

POSITIVE PRESSURE VENTILATION

Full-scale experiments were conducted to characterize a Positive Pressure Ventilation (PPV) fan, in terms of velocity. Experiments were performed in an open atmosphere and in a simple room geometry. The results of the experiments were compared with Fire Dynamic Simulator (FDS) output. The measurements of both sets of experiments compare favorably with the FDS model results. With the correct geometry, vent placement, and boundary location FDS predicted velocities that were within 10 percent for the open atmosphere and 20 percent for the simple room geometry. The Smokeview visualization of the FDS results of the PPV fan's flow pattern, and the flow out of the window also correlated well with those measured experimentally.

To view the entire report and the associated videos, or to request copies of the DVDs, go to:

<http://www.fire.gov/PPV/index.htm>



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