



AlphaT²

Fire Simulator Facilities

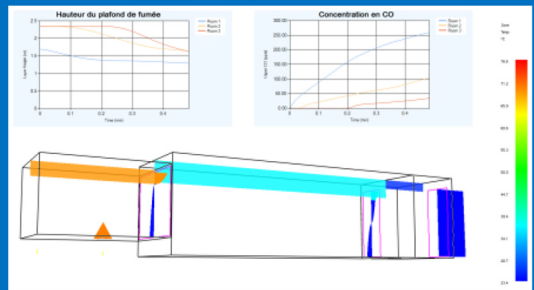


SCIENCE IN THE SERVICE OF FIRE



Design & Training actions

- Understanding fire system
- Training trainers on wood fire simulator level1 & level 2
- Manage real fires
- Introduction to fire modeling
- Using the thermal camera



Wood simulator design

- International safety standards
- Low environmental print
- Representative of all the situations encountered on intervention
- For initiation, reading smoke, progression and the fire attack

environmentally acceptable



Combustible	CO2 [kg/kg]
Bois	1.3
Aggloméré	1.47
Diesel	2.86
Propane	2.85

$$\dot{m} = C_d \int_0^{z_{c,max}} W \rho_a v(z) dz$$

$$\dot{m}_{a1} = \frac{2}{3} C_d W \rho_a \sqrt{\frac{2(\rho_a - \rho_g)g}{\rho_a}} (H_N - H_D)^{3/2}$$

$$\dot{m}_{a2} = C_d W H_D \rho_a \sqrt{\frac{2(H_N - H_D)(\rho_a - \rho_g)g}{\rho_a}}$$

$$\dot{m}_a = \dot{m}_{a1} + \dot{m}_{a2}$$

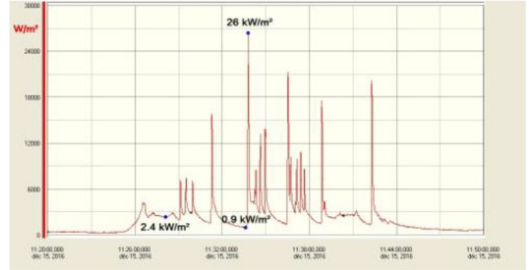
$$\dot{m}_a = \frac{2}{3} C_d W \rho_a \sqrt{\frac{2(\rho_a - \rho_g)g}{\rho_a}} (H_N - H_D)^{3/2} \left(H_N + \frac{1}{2} H_D \right)$$

Expertise & consulting in simulator

Diagnostic on existing simulator:

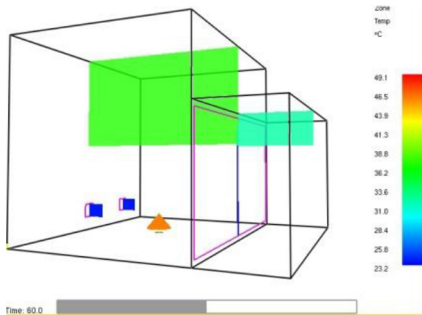
wood simulator with closed or open firezone

- Thermal constraints
- Wood Consumption
- Insulation
- Environmental Constraints
- Health and security



Simulator Transformation and Upgrade

- Opened firezone towards closed firezone
- Gas simulator towards wood simulator
- Multi-container structure



Conducting seminars « Science & Fire »

- Latest advances in the fight against fire
- Understanding in order to act



Cyrille **CUNY**

Designer of the latest generation closed fire zone simulator
Expert in fire modeling
25 years professional firefighter experience



Frédéric **GOUBY**

Proficiency in fire computer modeling tools
Webmaster
25 years professional firefighter experience
training designer



Nicolas **STRUSKI**

Fire Expert - Engineer
Author of the French book "Understanding the Fire System"
13 years professional firefighter experience

Alphat² Fire Simulator Facilities

63 impasse Frédéric Mistral
26790 Tulette
FRANCE

contact@alphat2.fr