The Role of Fire Detection Equipment To Prevent Fires In MV. Soemantri Brodjonegoro

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Abstract

The role of fire detection tools is very helpful in preventing fire hazards in MV. Soemantri Brodjonegoro, on this basis, the author formulates the problem of the extent of the ship's crew's knowledge of fire detection tools and how to maintain fire detection tools in MV. Soemantri Brodjonegoro. The method used in this study is a qualitative method that produces descriptive data in the form of written words from people and observed behaviors. In this case, collecting data in the form of an approach to the object through observation, direct interviews with the subject. Based on the results of research and discussion of problems carried out by the author during the practice of screening in MV. Soemantri Brodjonegoro regarding the role of fire detection devices found problems in the role of fire detection devices which include the lack of knowledge of ship crews about fire detection tools caused by the lack of implementation of new crew familiarization and the lack of implementation of safety meetings on ships. The discussion of the results of the study is to increase the ship crew's knowledge of fire detection equipment by means of maximum familiarization of the new crew and carry out safety meetings once a month, as well as improve the maintenance of fire detection equipment by means of good coordination between the ship and the company and increasing the responsibility of ship officers by checking fire detection equipment regularly.

In this case, it is concluded that the lack of knowledge of the ship's crew and the maintenance of fire detection equipment can cause the malfunction of the tool properly, namely as a tool to detect fire hazards on board so that the fire detection tool can function properly to support shipping.

Keywords: fire, detection, equipment, safety meeting, familiarization

1. Introduction

Fire hazard prevention is any effort made to avoid uncontrolled flames. This is done in places that are considered important, for example, places for storing flammable materials such as in paint stores, engine rooms and so on. In these places it is tried not to let uncontrolled flames occur. Actions taken in order not to arise a fire on board the ship is to do prevention and when
a fire has occurred it must be immediately overcome because it can threaten the safety of life, property and the environment so it is necessary to take fire control measures to limit, minimize, extinguish to prevent greater losses and before a fire hazard occurs fire detection tools and fire hazard prevention tools must be in good condition and ready to use.

With the familiarization of equipment and functions of fire prevention and fire fighting equipment on board the MV. Soemantri Brodjonegoro which is a bulk carrier is expected to minimize the occurrence of fire hazards with these tools. And if a fire occurs on board the ship can be overcome immediately so that the consequences of the fire hazard can be reduced as small as possible or eliminated altogether for the safety of the crew, cargo, ship and also the environment.

Fire detection equipment is a fixed fire extinguishing system, where the system is permanently installed that can detect the initial occurrence of fire hazards, such as smoke, unnatural heat, and uncontrolled flames. Fires with a sufficient number are expected to be extinguished quickly considering the presence of fire detection devices that can determine the location where the fire hazard occurs.

There was a fire on the MV. Seomantri Brodjonegoro, who was on the right main deck, was the result of sparks from the use of electrical outlets that exceeded capacity, then about cotton rag or rag which was then successfully detected by the fire detector and headed for fire control and was known by the ship's crew. It must remain vigilant and attentive so that the incident does not repeat itself and can be responded to appropriately and responsively.

Thus, fire detection equipment is very supportive as a fire hazard prevention tool on board the ship which is all about fire detection equipment is also regulated in the Safety of Life at Sea (SOLAS) 1974 Regulation 13 part A. The role of these detection devices is the Prevention of fire hazards on ships when cadets experience Marine practice on MV. Soemantri Brodjonegoro.

With these problems can be known early fire prevention measures must be by installing fire detection devices in places that are considered important so that the Prevention of fire hazards runs effectively and efficiently to support the safety of life at sea and minimize the danger of fire on board. In addition, we must take care of fire detection equipment so that it can function properly and know the knowledge about the use of fire detection equipment on board. Based on the description, The author took the title “The role of fire detection equipment to prevent fires in MV. Soemantri Brodjonegoro.”

2. Research Method

According To Lexy J. Moleong (2002: 3), defines qualitative methodology as a research procedure that produces descriptive data in the form of written or oral words from people and observable behavior. In line with that definition. Qualitative research is a particular tradition in the social sciences that relies fundamentally on observing people in their own field and dealing with them in their language and terminology.

The type of research used by the author is a method that can produce descriptive qualitative data. The definition of descriptive is a writing that contains an exposure, description and explanation of an object as it is at a certain time and does not draw conclusions or decisions in general.
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a. Primary Data
Primary Data is data that comes from the original or first source. This Data is not available in compiled form or in the form of files. This Data must be sought through the interviewee or in technical terms the respondent, that is, the person we make the object of research or the person we make as a means of obtaining information or data. The author obtained the data through interviews with Mualim III (Third Officer), Bosun (Boatswain), helmsman (Quarter Master) and people directly involved in the work on the MV. Soemantri Brodjonegoro related to the role of fire detection equipment.

b. Secondary Data
Secondary Data is data that is already available so we just need to find and collect it. Secondary Data can be obtained easily and quickly. Because it is available, for example, in libraries, trade organizations, the Central Bureau of Statistics, and government offices.

Some considerations in finding secondary data:
1) The type of data must be in accordance with the predetermined research objectives.
2) Secondary Data needed not to emphasize on the number but on the quality and suitability, therefore must be selective and careful in choosing and using it.
3) Secondary Data is usually used as supporting primary data, therefore both are used as sources of information to solve research problems.

3. Results and Discussion
a. Discussion of the problem
Based on the results of the study have been known constraints in the role of fire detection equipment in the MV. Soemantri Brodjonegoro. For this reason, the author provides a discussion of problems both in crew knowledge and maintenance of fire detection equipment on MV. Soemantri Brodjonegoro.
1) Increase crew knowledge about fire detection equipment
   A knowledge and discipline in being responsible for fire detection equipment determines the work of the tool properly. Discipline in being responsible for the tool can be interpreted as discipline in the maintenance, checking and testing of the tool. In addition, the following factors should also be considered:
   a) Improve familiarization of new crew in MV. Soemantri Brodjonegoro
      The main ship party officers must hold Familiarization with the new crew on board. An introduction to everything on board as well as its locations. Especially the location of the fire detection equipment and the room control panel. This must be done because familiarization can increase crew knowledge. Familiarization of fire detection equipment is one of the main things because if there is a fire hazard, the crew can immediately find out where the location of the fire hazard is. In addition, it can also quickly minimize the occurrence of fire hazards. The ship party must allocate time for the implementation of familiarization to the new crew or at the time of work carried out familiarization to the new crew. All of these things are very supportive for the safety of shipping both for the crew and the ship and its cargo.
   b) Improve the implementation of safety meetings at MV. Soemantri Brodjonegoro
Safety meeting is one of the things that support the safety of shipping. In the safety meeting will be discussed sharing the problems that exist on the ship, especially about the knowledge of fire detection equipment on board. With safety meeting we will add knowledge directly or indirectly. Safety meetings should be held once a month and the assumption that the entire crew understands and understands must be eliminated. In the safety meeting is always discussed about fire detection equipment because this tool is a tool to detect fire hazards and one of the tools to support the safety of shipping both for the crew and the ship and its cargo.

Figure 1. Implementation of Safety meeting in MV. Soemantri Brodjonegoro

It can be seen that the role of fire detection equipment is very supportive in the Prevention of fire hazards, the role of fire detection equipment which includes preventing fire hazards from expanding and also as a means of supporting safety against fire hazards quickly. The above can be discussed as follows:

1). Minimize the occurrence of fire hazards
Fire detection equipment is a tool that can provide an early sign of a fire this means that the fire hazard can be monitored by the tool and then provide a signal or sign stating that there is a fire hazard. Thus the fire hazard can be controlled so as not to expand and extinguishing can be done quickly and systematically, because fire detection equipment in addition to can notify the existence of fire hazards that occur can also be to find out where the location of the fire hazard. This is in accordance with the results of interviews conducted with the crew of the ship about how the flow of fire hazard prevention so that fires do not spread. The flow of fire detection equipment starts from the acceptance of smoke and heat and then goes to the fire panel where the location of the fire can be known and to the Fire alarm that can provide a danger sign to the crew or passengers on the ship and Prevention so as not to spread the fire hazard can be achieved with the help of the fire detection tool, as shown below which is how a tool can give a sign of fire danger which means it can also prevent fire hazards from expanding. The flow drawing of the fire detection device is as follows:
2). Fire detection equipment can support safety

Fire detection equipment can provide a sign of impending fire danger on board with we hear the sound of our fire alarm there is little time to act in order to rescue. There are three types of rescue here, namely saving the ship, saving yourself and also saving the cargo. We can know that with early warning of danger we can be better prepared to save the ship, cargo and ourselves. Of the three forms of rescue the author can describe the rescue as follows:

a). Save the ship

We know that a ship has a very high selling price and therefore all forms of rescue must be done to save the ship if possible. Including rescue ships against fire hazards. Therefore, the role of fire detection equipment in saving the ship is very big role.

b). Salvage cargo

With the early warning of fire danger we can immediately take action where the fire was extinguished. For example, in the location of the fire and there is a load such as cargo or goods then we can move the goods away from the location of the fire while we extinguish the fire. If the extinguishing is successful then the goods that were moved did not burn, this also means that the role of fire detection equipment is very supportive in safety, including the safety of the ship, and cargo.

c). Saving human souls

The role of fire detection equipment in addition to supporting the safety of the ship and the cargo of the device can also save human lives. This can happen when a fire detection device can receive smoke in a crew cabin, and the crew is sleeping with a fire alarm that sounds then the crew is awakened from sleep and extinguishing action can be done.

2. Improve maintenance of onboard fire detection equipment

Maintenance of fire detection equipment aims to ensure that the fire detection
equipment is ready for Operation. Treatment is carried out by means of the operation of the fire control panel, physical examination, ended by testing the fire detection system. The operation is performed by trying to activate and deactivate the fire detection system from the fire control panel. Physical examination is carried out by checking the connection and cleaning the dirt or dust attached to the fire control panel, after which it is continued by measuring the operating voltage on the detector.

A careful maintenance of all fire detectors is important so that the detector can operate continuously. Defective testing should be carried out regularly. From time to time dust or dirt and other foreign materials can accumulate in a detector, which can lead to a reduction in its sensitivity. Detectors that are dusty or dirty can also cause an alarm sound that we do not want.

To avoid this, it is necessary to note:

a. Operation and maintenance of fire detection systems in working condition, except during repair or maintenance work
b. Periodic cleaning of cable connections and cleaning of detectors as necessary to assure their operation
c. Testing and setting up fire detection systems to ensure proper operation and maintain reliability

In addition to the tool factor itself, the human factor must also be considered, namely in the form of knowledge and discipline in work or responsibility. And also it should be noted the following:

a. Improve coordination between the ship and the company

One part of the maintenance of fire detection equipment is coordination between the ship with a good company. The ship party must properly respond and carry out orders or orders from the company, especially about the maintenance of fire detection equipment on board the ship. Likewise with companies that must carefully look at and control the maintenance of fire detection equipment because with very good care, fire detection equipment will be able to function properly, namely as a tool to detect fire hazards on board. And also this fire detection tool can support safety for the crew, ship and cargo on a voyage.

b. Increasing the responsibility of ship officers

Ship officers must routinely check fire detection equipment because it is their responsibility. So that the ship's officers must be able to divide the time so that in carrying out the work on the ship can be done well.

Several kinds of ways that the activeness of ship officers in maintenance, checking and testing can run well, namely by:

1). Conduct inspection or surprise visit to the truth of the report that has been made by the officer in charge
2). The captain controls all reports and does not easily believe it
3). Choose officers who are really responsible for their duties
4). Assertiveness of leadership in coordinating his men to be more responsible for their duties

5). Provide bonuses to the crew if the task can be carried out properly, this can increase the sense of responsibility including the maintenance of fire detection equipment.

This step is expected so that the responsibility of the equipment, such as maintenance, checking and testing can run well to support the role of fire detection equipment on board.

4. Closing

a. Conclusion

1) Lack of knowledge of the ship's crew about fire detection equipment on the MV. Soemantri Brodjonegoro can be dangerous for the crew of the ship, ship and cargo, this is due to:
   a) Lack of new crew familiarization in MV. Soemantri Brodjonegoro due to the condition of the ship is busy and lack of maximum familiarization of the old crew to the new crew
   b) Lack of implementation of safety meeting in MV. Soemantri Brodjonegoro because of busy work on the ship

2) Lack of maintenance of fire detection equipment on the MV. Soemantri Brodjonegoro can cause poor functioning of fire detection equipment properly, this is because:
   a) Lack of coordination on the part of the ship with the company on the maintenance of fire detection equipment on board
   b) Lack of shipboard officer responsibility in fire detection equipment maintenance routine

b. Suggestion

As an improvement in the future, the authors suggest some things that are expected in the role of fire detection equipment can run effectively and efficiently.

1) Improve the knowledge of the ship's crew about fire detection equipment, namely by:
   a) Improve the familiarization of the new crew by introducing as much as possible everything on the ship, especially fire detection equipment
   b) Improve the implementation of safety meetings at MV. Soemantri Brodjonegoro regularly every once a month

2) Improve the maintenance of fire detection equipment as possible by:
   a) Improve coordination between the ship and the company well so that the maintenance of fire detection equipment can be carried out
   b) Increase the responsibility of ship officers to fire detection equipment by checking regularly.

5. References

Teenagers


