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Safety Precaution in Industrial Plant

Abstract

There are many industries in the world today. These industries have operations that involve the use of machines, tools or handling of various chemicals for various reasons. These operations might pose risks to the health of the individuals, especially those in direct contact with these tools, machines or chemicals. Therefore, it is important for the industrial plants to establish proper precautionary measures in their operational functions to the safety of the individuals carrying out the risk functions and operations in the industrial plants. These functions and safety measures should be elaborated to enhance the efficiency of the same.

Statement of Purpose

The aim of this research is to identify various safety precaution measures in industrial plants. It studies the significance of adopting these precautionary measures on both the workers and the industry itself. The significance of having the safety precautionary measures has to be flexible and applicable in all the industrial plants. This research also identifies the effects of failing to adopt measures of precaution and safety in the industrial plant. The rationale for this research base on the fact that industrial plants can have damaging effects if there are inappropriate safety measures in operation

Methodology and Findings

This study employed a qualitative approach to establishing different grounds regarding the issue of safety in the industrial plants. It involved searching relevant literary materials on the same issue by identifying the relationship

in the literary materials. This research employed this methodology by basing its purpose on the evidences of safety precaution and safety in industrial plants. That is, the already existing evidences on the safety issue in industrial plants provided the ground for the adoption of discussion of this research. This research also based on a few case studies to deduce examples of the safety measures.

The research found that wearing of protective gear, following instructions and use of signs in the industrial plants were the primal safety measures adopted by most industrial plants. The research found out that the significance of having safety measures in the industrial plant is that it reduced the loss of lives and injuries, hence promoting economic growth and success of the industry. On the other hand, failure to adopt safety measures would lead to increase in deaths and injuries at the industrial plant, hence derailing economic development.

Introduction

Industrial safety is a major issue in every industrial setting in the world today. The industrial plants have many machines, which are prone to failure if proper care is not taken. Most of the industrial plants have many workers who because of their numbers, have no appropriate measures of protecting themselves in case of failure in the system of the plants (Jorgensen, Sven Erik, 1934- Fath, Brian D, 2008). In most cases, the management of an industrial plant and its leadership is often reluctant to ensure that the workers have appropriate precautionary measures because of the expenses. Such, approaches by the organizations often lead to problems in case of injuries or deaths caused by the failure in the industrial plants (Kaiser &

Schindler, 1999).

Adopting safety measures in industrial plants is an important element. It promotes efficiency in the operations of the machinery and other aspects of the organization because there is constant check-up of the same to ensure that they function accordingly (Lansburgh & American Academy of Political and Social Science, 2011). The efficiency and effectiveness of the workers also increase because the safety measures enable them to be more careful when handling equipment. It benefits the industrial plant economically because of the increased effectiveness, efficiency and performance of the plant, leading to increased performance (Lisboa, 2007).

Failure to observe appropriate measures of safety in the industrial plant has consequences on both the workers and the industrial plant itself. First, the health of the workers is at risk. The exposure to noise from the industrial plant can be damaging to their ears (Macdonald, 2004). On the other hand, they expose themselves to serious health issues by getting in contact with a variety of chemicals without the required protection. Protection and safety precaution is paramount because it instills discipline among individuals (PASWAN & MUKHOPADHYAY, 2011). They are also at risk of death or injuries, or both. On the part of the industry itself, the failure to observe the required measures of safety precaution in the organization can lead to lawsuits by the informed workers or other legal bodies (Taylor, Iain E. P, 2007). These lawsuits on the endangering of the life of the workers can be costly to the organization. Moreover, dealing with the deaths and injuries of the employees can be challenging (Varonen & Mattila, 2000).

Literature Review

Recent research by the Health and Safety Executive (HSE) showed that 50% of the major hazards in Europe of the loss of containment occurrences arising from the failures in technical plants were caused by ageing mechanisms in the plant such as fatigue, corrosion and erosion. This research also represented 30% of all the reported major accidents events and 50% of the technical control and integrity, and instrumentation related occurrences (Horrocks et al.,). From the research, the failures in the technical plant led to the loss of eleven lives, 183 injuries and more than 170million € in economic loss. Therefore, this research bases on these losses to establish its purpose.

Dipak Kumar Dash in his article, the “ Industrial Hazards, and Safety Measures” identifies various aspects of industrial safety. First, he talks suggests that industrial safety is a process of protecting the workers from the dangers of various industrial accidents (Dash, n. d.). The treatment of then accidents exists in three distinct categories including the medical assistance, personality readjustment, and operating defects. He suggests that two approaches of reducing accidents include the actuarial approach and the safety education campaign.

A publication by the International Labor Organization on managing major accidents reveals important information concerning the issue of industrial safety. The publication suggests that controlling the causes of the major industrial accidents is through establishment of a works management (International Labor Office, 1991). The management should engineer appropriate safety measures by promoting effective plant operation,

overseeing regular plant, maintenance and exercising management of safety on site.

Discussion

Based on the findings, the required measures of promoting the industrial plant safety occur in three phases including detection of a potential risk or accident, addressing the accident and evaluating the accident for future occurrence (Handley, William, 2003). Accident detection involves options such as identifying faults in the industrial plant by looking for the faulty machinery or identifying the reduction in performance of the plant or the machine (Deshmukh, L. M., author, 2005). Addressing the accident or risk involves effective management options including repairing the faulty machinery, ensuring that the workers have protective gear during working operations, ensuring that the workers follow the required precautionary procedures and placing signs throughout the plant to act as a reminder to the safety precaution (Eason, 2002). The third phase, which is an evaluation, involves examining the suitability of the precautionary measures by identifying possible consequences of not having the measure. The evaluation phase then places concrete measures of preventing the same and other anticipated accidents in the industrial plant (Harper & Koehn, 2008).

Conclusion

This research sought to identify the significance of having safety measures in industrial plants, various options of promoting industrial safety and the possible effects of not having safety measures in an industrial setting (Blake, Roland P, 2005). It is important to adopt safety measures in the industrial

setting because they reduce the risks of injuries from failure of the plant. Injuries can be severe and might even lead to death. Safety also measures save the industry from lawsuits against the endangering of lives of the workers (Asfahl, 2006). The failure to adopt safety measures reduces efficiency in the industrial plant, leading to a reduced production and a considerable decrease in their economic output of the industrial organization.

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