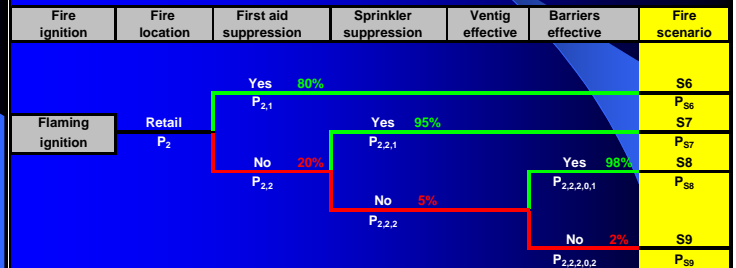
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Type building, type fire, systems impacting on fire, occupant response, design fire scenario, consideration of probability, consideration of consequence, risk ranking



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Next example
400 people, retail



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Risk ranking of scenarios

Fire scenario	Probability	Consequence	Risk	Rank
S6	0,48	0(low)	0(low)	3
S7	0,114	2	0,228	2
S8	0,004 8	200	0,96	1
S9	0,001 2	700	0,84	1

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For fires originating in the retail area

- Scenarios S8 and S9 have about the same risk and entail large consequences. The design should be undertaken to address these potentially large-loss fires. Perhaps two design fire scenarios could be considered.
- One in which the fire grows until sprinklers activate. This would assure design of an adequate sprinkler system.
- One in which the fire grows without sprinkler activation and flashover is achieved. This would assure design of adequate barriers.

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Commentary

- Philosophy further scatter commentary made public on web pages Ministry of the Interior CR – board of management fire - fighting rescue body CR with title „progress at different way performance technical conditions fire protection”.
- Document content be not only detailed account system progress at fire engineering solving, but as well assessment some criteria acceptability in light of conditions for evacuation, fire - stopping hit, engineering construction plus warehouse materials.
- Ministry of the Interior Czech Republic were to be given some of the draft limits.

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Summary and conclusions

- Czech Republic realized in years 2009 plus 2010 system steps for the development of plus practical application methods fire engineering within its territory. Though conference on row significant steps, it stands to reason, that the wider application fire engineering progress will perform guide row of other initiatives in many directions
- At present it is possible use
 - standard access,
 - authorized computational methods
 - plus progress based on the principles fire engineering,
 - eventually their combination.

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