

Simulation Of Dispersion Of Pollutant By Eddy Field

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Abstract. This research studies the behavior of the dispersion of a pollutant cloud, through the simulation of an eddy field velocity. To do so, a mathematical model was developed, with base in the Monte Carlo simulations, in order to analyze all statistic aspects, present in this process. A computational program was developed, so that it can be possible to establish the behavior of the cloud size, in a scale close to the beginning of the process. The reason for that is justified by the difficulty that the Models, based in the Hydrodynamic Theory, has to manage some results in the beginning of the dispersion process. The results have shown that the model satisfy the objective of the research, as well it could be the first step to analyze the process of dispersion of pollutant in large scale.

KeyWords: Dispersion Analysis, Water Quality Model, Turbulent Diffusion.