

Fire involves the interaction of complex physical and chemical phenomena that are continuously changing over time. Fire investigation requires therefore a thorough knowledge of the behaviour of materials, systems and building construction in case of fire, as well as a good understanding of the influence of ventilation conditions and the propagation of hot flue gases.

To evaluate the 'fire behaviour' WFRGENT nv has ample test equipments at its disposal on the one hand to evaluate the reaction to fire of materials and systems and on the other hand to test the fire resistance of building constructions according to a wide variety of national and international standards. However, WFRGENT nv can also realise non-standardized experimental full scale tests on any object ranging from electronic components to 1000m² building constructions. The data from these experiments are often combined with the outcome of numerical simulations in order to reduce the number of tests or to extrapolate test results.

This service is mainly offered to people or organisations who wish to evaluate the fire risk in existing or planned building constructions or means of transport. It also helps in finding answers for situations where fire has cost lives, has caused major financial losses or has endangered people and/or organisations.

For the numerical simulations WFRGENT nv makes use of software packages developed in-house as well as externally. For the simulation of smoke and hot gases spread, WFRGENT nv utilises purposely developed CFD packages. For complex problems, WFRGENT nv - as a spin-off organisation of University Ghent - cooperates with specialists of University Ghent and the Von Karman Institute.

Previous projects covered aspects of fire safety in nuclear power plants, car parks, domestic houses, etc. as well as fire scene investigations in Belgium and abroad (Switel, 'De Punt', Schiphol, ...).

For more information, please contact [dr. ir. Bart Sette](#).