

ABSTRACT

ANALYSIS OF FIRE EVACUATION TIME IN GEDUNG TOKONG NANAS BUILDING WITH PYROSIM AND PATHFINDER SOFTWARE

Law No. 28 of 2002 concerning Buildings stated that all buildings to be built must meet several requirements in the construction process. Fire hazard has a risk of loss both materially to fatalities. Therefore, every building needs to have an evacuation model that can support the evacuation process in the event of a fire disaster. Evacuation model simulation can be done in real or with a software program. Real simulations can be done in the form of training for residents, while software programs can be done using software including fire simulations using Pyrosim and evacuation simulations using Pathfinder. In this study shows the pattern of the spread of fire and smoke from fires in the Tokong Pineapple Building and the time needed to evacuate during a fire disaster. Evacuation times for each case will differ depending on the density of occupants and building plans. In this study, applying three evacuation scenarios. The first scenario assumes the number of occupants in the building is 5565 people with a total evacuation time of 43 minutes. The second scenario assumes the number of occupants is 1085 people and the total evacuation time is 10 minutes, and the last scenario assumes the number of occupants in the building is 840 people with a total evacuation time of 9 minutes.

Key words: Fire, evacuation, Pyrosim, Pathfinder, Tokong Nanas Building, security, fire disaster mitigation