

Toxic Gas Dispersion in the Urban Area

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Dispersion of an industrial toxic gas is disturbed by the buildings and obstacles especially when dispersed in the urban area. So that, it is not appropriate to use an integral model or some simple diffusion models and due to the progress in the computation it is possible to model by the Computational Fluid Dynamics (CFD). So in this study, toxic gas release accident scenario will be modeled using Reynolds-averaged Navier-Stokes equation and some validation studies will be shown. FLACS software takes the geometry of the urban area and do the porosity calculation. Liquid Ammonia two phase fluid jet and wind passive dispersion is done using the Cartesian grid system. The effect of the buildings and obstacles is evaluated graphically and also analytically.