

## 1.5 Approximate models for analysis of steel structures under fire loading

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### APPROXIMATE MODELS FOR ANALYSIS OF STEEL STRUCTURES UNDER FIRE LOADING

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1

Approximate models with physical nonlinearity will allow to substitute experimental tests to estimate fire resistance of steel structures subjected to fire.

2

- ▣ Study of numerical models to estimate properties of pre-stressed steel connections under high temperature caused by fire
- ▣ Computer simulations of high temperature to determine safety load for this steel connections

3

### EXAMPLES OF REAL STEEL FRAMEES AFTER FIRE

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Fig. 1

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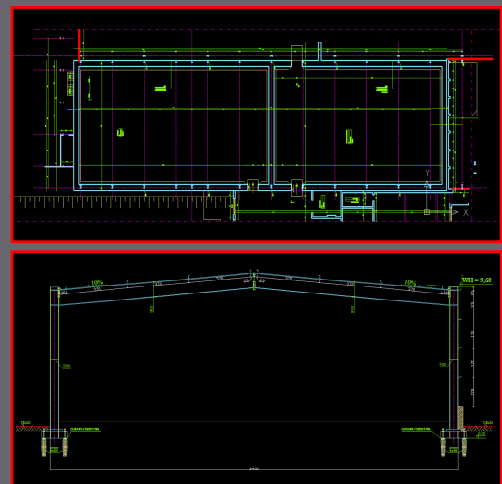


Fig. 2

6

- ▣ Connections to be tested:
  - beam to beam - 10 models
  - beam to column - 10 models



Fig. 3



Fig. 4



Fig. 5

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Fig. 6



Fig. 7



Fig. 8

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Thank You

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