



COST TU0904 Integrated Fire Engineering and Response

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FIRE FIGHTING ON INCLINED COAL HANDLING BRIDGE

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Fire in Opatovice power plant

Elimination of human mistake

Solution

Summary

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



Snímek 2

SE1

Entler; 2.4.2012

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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

170 m long
47 m high
6760 l/min of water

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.



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- **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



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

Minimalization of losses
Protection of health and life

SUCCESSFULL FIRE INTERVENTION



THANK YOU FOR YOUR ATTENTION

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