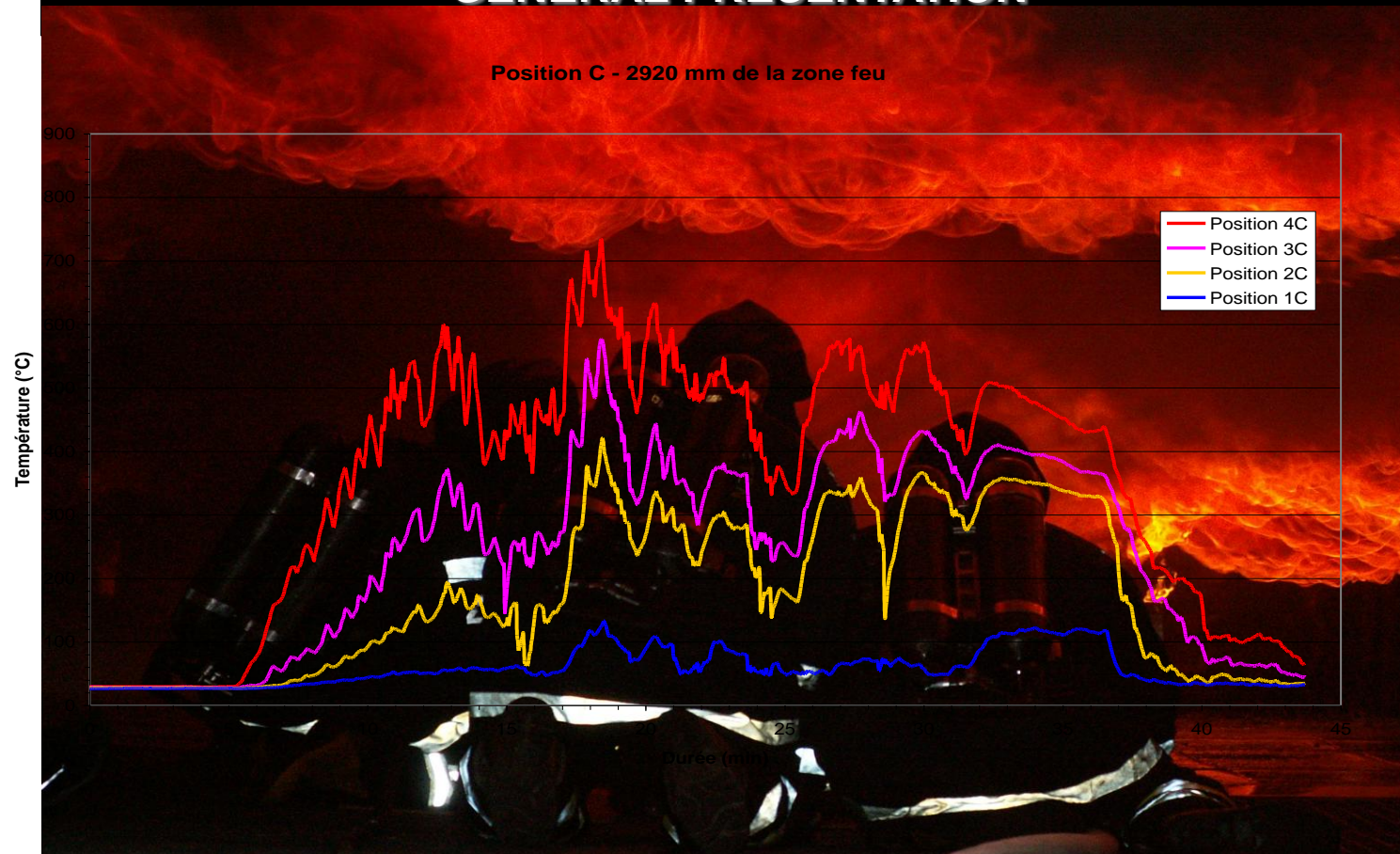


GENERAL PRESENTATION



OBJECTIFS

Bring answers by setting up a partnership on a research program dedicated to the comparative study of the means and the methods for the fire fighting in closed premises.

Be profitable to the industrials safety staffs and also the civil safety actors, directly threatened by these phenomena..



Research Program on the Optimization of Extinguishers for Fires Depletion in Structure



Partnership

Promoted by : **GIMAEX**



Powered by :



TECKNISOLAR ∞ BALSAN



Medium

FIREFIGHTERS

10

Firefighters team from different locations

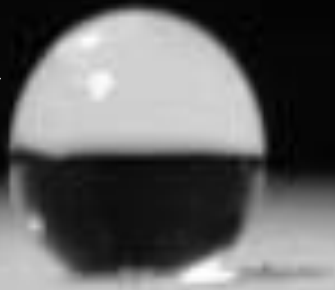


and with different technical and tactical feedback in order to meet a reflection of reality.

Medium

EXTINGUISHERS

11



Water nozzles (low pressure)

12.5 / 25 / 37.5 / 125 gpm

DMR/S + Foam agent

Firefighting Optimal Nozzle*
(New water patent from IFP)

Powder

One Seven ®

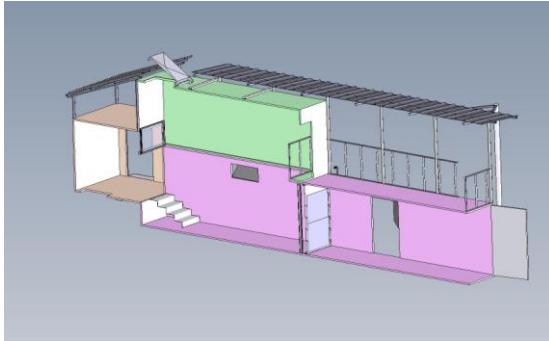
High Pressure Delivery

Cutting extinguisher Cobra
Type

...

Facilities

SERAFIN



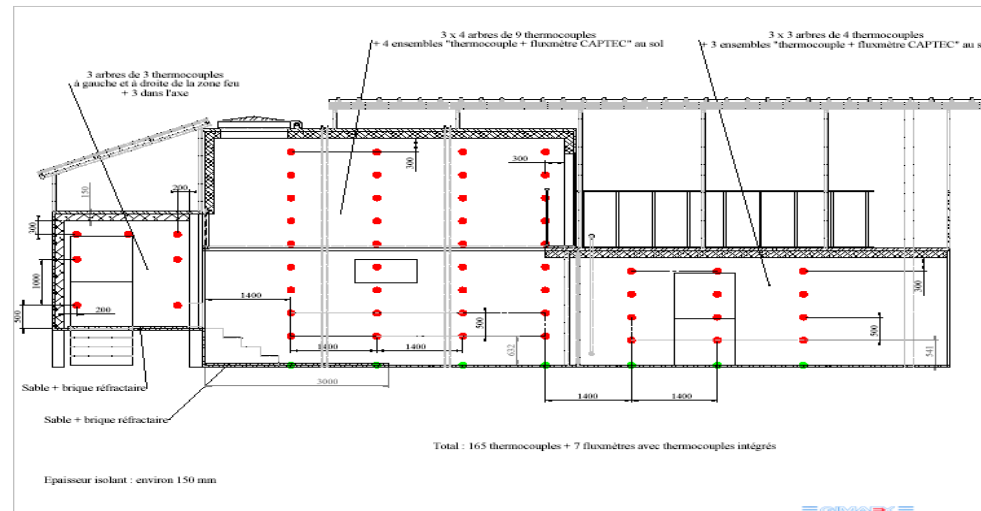
Monitoring Structure for Firefighting Researchs and Experiments (SERAFIN)

SERAFIN



SERAFIN

SERAFIN is equipped with **240 thermo couples** which can provide you the exact temperature at any point. **3 fluxmeters** are additionally mounted on the floor. Thanks to those fluxmeters we can record the movements of the gases inside the container structure. We can also record humidity, pressure...thanks to **other measuring instruments**.
An exact picture documentation will be realized by video and thermal image cameras.



SERAFIN

Many different scenarios

Specific Isolment

Specific design for flashover due to ventilation variation

INNOVATION

Complete Instrumentation

***FULL SCALE EXTINGUISHER
QUALIFICATION BEFORE FIRE
TEST...***



Operating pressure

Pulse effect

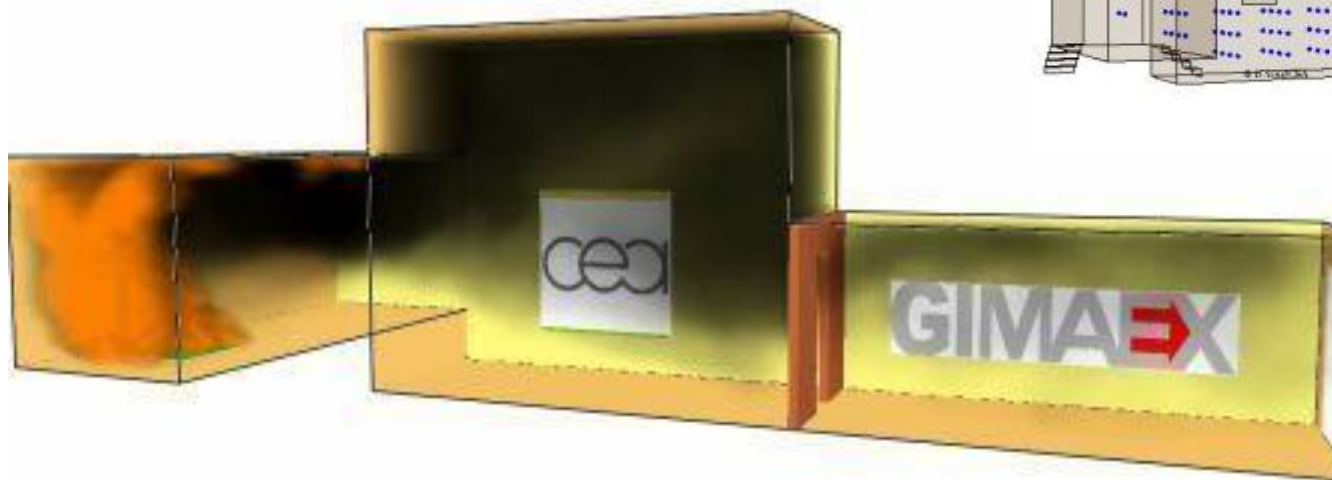
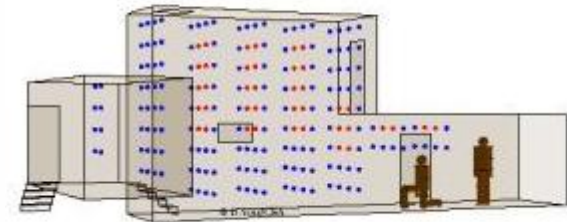
Water flow

Pressure lost

Shape of the spray

Velocity,

30 scenarios



140 monitoring fires

TEST PROCEDURE



Interior Fire Scenario

Monitoring test performed in SERAFIN

Data acquisition and firefighters feedback

Modeling and Scientific analysis

Discussions and Publications

CALCULATION AND RESULTS

- Cooling capacity of the individual extinguishing agents
- Effect of the applied extinguishing agent on the thermal in SERAFIN
- Quantity of required water for reaching the expected result
- Quantity of required additives for reaching the result
- Quantity of accumulating waste water
- Temperature sequence inside the structure during the extinguishing process
- Pressure ratios in SERAFIN during the tests
- Exact meteorological conditions
- Handling of the individual technics
- Start-up time of the system
- Handling of the system (weight, flexibility...)

Smokeview 5.0.1_730 - Oct 1 2007

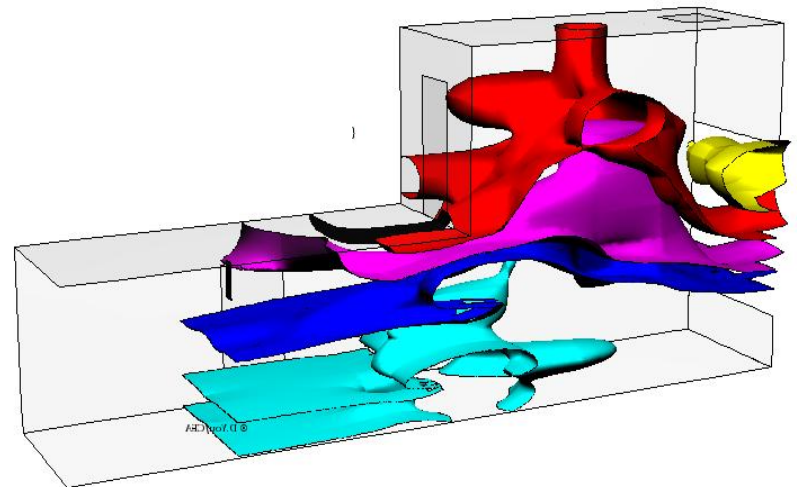
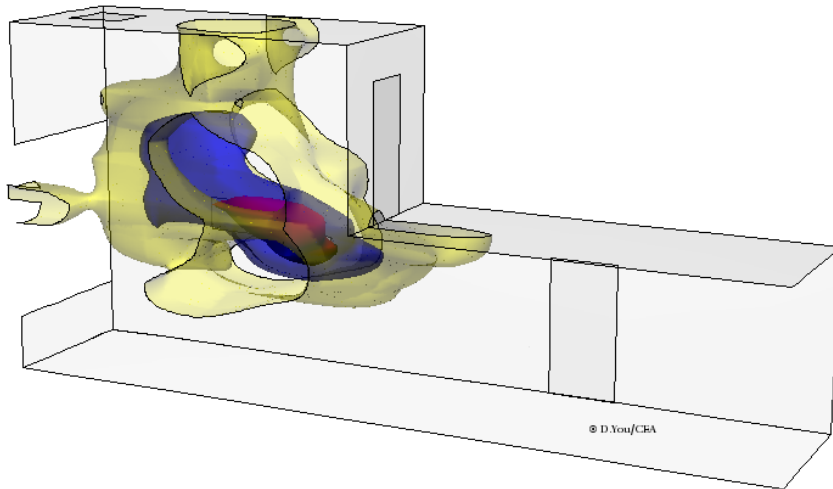
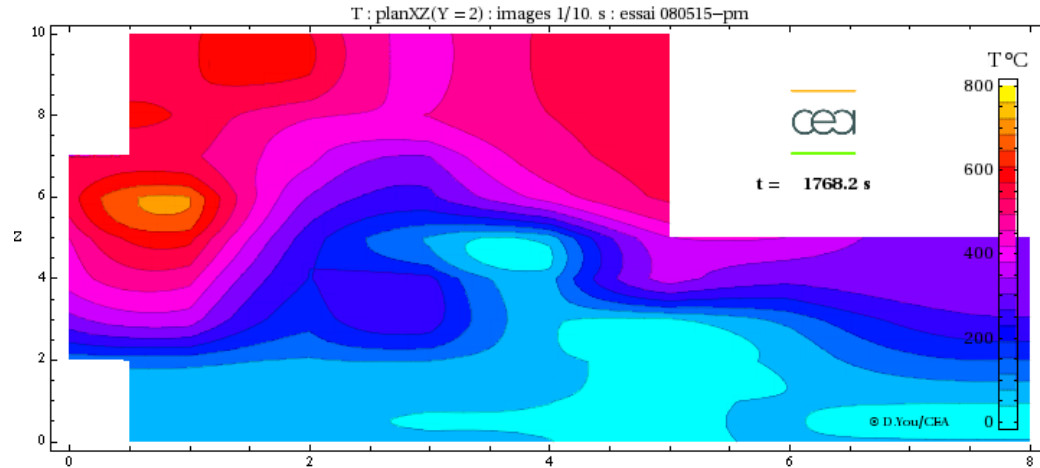


Frame: 0
Time: 0.0



mesh: 1

SPIRIT AND PURPOSE



SPIRIT AND PURPOSE

The test performed within the scope of PROMESIS in SERAFIN will be executed in order to research and understand the behavior of the individual extinguishing methods, tactics and their effects on hot fire gases in the preliminary phase of a Flashover.

PROMESIS should have the following logical consequences:

- a) Determination of the qualitative best extinguishing agents
- b) Determination of the extinguishing method with the highest safety for the firefighters
- C) Alignment of possible existing guidelines to latest developments