Evaluate the Spray Models Using FDS by NIST

Master's thesis number: MT-55-22

Introduction and background:

Fire safety is an important factor as there is extensive research is happening to evaluate the efficiency of suppression parameters. However, it takes time, money and energy to do it experimentally. Thus, Fire Dynamic Simulator is a software introduced to evaluate the suppression parameters of spray types like sprinkler and water mist. The suppression parameters were Droplet concentration, particle velocity and droplet size distribution. The comparison of monodisperse and polydisperse spray can be considered and the behaviour can be studied under fire and non-fire scenario.

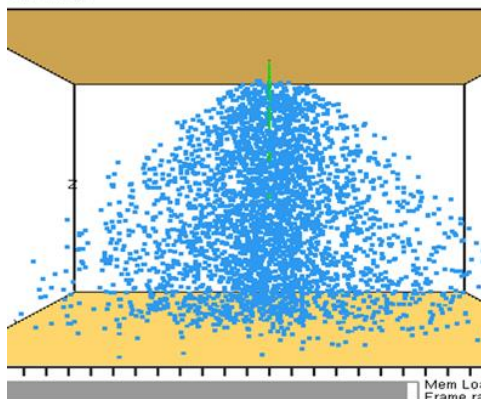**Problem description and objective:**

Literature study on spray suppression using sprinkler and mist suppression system.

Making a FDS fire model .

Evaluate simplified parameter and complex parameter.

Comparison study can be made with and without fire.

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