

Nanthaporn Decha 2010: A Program for Fire Escape Design for Assembly Occupancies.
Master of Engineering (Fire Protection Engineering), Major Field: Fire Protection
Engineering, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor
Satjarthip Thusneyapan, M.S. 132 pages.

The research concerns the usage of assembly occupancy area in Thailand. The building of interested included 5 groups: dance hall, exhibition hall, passenger station, restaurant, and theater. They are buildings for gatherings and activities. The conflagration would cause the high lost in lives and properties; as happened at Santika Pub in Bangkok, Thailand at the New Year Eve of year 2009. Because the design of the fires escapes and occupant load in a building require high technical knowledge in the safety standard of NFPA 101 Life Safety Code, which are widely used for reference. This research developed a software for engineers, architects and any people who are interested in the design and the improvement to the fire safety of buildings.

The study shows that the program is able to calculation the occupant loads in a building. It is fast and accurate for designing the fire escapes comparing to the conventional calculation by calculator. The program provides online advisory for better improvement of the design, and covered five groups of assembly occupancy area. The program is useful for engineers, and suitable for engineering students to use and study about fire escape design.

Student's signature

Thesis Advisor's signature