ABSTRACT

Surabaya Shipbuilding State Polytechnic is a high education institution established in 1987 has a new Directorate building. This four-storey building has an area of 1050 m² only completed with the smoke detector in the first floor, while for other active fire protection such as fire extinguisher and means of passive fire protection like emergency response system (ERP) are not provided. Based on this condition, Emergency Response Plan and APAR are badly needed to design so that the fire case in the wood garage of PPNS-ITS in 2000 will not happen again.

The design of this evacuation facilities started with calculating sum of people the building can hold suited the kind of its use, based on NFPA 101 the year of 2000, further it can be noted how many emergency doors needed and their width is measured. To determine the amount and type of fire extinguisher is required, use the standard NFPA 10 years in 1998 and PERMENAKERTRANS No. RI. 04/MEN/1980.

From the design result, the need amount of emergency doors for the 1st, 2nd and 3rd floors can be obtained that is 2 exit with 1 unit of 525 mm in width and the 4th floor, with 1 exit of unit of 525 mm in width. Exit route every floor has 2 exit lines because of the availability of 2 exits. Meeting point A is located on the west side of the building near car parking area, and meeting point B is situated in southern part of the building. The proximity of the distance of the 1st exit to meeting point A is 45.4 m and 2nd exit to meeting point B is 20.6 m. Number of fire extinguisher is required based on PERMENAKERTRANS No. RI. 04/MEN/1980 are 20 unit with the kinds of powder fire extinguisher (PG) and based on NFPA 10 years 1998 is 7 unit, kinds of portable fire extinguisher is dry chemical for a building of fire type A and C.

Keywords: Emergency Response Plan (ERP), NFPA, SNI, Portable Fire Extinguisher.