

DISPERSION MODELING OF FLAMMABLE GASES AND LIQUIDS

ABSTRACT

Many industries use a lot of flammable gases, liquids and hazardous chemicals for their processes. The storage and handling methods of gases, liquids, hazardous chemicals as per Material Safety Data Sheet (hereafter MSDS). A lot of safety precautions, rules and regulations to be followed while handling the materials in the industries. In case of any violation to handling and storage, there will be explosion or spread over of fumes in the atmospheric air. During these kind of scenario factor of safety on mankind is critical. Dispersion modeling plays a vital role in analysis of spread over fumes during explosion. The output of dispersion modeling ONSITE and OFFSITE emergency preparedness will be meaningful. The dispersion modeling can be performed using softwares. The softwares are designed with a mathematical equations and calculations. The software simulation results in protecting humans as well as the environment from the various hazardous like fire, explosion and chemical releases. This simulation modeling which helps the various industries to improve the safety culture due to emergency situations. Most of the Industries like processing industries, production industries, Cement manufacturers, tyre manufacturing industries, firecracker industries and metal powder production units need to introduce the software modeling to protect their employees from the hazardous zones.

Keywords: dispersion, modeling, storage, safety, hazard, MSDS