Numerical Simulation Application in Air Pollution Studies

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Abstract:

There are most hazardous air pollutants in workplaces and environment, which should be evaluated and controlled. Numerical simulations can help experts to improve the air quality. In this study, due to the importance and abilities of numerical simulations, hazardous air pollutants in workplaces and environment divided to four subgroups. These subgroups were included air pollution, ventilation, respiratory airways and risk assessment. Then, recent researches in each subgroup were reviewed and the codes and software used simulations were determined. Results show Fluent software and k-epsilon turbulence models have the most use in air pollution studies simulations. Today, different codes and software have been developed for simulation and we suggested their use in occupational health studies.

Keywords:

Numerical simulation, Computational Fluid Dynamics, air pollution, Simulation software.