ABSTRACT

Adiluhung Saranasegara Indonesia (ASSI) PT is a company dealing with service ship repairment and new shipbuilding with the main mostly relating with welding process event this company’s main activity is welding process, yet it has’t owned fire safety system. Based on that evidence, it is needed to design fire safety to prevent from fire accident.

Fire prevention which was designed are about fire Prevention system desing based on “SNI 03-1745-2000 about methode of designing and installing standing pipe system and hose to protect houses and other Building from fire accident”, designing emergency response plan based on “SNI 03-1746-2000 about method of designing and installing exit way to save from fire hazard in a building” and “NFPA 101 Life safety code”, and designing portable fire extinguisher based on “PERMENAKERTRANS RI NO.04/MEN/1980 about installation and maintenance portable fire extinguisher requirements” and “NFPA 10 year 1998 about standard portable fire extinguisher”.

Based on the result of this design it is showed that Adiluhung Saranasegara Indonesia PT which has 13,243.7 m² wide, needs 34 pillars with reservoir volume 57.6 m³, and pump energy capacity is about 14,710 hp, with pipe diameter suction 8 inch, and discharge pipe 6 inch. Amount of required portable fire extinguisher based on PERMENAKERTRANS RI no.04/Men/1980 about 20 and based on NFPA 10 year 1998 about 9, with extinguisher type is dry chemical and carbon dioxide. For emergency system the number of exit door for office building is one with the width 0.525 m and the height 2 m, then the workshop and warehouse building are 2 with the width 1.05 m and the height 2 m. Exit Route is designed only one for each building, while the width of exit route is 1 m for all building. Assembly area location is located on the west part of the building and it is about 31 m from the building, and standard operating procedure (SOP) is also designd.

Keyword: Hydrant pillar, Piping system, Energy pump capacity, Portable for fire extinguisher, Means of escape, Assembly point, Emergency exit, SOP evacuation