ABSTRACT

Designing and the making of integrated system simulation using smoke detector at middle classification be a focus at wood warehouse which have capacious 2000 m². This warehouse need attachment integrated system appropriate with SNI 03-3985-2000 about method designing, attachment and testing of detection system and fire alarm for fire prevention at building, and SNI 03-3989-2000 about method designing and attachment automatic sprinkler system for fire prevention at building.

Base on SNI 03-3985-2000 smoke detector which appropriate for use at warehouse building. Detection system and alarm should be integrated with water as extinguisher. On simulation make use of acrylic material for making frame building and copper for making sprinkler head and piping. This system should be simulated with use IC ATMEGA 8535.

From calculation phase got outcome that amount of detector needed 48 detectors whereas calculation for sprinkler got outcome that amount of sprinkler needed 125 sprinklers, water requirement 57,6 m³ whereas water reservoir prepared can accommodate 75 m³. capacity of power pump 9,65 hp or 7,19 kW.

Keyword: smoke detector, sprinkler, water needed, simulation