

CHARACTERISING FIRE SCENARIOS BASED ON NEW ZEALAND FIRE INCIDENT DATA

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ABSTRACT

Suites of design fire scenarios for each occupancy type are required for use in a probabilistic model currently being developed by the authors. A summary of the analysis and results for New Zealand residential occupancies is presented. Results and experience from analysis of fire incident statistics that were used to identify the most important design fire scenarios for residential occupancies in terms of life safety are summarized. An approach is presented for identifying a normalized weighted distribution of design fire scenarios that incorporates the magnitude of the frequency of incidents and casualties, the severity of the incidents, and a measure of the confidence in the available statistics. An example distribution for apartment design fire scenarios that could be used as an input for the probabilistic model currently in development is included.