FIRE FIGHTING ON INCLINED COAL HANDLING BRIDGE

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Fire in Opatovice power plant

- 2005 fire of a coal handling bridge
  - Limited operation for 3 month
  - Loss of 3 millions Euros
- Cause
  - Lightning
  - Old manual fire protection
  - Failure of fire alarm system
  - Human mistake
Elimination of human mistake

Automatic fire protection equipment

- Installed in Tušimice power plant (2007-2009)
  - automatic extinguishing system starts in 5 min
  - fire survey by firefighters needs 7-10 min

THREAT OF LIFE OF FIREFIGHTERS

Solution – no fire surveys

In last 8 years on the power plant area:

- 25 fires
- 676 false alarms

Extinguishing by false alarm:
  - several days of lay-by
  - loss of 40.000 Euros per day

Need another solution.
Solution

• Interoperability Interactive Algorithm

• Elimination of false alarms = time for the fire survey by firefighters + automatic extinguishing and cooling of a construction on shortest time

AN INTERACTIVE TIME DELAY OF AUTOMATIC EXTINGUISHING

FIREFIGHTERS SURVEY

time needed for safety survey

STRUCTURAL FIRE ENGINEERING

fire resistance of structure

• How long construction will last?
• Fire modeling in a strong chimney flow
Summary

- Interoperability algorithm
  - Cooperation between fire alarm system and fixed extinguishing system
  - Cooperation between fire alarm system and smoke control
  - Cooperation between fire alarm system and firefighters intervention
- Agreement between structural fire engineering and fire safety measures
- Agreement between structural fire engineering and firefighters

Minimalization of losses
Protection of health and life

SUCCESSFUL FIRE INTERVENTION
THANK YOU FOR YOUR ATTENTION

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