# TRAVELLING FIRES IN LARGE COMPARMENTS
## Realistic fire dynamics for structural design

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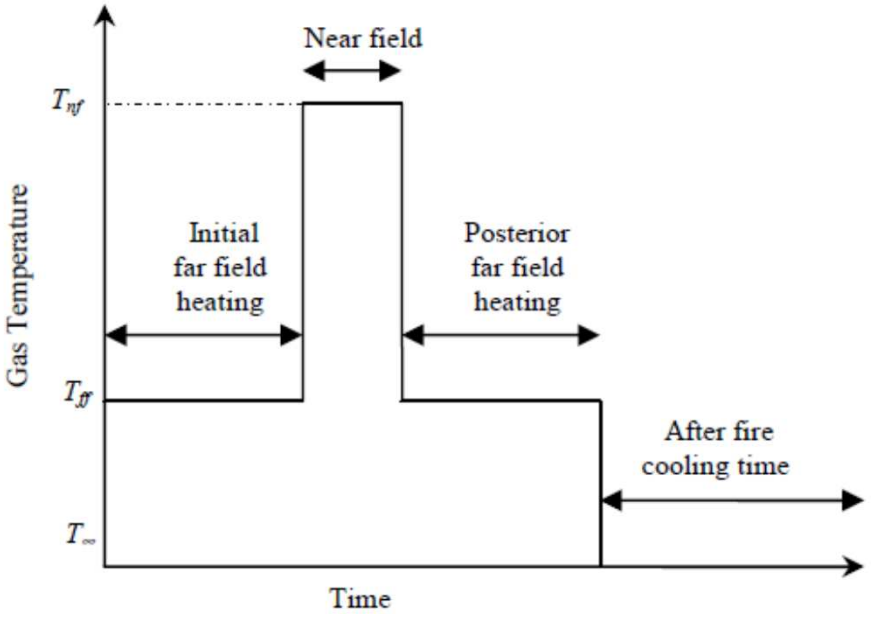
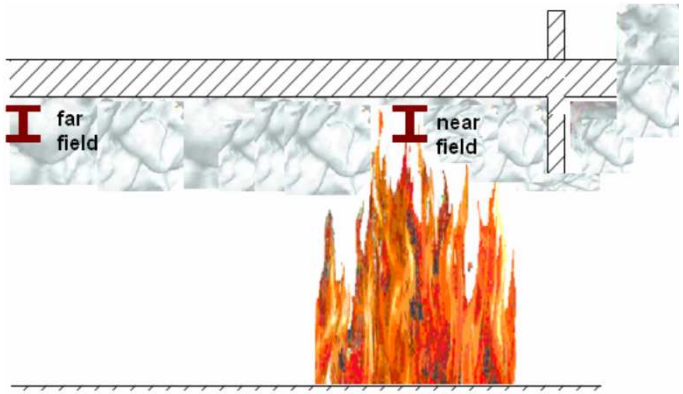
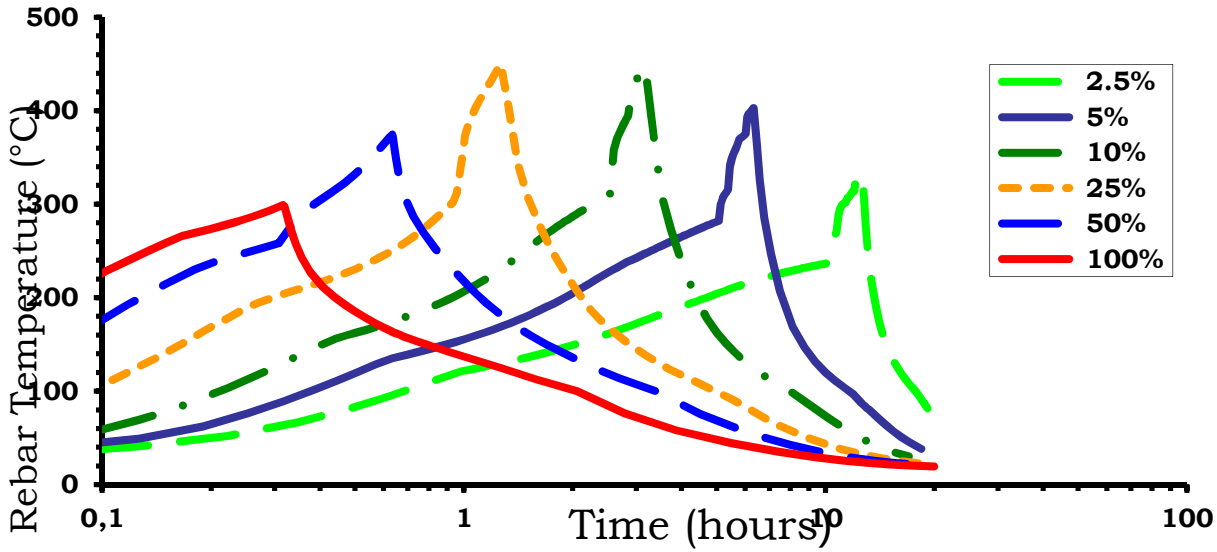
**Application of Structural Fire Engineering, 29 April 2011, Prague, Czech Republic**

# Family of Fires: Rebar Temperature

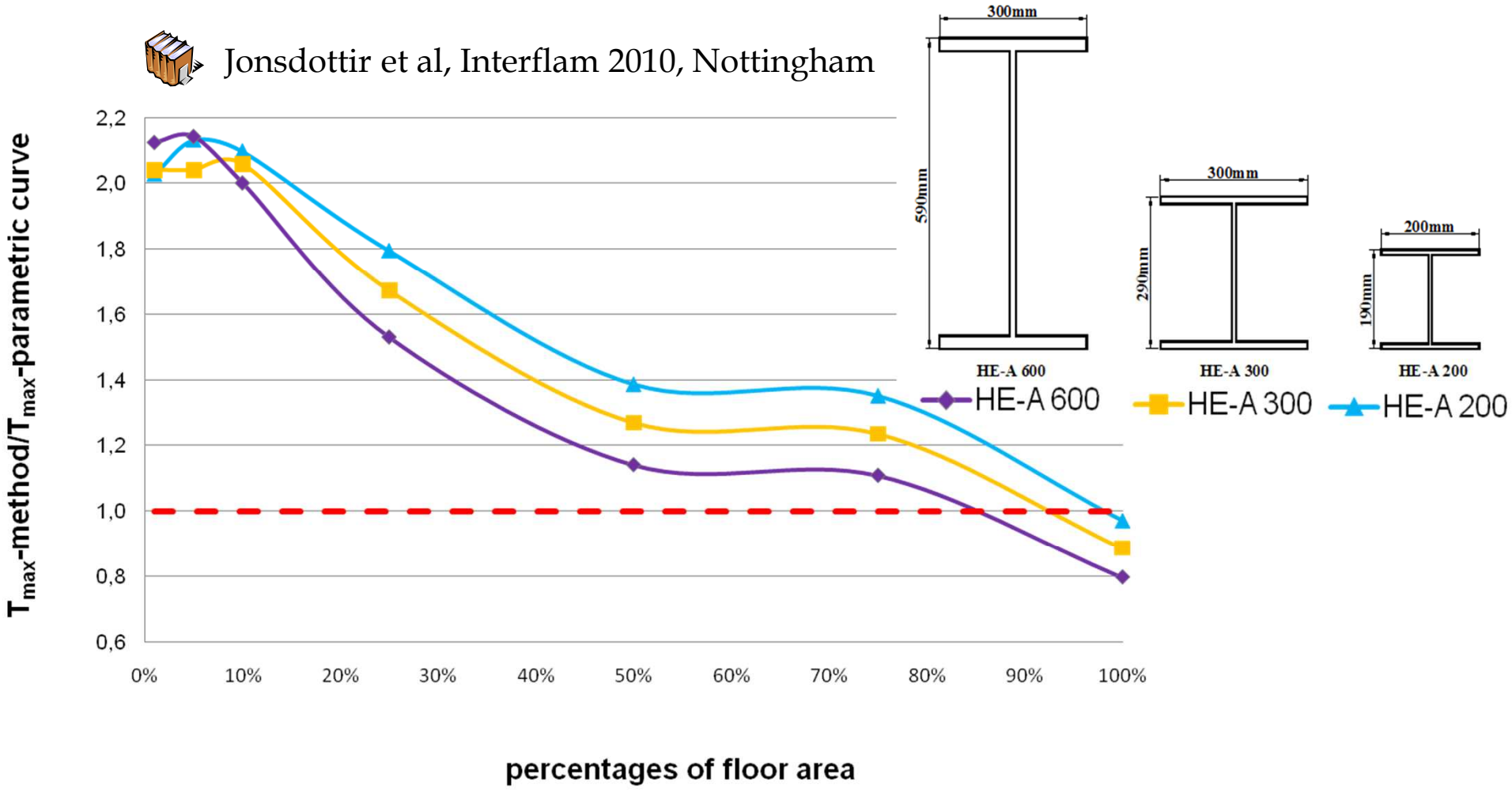


# Insulated Steel: Parametric vs. Travelling fires

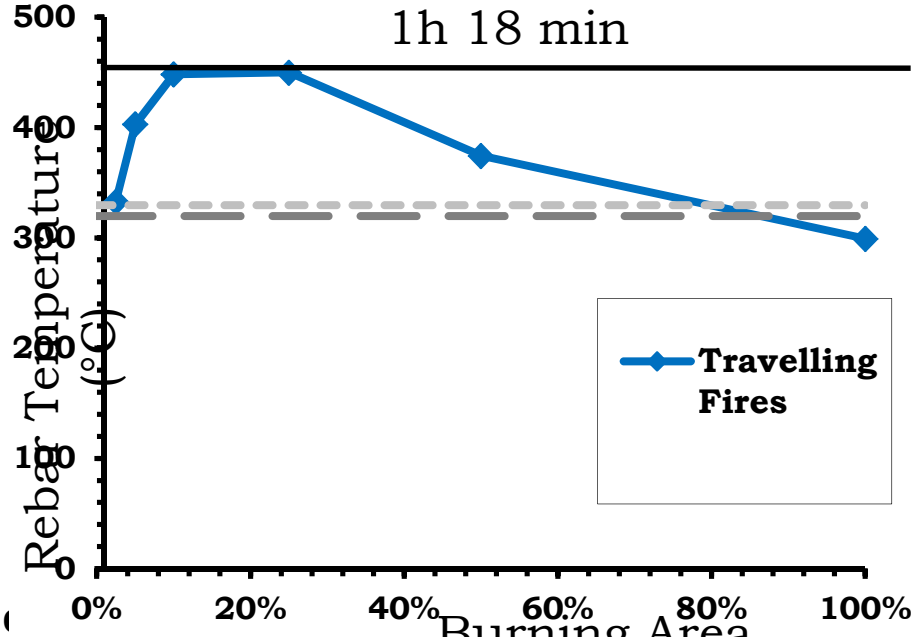
Jonsdottir et al, Interflam 2010, Nottingham

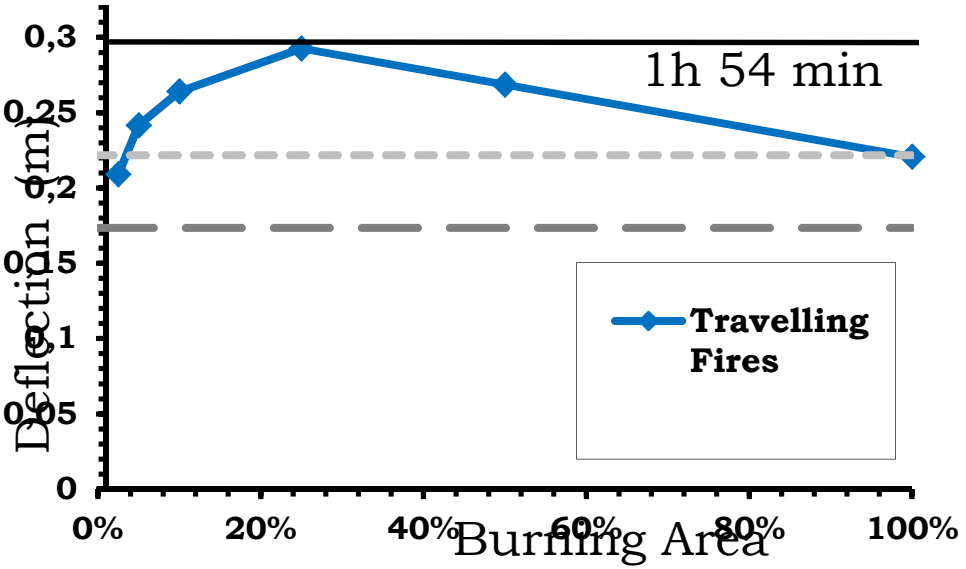



- Compared to parametric fire, 110% higher temperatures for a protected steel with 39 mm-gypsum

# Concrete Frame: Parametric vs. Travelling fires

- In large compartments, a post flashover fire is not likely to occur
- Provides **range of possible** fire dynamics
- Travelling fires give more onerous conditions




Law et al, *Engineering Structures* 2011

## Sponsors:

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## Collaborators:

**J Stern-Gottfried**

**A Law**

**A Jonsdottir**

**M Gillie**

**J Torero**

## Papers:


- **Law et al, *Engineering Structures* 2011**
- Jonsdottir et al, *Interflam* 2010, Nottingham
- Stern-Gottfried et al, SPFE PBD, 2010, Lund
- Stern-Gottfried et al, *Fire Risk Management* 2009
- Jonsdottir et al, *Fire Risk Management* 2009
- Rein et al, *Interflam* 2007, London


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