



RAMBOLL

FLACS - STATE OF THE ART GAS EXPLOSION SOFTWARE

A valuable software tool to minimise risks of gas explosions and fire hazards.

Explosion from process leaks can have fatal consequences resulting in not only loss of personnel, but also environmental disasters and damage to costly assets and production. In order to avoid explosions and fire hazards, risk assessment is essential to implement in companies operating within both offshore and onshore industries.

Ramboll now provides extensive services for risk assessment and hazard management procedures with the state of the art software tool FLACS.

Risk assessment tool

The FLACS software is a Computational Fluid Dynamics (CFD) based software for simulation of gas dispersion and gas explosion from process leaks. The specialized software has been used extensively in connection with projects, where the risk of

spreading and ignition of potential explosive gases needs to be assessed. The gases can be ignited and the explosion pressure loading to the surroundings can be determined.

The Norwegian developed FLACS programme is the world's leading explosion simulator software and distinguishes from others by its extensive verification programme from full-scale experiments, user-friendliness and cost-effectiveness. Also, the programme facilitates a virtual reality function.

Valuable for offshore and onshore projects

The FLACS software programme is valuable for both offshore and onshore projects. Ramboll has well-documented experience in both fields. Our specialists carry out risk, explosion and structural analyses relating accident frequency and consequence. Our expert

knowledge is based on solid experience from working conditions, processes, procedures and installations relevant to the offshore and onshore industries.

Selected references of our FLACS experience include:

- Gas explosion and risk assessments of Maersk Oil platforms in the Danish North Sea
- Simulation of dispersion scenario and determination of design accidental loads (DAL) from gas explosion simulation for the StatoilHydro refinery in Kalundborg.

MORE INFORMATION AND CONTACT

Ulf T. Tygesen
Senior Project Manager
Ramboll Oil & Gas
T + 45 7913 7398
M + 45 2026 8398
UTT@ramboll.com

www.ramboll-oilgas.com