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Numerical Study of Fire Propagation in Confined and Open Area

Authors : Hadj Miloua, Abbes Azzi

Abstract : The objective of the present paper is to understand, predict and modeled the fire behavior in confined and open area in different conditions and diverse fuels such as liquid pool fire and the vegetative materials. The distinctive problems are a ventilated road tunnel used for urban transport, by the characterization installations of ventilation and his influence in the mode of smoke dispersion and the flame shape. A general investigation is relatively traditional, based on the modeling and simulation the scenario of the pool fire interacted with wind ventilation by the use of numerical software fire dynamic simulator FDS ver.5 to simulate the fire in ventilated tunnel. The second simulation by WFDS.5 is Wildland fire which is always occurs in forest and rangeland fire environments and will thus have an impact on people, property and resources.

Keywords : fire, road tunnel, simulation, vegetation, wildland
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