

Analysis of Life-Saving Facilities System and Fire Management Facilities at Ogan Ilir Police Station in 2020

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ABSTRACT

Introduction: Fire cases in Indonesia continue to increase every year. Based on data from the Regional Disaster Management Agency (BPBD) of South Sumatra, there were 116 cases of fires during 2019 in South Sumatra. An office building is a building that serves as a place for people to do office activities. Office buildings that have been relatively safe are actually faced with various risks of emergency hazards such as fires, earthquakes, floods and others. Ogan Ilir Police Station has experienced a life-threatening fire and losses, and therefore life facilities are needed according to the existing SNI. The purpose of this study is to analyze life-saving facilities and fire management facilities in Ogan Ilir Police Station, South Sumatra. **Methods:** This research used a qualitative descriptive method. Descriptive research was conducted by evaluating the fire protection system in accordance with the national standard in reference to the Regulation of the Minister of Public Works. Sources of information were obtained from key informants and other informants. **Results:** The suitability of the fire protection system at Ogan Ilir Police Station with the standards of the Minister of Public Works No. 26/PRT/M/2008 for the system of life-saving has complied with the requirements. Meanwhile, fire fighting facilities such as fire extinguishers have been installed, but there are some small elements that are not in accordance with the requirements. **Conclusion:** The fire protection system at Ogan Ilir Police Station, South Sumatra has not complied with the requirements of the Minister of Public Works No. 26/PRT/M/2008.

Keywords: fire protection, life saving, ogan ilir police station

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INTRODUCTION

Fire is not only caused by just one factor but there are many factors that affect it. The most common factors of fire are human factors and technical factors (Ramli, 2010). Electrical short circuit is one of the highest causes of fire cases in Indonesia, reaching about 62.8%. Therefore, good spatial planning and special attention to fire disaster management infrastructure is needed, especially for fires that occur in office buildings (Priambudi, Kurniawan and Widjasena, 2017).

An office building is a building that serves as a place for people to carry out office activities. Office buildings that have been relatively safe so far are actually faced with various risks of emergency hazards such as fires, earthquakes, floods and others (Ministry of Health Republic of Indonesia, 2010).

Ogan Ilir Police Station includes state buildings that must have a means of rescue from disasters or emergencies in accordance with the required Indonesian National Standard (SNI). Based on the results of interviews and observations conducted at Ogan Ilir Police Station, there has been a fire in the buildings of Ogan Ilir Police Station that scorched 3 rooms used for Criminal Investigation Room (Reskrim), Special Crimes (Pidsus), Corruption Crime (Tipikor), Community Development (Binmas) and Logistics. Losses due to the fire amounted to 460 million due to damage to buildings and goods in the buildings, delays in work activities, as well as the need for costs for the construction of new buildings.

In terms of fire hazard prevention and management, this can be related to the lack of fulfillment of life-saving facilities and fire management facilities. The purpose of this research is to analyze life-saving facilities and fire management facilities in Ogan Ilir Police Station.

Cite this as: Maharani, V. N, *et al.* (2022) 'Analysis of Life-Saving Facilities System and Fire Management Facilities at Ogan Ilir Police Station in 2020', *The Indonesian Journal of Occupational Safety and Health*, 11(3), pp. 463-472

METHODS

This research was based on the code of conduct No. 336/ UN9.1.10/ KKE/ 2020. This research was conducted at Ogan Ilir Police Station from November to December 2020. This study used a qualitative descriptive method, and the research instruments in the form of feasibility assessment on building fire protection included a field observation, interview and document review to get an overview of fire protection system in Ogan Ilir Police Station in accordance with the national standard of the Regulation of the Minister of Public Works No. 26/ PRT/M/2008 concerning Technical Requirements of Fire Protection Systems in Buildings and Environment, and National Fire Protection Association (NFPA) 01 about Life Safety Code. Sources of information were obtained from key informants and other selected informants whose selection was based on considerations given by the key informants. Sampling was carried out with principles and estimates. The assessment index is considered appropriate if it is in accordance with the Regulation of the Minister of Public Works No. 26/ PRT/M/2008.

RESULTS

Life-saving Facilities

Exit Facilities

The main exit facility in Ogan Ilir Police Station is only an access door in the Main Building of Ogan Ilir Police Station as a place for officers to enter and exit. There are 3 main entrances to exit in the form of corridor. The entrances are also directly



Figure 1. Main Door Corridor for Exit Facilities at Ogan Ilir Police Station

connected to the road. In addition, the time it takes for officers and guests to reach the gathering place from the work area is ±2 minutes because the main building is right behind the gathering place.

"... our evacuation route has 3 doors, at the front, left and right sides for evacuation." (Y, 53)

"...The means exit are complete, and they have been checked by the RBP Team from the Indonesian Ministry of Administrative and Bureaucratic Reform, so they must be suitable for the facilities, right?"(YH)

"...there is a route to go directly to the gathering place in front of the main building" (S)

"... the path is on the side and at the front. If it's the one at the front one, come on, when you enter, there is a guard desk right away" (R)

Based on interviews with informants, the suitability of the means of egress has also been tested and checked by the RBP Team from the Indonesian Ministry of National Police, Ogan Ilir Police Station.

Evacuation Route Signs

Based on the results of the research, the directions of the exit in Ogan Ilir Police Station are located in almost all work units and along the evacuation route. These exit directions will end at the assembly point in front of the public office. The exit directions in Ogan Ilir Police Station are rectangular in green color and have the words "EVACUATION

Table 1. Suitability of Exit Facilities at Ogan Ilir Police Station

Regulation of the Minister of Public Works No. 26 / PRT / M / 2008	Suitability
There is a corridor used as EXIT access.	Suitable
Exit facilities are maintained continuously, free from any obstruction(s).	Suitable
Furniture, decorations or other objects are not placed in a place that interferes with the EXIT, access to it, and a way out of it or disturbs the view.	Suitable
No mirror mounted inside or close to any EXIT that can confuse the direction of the exit.	Suitable
EXIT access width ≥ 71 cm.	Suitable
The number of exit facilities \geq two.	Suitable
EXIT ends on public roads or outside of EXIT.	Suitable

ROUTE” written in white and accompanied by a directional arrow. The following is a checklist of the suitability of the directional signs in Ogan Ilir Police Station with the Regulation of the Minister of Public Works No. 26/PRT/M/2008.

“.. for the evacuation route there are directional signs until the exit." (Y, 53)

"The exit is like a door, If there are no stairs, because our building is not multi-storey, then the directions to the emergency road are sufficient enough. The condition is quite good, the placement has never been changed, and the directions are checked directly with the RBP team from the Indonesian Ministry of Administrative Affairs. God willing, it's safe" (YH)



Figure 2. Directions of the Exit at Ogan Ilir Police Station

Table 2. Suitability of Evacuation Route Signs

Regulation of the Minister of Public Works No. 26 / PRT / M / 2008	Suitability
There are signs of directions on the exit facilities.	Suitable
The color of the directions is visible and contrast.	Suitable
At each location is placed a directional sign with a directional indicator.	Suitable
Directional signs with external and internal illuminations should be readable in both normal and emergency lighting modes.	Not Suitable
Any directional signs are illuminated continuously.	Not Suitable
The directions mark reads as "EXIT" or another proper word and ≥ 10 cm in size.	Suitable
The width of the letter in the word "EXIT" ≥ 5 cm, except for the letter "I".	Suitable
The minimum space between the letters in the word of "EXIT" ≥ 1 cm,	Suitable

“... Escape is like looking for exits., All the road routes have signs, but there are no stairs in the building because our building is not multi-story. Eligibility of the directions is checked but some are not. Installation is carried out along the way of the exit leading to the meeting place” (S)

".. For the route, it's clear, and the signs are clear, so officers and guests can know where to go in case of an emergency. I think all are in good condition." (R)

Based on the results of interviews with key informants, directional signs have been installed according to the procedure. For the installation points, the signs are located in every building up to the meeting place. Checking is also carried out by the RBP Team from the Indonesian Ministry of Administrative Affairs.

Assembly Place

The assembly place in Ogan Ilir Police Station is claimed to be spacious to accommodate officers and guests in case of fire that requires evacuation. There are two assembly places for officers and guests in Ogan Ilir Police Station. The following is a checklist of the assembly place suitability for police officers and guests of Ogan Ilir Police Station with NFPA 101.



Figure 3. An Assembly Place of Ogan Ilir Police Station

Table 3. Suitability of Assembly Place

NFPA 101	Suitability
A place to gather after evacuation.	Suitable
There are hints of where to assemble.	Not Suitable
The appropriate area of the gathering place, at least 0.3 m2 /person.	Suitable

".. So, the marking point of the gathering point itself does not exist yet. But, in case of danger such as the one in the ceremony field yesterday when the fire occurred, we all worked together to extinguish the fire so all members went to the location." (Y, 53)

"...if there is an emergency gathering in front of the ceremony field, a bell will be used there too. We have a plan like that for the directions" (YH)

"... The assembly place in the event of a fire is located in front of the main building. The assembly place is an empty area, so when a fire occurs, people will be directed to the assembly place. The conditions are good, and the feasibility is also good, in my opinion." (S)

".. woah for the gathering place it's located in front of the ceremony field. Though there are no instructions yet, but if there is an emergency, people will be directed there" (R)

Based on the results of interviews with key informants, the assembly place is in an open and wide ceremony field, but the marking of the meeting place has not been installed. If an emergency occurs for all members, guests are immediately directed to the meeting place in front of the main building, namely the ceremony field.

Fire Management Facilities

Active Protection System

Light Fire Extinguisher (APAR)

Based on the results of the interview, observations and secondary data, the total number of fire extinguishers is 10 APAR tubes. All APAR construction in Ogan Ilir Police Station is of the Stored Pressure Type with a weight of 6 kg with a type of fire extinguisher that is dry powder made from dry chemical flour. The placement of fire extinguishers in Ogan Ilir Police Station is placed 100 to 125 cm from the bottom of the floor. The maintenance and feasibility testing is conducted routinely once a year by the logistics unit.

".. for APAR using dry powder, each building has an APAR. We refill it if it is used, but the cost is a bit expensive around Rp.300.000 – 350.000. The APAR is inspected by the logistics unit (Y, 53)

"If there are 3 types of APAR, the availability depends on the location. The first is a type of flour or powder that is available in every building and is evenly distributed. For adequacy it is sufficient, and for maintenance it is the same as for other tools. The APAR is checked once a year." (YH)

"For the type of powder fire extinguisher, I saw it earlier, and that's why I told you to check it first. According to the situation now, right.., there are enough 10 fire extinguishers, and the condition is still not expired; it's still valid. We'll see, madam." (S).

"The conditions, such as placement and availability, in my opinion are quite good. The types of APAR are complete, and yes..we have dry powder fire extinguishers. The maintenance is usually conducted once a year, and there is a check, so if there is an extinguisher that has expired, it is immediately replaced. Also, the content is refilled, that is once a year."(R)

Based on the results of interviews with key informants, APAR of Ogan Ilir Police Station uses dry powder according to the existing fire hazard classification. APAR checks are carried out by the Logistics Unit. Each building has an APAR with a total of 10 fire extinguishers at Ogan Ilir Police Station.

Fire Manual Detectors, Alarms, and Call Points

In Ogan Ilir Police Station there are no alarm detectors or manual call points. This is because the



Figure 4. A Fire Extinguisher at Ogan Ilir Police Station

Ogan Ilir Police Station is an old building so there is no alarm detector there, but in the new building, which is the building of Rusunawa Ogan Ilir Police, already has fire alarm detectors. In addition, Ogan

Ilir Police Station also has speakers and bells in the event of a disaster, and each police officer has HT for communication.

".. Detectors, fire alarms and call points are not yet available in this building, but they are available in our new building in Rusunawa. For most notifications, we use a bell for in this building and it is still manual. The active protection system is also not complete, as there is only APAR in this building. From our side we also never propose it because we do not know it is important for the completeness of the building but for the future we can propose it. " (Y, 53)

Table 4. Suitability of APAR

Regulation of the Minister of Public Works No. 26 / PRT / M / 2008	Suitability
The presence of light fire extinguishers	Suitable
A classification of APAR consisting of letters indicating the class of fire in which the fire extinguishers proved effective, preceded by numbers (only class A and class B) indicating the effectiveness of the relative blackout affixed to the APAR.	Suitable
The extinguishers should be placed in an eye-catching place where the tools are easy to reach and ready to use.	Suitable
The APAR must be clear and unobstructed.	Suitable
APAR, other than the wheeled APAR type, must be firmly mounted on the hook, or binder made in APAR manufacturing, or registered binder approved for such purpose, or placed in cabinets or walls whose construction goes inside.	Suitable
Distance between APAR and floor ≥ 10 cm.	Suitable
Operating instructions should be placed in the front of the APAR and should be clearly visible.	Suitable
Hazardous material identification system labels, six-year maintenance labels, hydrostatic test labels, or other labels should not be placed in the front of the APAR or affixed to the front of the APAR.	Not Suitable
The APAR must have a label affixed to provide information on the manufacturer's name or agent name, mailing address and telephone number.	Not Suitable
The APAR must be inspected manually or monitored electronically.	Suitable
The APAR should be inspected at any time intervals of approximately 30 days.	Suitable
Records of all examined fire extinguishers (including corrective actions taken) must be kept.	Suitable
APAR maintenance must be carried out for a period of ≤ 1 year.	Suitable
Each APAR must have a solidly attached card or label indicating the month and year of maintenance.	Not Suitable
The maintenance label must identify the person carrying out the maintenance.	Not Suitable

Based on the results of interviews with key informants, Ogan Ilir Police Station does not have facilities in the form of fire alarm detectors and manual call points. The absence of follow-up for the installation of fire protection facilities as well as a large amount of time and budget for the installation make Ogan Ilir Police Station only use speakers and bells in the event of a fire as a preventive measure.

Hydrants, Upright Pipe Systems and Sprinklers

In Ogan Ilir Police Station there are no hydrants, upright pipe systems or sprinklers. This is because the Ogan Ilir Police Station is an old building. To overcome the risk of fire, Ogan Ilir Police Station has a tedmond that can be directly connected in case of fire, as well as function as a water source. Ogan Ilir Police department has a source of water from drill well and dug well. In addition, Ogan Ilir Police Station also has AWC cars as well as fire engines for the first preventive measure in the event of a fire.

" Water hydrants, sprinklers, and upright pipe systems are not available yet, so we use tedmonds that are streamed, and we are also assisted with AWC cars." (Y)

Based on the results of interviews with key informants, it is known that Ogan Ilir Police Station does not yet have water hydrants, sprinklers or standpipe systems. As a precaution, the Resort Police has a tedmon as a reservoir for water storage in addition to AWC cars and fire engines.

Passive Protection System

Ogan Ilir Police Station does not have a passive protection system throughout the buildings. There is no plan for the installation of a passive protection

system in Ogan Ilir Police Station because the installation of passive protection system is quite difficult and will interfere with the operation. Thus, Ogan Ilir Police Station does not make proposals for the completeness of the building's passive protection system.

Based on the results of interviews with key informants, there is no passive protection system in Ogan Ilir Police Station. The police have just found out about the passive protection.

DISCUSSION

Life-saving Facilities

Exit Facilities

The "emergency exit" facility is a guarantee for the ease of the process that can at least reduce the number of victims in the event of an emergency. The means of exit used by officers to reach the assembly place is the main road located at each end of the left, middle and right of the building (Ramli, 2010).

Based on the results of the comparison, it was revealed that Ogan Ilir Police Station already has exit facilities from the 7 elements set by the Regulation of the Minister of Public Works No. 26 Year 2008. Furthermore, in accordance with the results of field observations regarding the suitability of Ogan Ilir Police exit facilities, it was found that as many as 7 elements have fulfilled the requirements of the Regulation of the Minister of Public Works No. 26/PRT/M/ 2008 (Regulation of the Minister of Public Works, 2008).

Egress facilities also need to be equipped with safety signs or labels that can be read clearly and easily understood by building users. Safety signs or labels need to be implemented to provide information and warnings in an emergency situation for visitors, in accordance with what is described in the Regulation of the Minister of Public Works no. 26/PRT/M/2008 concerning Technical Requirements for Fire Protection Systems in Buildings and the Environment (Kurniawan, Djaka and Suroto, 2017).

The elements that are in accordance with the requirements are the existence of corridors as exit access, which are left, right and center doors of the building. Each building must have more than one alternative exit which is located far apart. This is important so that the process of self-rescue can be

done even faster. Along the way out, a sign is given indicating the direction of the evacuation route that goes directly to the exit of the building. Both exit signs and evacuation routes should be clearly visible and should be able to glow in the dark (Haghani and Sarvi, 2016)

This result is in line with Miranti's research stating that each corridor and exit should be equipped with a sign indicating the direction and location of the exit. This serves as a sign for the building's occupants or guests to have no difficulty in evacuating to the exit. Otherwise, it will be difficult to save themselves in case of an emergency (Miranti, 2018).

Evacuation Directional Signs

Signs for evacuation directions at Ogan Ilir Police Station are installed along the sides of exits as well as emergency doors. The size and shape of the directional signs use the ANSI standard. For directional signs installed on the sides of the exit, directional signs measuring 120 x 340 mm are used. The evacuation directional signs at Ogan Ilir Police Station have not used phosphor paint and internal illumination (Ramli, 2010).

Based on the results of the comparison, it is known that Ogan Ilir Police Station already has signs for evacuation directions from the 8 elements set by the Regulation of the Minister of Public Works No. 26/PRT/M/ 2008, which was then carried out in accordance with the results of field observations. Furthermore, regarding the suitability of the signs for the evacuation direction of Ogan Ilir Police Station, 6 elements have fulfilled the requirements of the Regulation of the Minister of Public Works No. 26/PRT/M/ 2008, but there are 2 elements that have not been fulfilled, as every evacuation direction has not been continuously illuminated and the area inside the room and outside the room has not been illuminated.

Regarding whether the directional signs with external and internal illuminations are readable in normal and emergency lighting modes, from the results of research in Ogan Ilir Police Station, it is known that each sign has not been illuminated, both indoor and outside. The standard used is the technical requirements for fire protection system in buildings and the environment, especially the directional signs that must be present. According to Miranti (2018), every directional mark must be painted with reflective paint (phosphorus paint) so that= both internal and external directional signs can

be read in normal and emergency lighting modes (Miranti, 2018).

Regarding whether each sign is illuminated continuously, from the results of the study it is known that all evacuation signs are not illuminated. This is in line with Mahmasshony's research suggesting that directional signs must be illuminated to make it easier for building occupants to read them, especially when it is dark (Mahmasshony, 2016).

Regarding whether each sign is illuminated continuously, from the results of the research it is known that all evacuation signs are not illuminated., Directional signs should be illuminated to make it easier for building residents to read them especially in dark conditions. This emergency lighting itself works when the power source as the main power source goes out due to a fire, so the only assistance that can be used during an evacuation is exit signs (Kowara, 2017).

Assembly Place

A muster station is a safe place that is prepared as an assembly place in the event of an emergency, which provides sufficient accommodation space for everyone. A muster station must be equipped with lighting supplies from emergency electricity, access from hallways, stairs and emergency exits to the muster station (Ramli, 2010).

Based on the results of the comparison, it was known that Ogan Ilir Police Station already has a place to assemble or muster point referring to the 3 elements set by the National Standards Agency (2000). 2 of 3 elements have met the requirements, namely the existence of an assembly place after the evacuation and an appropriate area of the assembly place that can accommodate officers and guests who are in Ogan Ilir Police Station (National Standards Agency, 2000).

The assembly place is located near the entrance gate, specifically the entrance of vehicles that is usually used for events and ceremonies in the morning and other meeting places behind the main building. This is in line with research conducted by Utari (2020), stating that in UPNJ Building Faculty of Health Sciences, the location of the assembly place is in the middle of the campus, to be precise on the ceremonial field with the assembly condition being safe and easy to reach (Yulita, Maharani and Utari, 2020).

However, the result is not in accordance with previous research conducted by Utama, stating that a meeting place in the X Mall building has a 100%

appropriate level of the assembly place. In order to achieve appropriate conditions, the meeting place should not be used for other purposes so as not to be disturbed (Utama, 2019).

Life Management Facilities

Active Protection System

Light Fire Extinguisher (APAR)

Based on observations and interviews about fire extinguishers at Ogan Ilir Police Station in relation to the Regulation of the Minister of Public Works of the Republic of Indonesia No. 26/PRT/M/2008, there are 4 aspects that do not meet the requirements due to lack of knowledge of the checklist concerning APAR. APAR in Ogan Ilir Police Station does have labels affixed to provide information on manufacture's name or agent name, mailing address and phone number. According to the Regulation of the Minister of Public Works RI No. 26/PRT/M/2008, labels should be affixed as a means in case of damage, so that agent can be quickly and easily contacted (Regulation of the Minister of Public Works, 2008).

According to the Regulation of the Minister of Public Works No. 26/PRT/M/ 2008 regarding maintenance, maintenance and refilling must be done by trained officers who also have thorough maintenance manuals, suitable types of , refill materials, lubricants and manufacturing recommendations as replacement of special parts registered for use in APAR. In storage, archives must be maintained through tags or labels affixed to the APAR. Safe and environmentally friendly fire extinguishers contain liquefied gas, and APAR that has expired must be routinely refilled (Hambyah, 2017).

In accordance with the Regulation of the Minister of Public Works No. 26/PRT/M/ 2008 concerning Building Maintenance and Maintenance Guidelines, monthly inspection records of light fire extinguishers should be conducted, and dates and signature of personnel who perform the inspections must be included in the label (tag) of maintenance attached to the light fire extinguisher (Regulation of the Minister of Public Works, 2008). This is in accordance with previous research by Arifatul (2016) that showed that light fire extinguishers have already been installed but there are some that do not meet the standard reference. Light fire extinguishers

must be inspected periodically and carried out by competent people, so that they should be placed in the right place in intact and good condition (Sholeh, Suroto and Wahyuni, 2021).

Fire Manual Detectors, Alarms, and Call Points

A detector is an automatic fire detection device which in the event of a fire is also active. This detector must be installed in every building and routinely checked to determine whether it is still working properly or not. If a fire occurs in a building that does not have heat detectors, smoke detectors and fire alarms, it will result in a large fire and many casualties since fire is not detected by fire detectors and there is no warning of danger from an alarm to ask people to evacuate (Regulation of the Minister of Public Works, 2008). Meanwhile, the manual call point or the broken glass button is a tool that works manually, and the alarm cannot be operated as long as the glass barrier has not been broken (Regulation of the Minister of Public Works, 2008).

Based on the observation of fire detectors and alarms in Ogan Ilir Police Station, the building does not have fire manual detectors, alarms and call points. Similar research conducted by Arifatul also showed that there were no fire detectors in the company. Installation of detectors and alarms should be carried out in every building in order to predict the existence of fires (Arifatul, 2016). Based on research by Permadi, the application of fire alarms must be adjusted to NFPA 72 standards, in which a good alarm system must be integrated with fire detectors and sprinkler systems because there is a possibility that fires cannot be detected by workers only, but needs to be assisted by such detection facilities (Lubis, Soemirat and Permadi, 2019)

Every building must have a manual call point that serves as a tool that works with manuals and alarms as a detection system in the event of a fire. In each building, manual call points, lever malfunction checks and manual call point suppressor buttons must be inspected regularly, and the manual call point should not be blocked by objects or items that make it inaccessible and not easy to see. This is done to make it easier for anyone who wants to inform the emergency (Mahmasshony, 2016).

Hydrants, Upright Pipe Systems and Sprinklers

Hydrant is a device equipped with a hose and nozzle as a pressurized water channel and is used for fire fighting purposes; hydrants are placed in

buildings and building yards. The hydrant in the Rectorate building is equipped with a fire hose which is connected to the hose head which is stored in a red box and reads "HYDRANT" (Regulation of the Minister of Public Works, 2008).

Based on observations and interviews about hydrants, upright pipe systems and sprinklers in Ogan Ilir Police Station, it was found that the building does not have a building hydrant or yard hydrant. Based on research conducted by Chusanudin, hydrant facilities play an important role in facilitating fire suppression during fire events. Therefore, the completeness of the means of hydrants must be done. Additionally, it is required to make instructions for the use of hydrants and to perform hydrant maintenance (Chusanudin, 2015).

The installation of an upright pipe system has not been done because there is no proposal from the police and because it needs expensive budget. In line with SNI 03-1745, every building fitted with upright pipes and automatic sprinkler systems must have an inlet for pump equipment at a distance of 18 m from the fire connection ("siamese"). In addition, the requirements and terms for fire connection for upright pipe systems must be in accordance with SNI 03-1745-2000 about the procedure of planning and installing upright pipe systems and hoses for the prevention of fire hazards in buildings (National Standards Agency, 2000).

Previous research conducted by Arifatul showed that the company also did not have sprinklers. In fact, sprinklers are useful for fire protection if the fire is not detected by other active protection facilities or when the fire is not visible to the fire management unit (Arifatul, 2016). In addition, research conducted by Miranti showed that Bougenville Building at Telogorejo Hospital was not equipped with sprinkler because the Bougenville Building was an old building and at that time there was no regulation that required a sprinkler. To this date, there is still no plan for the installation of sprinklers in the Bougenville Building because the installation of sprinklers is quite difficult and will be able to interfere with the operation of the hospital (Miranti, 2018).

Passive Protection System

In Ogan Ilir Police Station, there is no passive protection system throughout the building. This is because the building of Ogan Ilir Police Station is an old building that has not fulfilled the utility of the passive protection system, and the Ogan Ilir Police

station has not made proposals for the completeness of the passive protection system of the buildings. Furthermore, the use of fireproof construction is very important for the survival of a building in the event of a fire as the building will quickly collapse when the residents evacuate people and goods. This can cause many fatalities because a building is not resistant to fire. This is in accordance with research of Salena which conducted research on the building of the Faculty of Public Health which did not have a fire resistant construction. Construction materials in both buildings are not fire retardant that go through a process of fire resistance testing but use commonly used materials. This shows that the application of the passive fire protection system in the building of Faculty Public Health is not appropriate due to the absence of fire resistant materials (Salena, Safriani and Novrizal, 2019).

This result is not in accordance with previous research conducted by Kurniawan, in The Lawang Sewu Building. The finding showed that the building has met the assessment criteria for the sub-component of structural fire resistance of the building, so it is categorized as good. In accordance with what is described in SNI 03-1736-2000 concerning Procedures for Planning Passive Protection Systems for Prevention of Fire Hazards in Houses and Buildings, cultural buildings are included in Building Type 9B and have Type A construction, namely buildings with the highest fire resistance. The construction serves to withstand earthquake vibrations, and the thick walls function to withstand heat propagation = quickly without destroying the stability of the building structure (Kurniawan, Djaka and Suroto, 2017).

This is not in accordance with previous research conducted by Trianisa, stating that the passive protection system in School Building 'X' in Bandung has been installed quite well, but there is a placement or physical condition that is not in accordance with the regulations and there is a passive protection system that is not installed as well. Fire retardant construction of a building is important because it can give time for the residents of the building to evacuate safely (Yulita, Maharani and Utari, 2020).

CONCLUSION

Life-saving facilities in Ogan Ilir Police Station that are entirely appropriate are part of the exit facilities. Meanwhile, the elements that are not entirely appropriate are evacuation directional

signs since no evacuation directions have been illuminated and there is no sign of the assembly place. Regarding the fire management facilities in Ogan Ilir Police Station, it is shown that active fire protection system has fulfilled light fire extinguisher (APAR) criteria, while the elements that are not entirely appropriate are fire detectors, fire alarms, manual call points, hydrants, upright pipe systems, and sprinklers.

ACKNOWLEDGEMENTS

The researchers would like to thank the staff of Ogan Ilir Police Station for being the respondents in this study.

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