Consequence modelling studies

Companies handling flammable and toxic materials are exposed to hazards during storage, transporting, and processing. As such, it is crucial to understand the consequences of a potential loss of containment of a hazardous event when performing a risk assessment.

Supported by various advanced modelling software, our experienced consultants can help you assess the consequences and risks associated with your potential hazards.

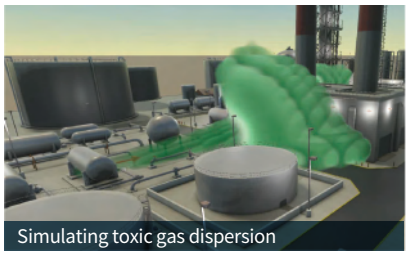
Furthermore, we can help you define effective safety measures to prevent the loss of control of a hazardous event or to reduce potential risks to an acceptable level.

Key services


Simulating explosion in a factory

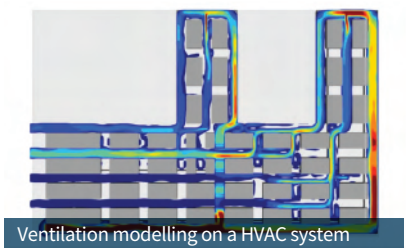
Explosion modelling

- Probabilistic explosion analysis
- Blast propagation
- Worst-case or realistic worst-case explosion analysis
- Explosion mitigation and layout optimization
- Dust explosion modelling


Simulating toxic gas dispersion

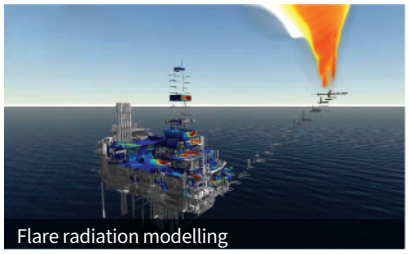
Dispersion modelling

- Cryogenic release dispersion
- Exhaust fume and flare dispersion
- Toxic gas dispersion
- Flammable gas dispersion


Ventilation modelling on a HVAC system

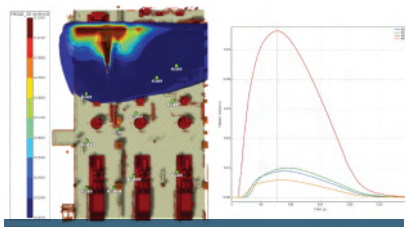
Ventilation modelling

- Wind chill analysis
- Helideck or crane siting
- Mechanical ventilation optimisation
- HVAC system designing


Flare radiation modelling

Fire and smoke modelling

- Passive Fire Protection optimisation
- Flare studies
- Smoke modelling and escape route impairment
- Quantitative fire risk assessment
- Fire and smoke detection optimisation studies



Gas detector optimisation study

Gas and fire detector layout optimisation

- Verification of the installed detector system
- Comparison of alternate detector layouts
- Testing of different detector set points or voting schemes
- Suggestion for new layout/ alarm criteria

Air quality impact assessment

- Pre-development or Pre-planning screening services (e.g. appraise location of sites or sources, abatement or increase of capacity of running processes)
- Stack height assessment
- EIA for sensitive receptors from single or multiple point source emissions against Air Quality Standards and the Industrial Emissions Directive limits (ELVs)
- Dispersion modelling taking into consideration terrain features, airborne pollutants data, and odors and emissions from any industrial processors