

大規模空間建築物避難模擬評估之研究—以大型展覽館為例

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摘要

Due to the booming development of economy, the population of city is concentrated and buildings trend to large-scale gradually. because of the inner space in this kind of building is big, so makes the evacuation time increasing and fire extending easily. In addition to this kind of building can contain a great amount of people, so it could generate detention easily when people take evacuation, and generate inestimable damage to the lives and property.

Recently, many developed countries sequentially using computer model to evaluate the evacuation safety in building, but using these software still get some conditionality on its' applicability and manipulation.

Therefore, this research compiles data of software and assort those information at first, then considers how difficult to acquire those softwares and their applications. Finally, according to the attributes of this case chooseing building EXODUS to be the evaluate tool.

The Fire Law 13th stipulate that public building (above certain scale) should fram fire drill programs, including inducer. In this case, people could up to 60 thousand, and 90% of people all concentrate in the exhibition space, so regard the first floor and fourth floors as the main place to calculate by this research. Through calculateing many kinds of setting situations, it shows that zony evacuation is better for evacuate people, in this case, the 4th floor conspicuously. That's because people in 1th floor can go out of building directly, and the width of all exits is wide enough that won't cause congestion. On the other hand, people in 4th floor might because of the conditionality in the width of staircase then cause serious congestion. Thus it may be known that induction is good for people to evacuate.

關鍵字：Large-scale spatial building，Building EXODUS，Simulate Evacuation