

**PORT HUMAN RESOURCES PERFORMANCE
IMPROVEMENT THROUGH OCCUPATIONAL HEALTH AND SAFETY
TRAINING**

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ABSTRACT: It has been widely recognized that ports are challenging places to work due to the existence of wide variety of hazards and risks arising from several multiple types of operation activities which are always kept in progress regardless of time and weather. The Port performance improvement greatly depends on the safe behaviors of port workers and employees and their understanding and awareness of the risks and hazards involved in their work. To develop such qualified human resources that are competent to work in such hazardous workplaces and complied with the port industry requirements and needs, a sufficient and job-related training on the Occupational health and safety must be considered in order to ensure the protection of port workers against occupational accidents and diseases attached to their work, with appropriate focus on the working conditions, safe work practices, personal safety and welfare of the workforce. This type of training is considered a basic and vital Activity area of human resources development. This paper aims to demonstrate the positive impact and importance of the risk management, safety culture, quality assurance, behavioral safety systems and occupational health and safety programs on port human resources performance improvement.

Keywords: Port, Human Resources, training, occupational, safety, Health, performance.

2-Introduction:

The international port industry dates from the earliest days of civilization. Since that time it has been developed over the years, including the introduction of increasingly sophisticated cargo-handling equipment with greatly increased capacity and reach, some changes have introduced new hazards, and port work is still considered as an occupation with very high accident rates, fortunately, systems for identifying and managing risks have also been developed and the need for investment in the training and skills of port workers has been increasingly recognized. A number of countries have included the training and certification of port workers in their national certification process.

Although the process of selecting port personnel normally aims to recruit the most competent persons who have the proper qualification and skills required for their jobs according to related requirements and laws, they are unlikely to remain competent for the following years if they are not continuously updated, as changes take place rapidly in technology, infrastructure, procedures, competition, and interfaces with transport industry. Also Port workers often have no idea of the dangerous nature of the cargo due to language problems or limited safety culture. The condition of the cargo is also important as leaking drums or split bags can be very hazardous for the handlers. Other risks include falls, cuts, back and other musculoskeletal problems as well as collisions with fast moving vehicles such as fork-lift trucks or delivery trucks.

This is where training comes in, not only to keep the individuals competent but also to improve their performance and increase their productivity by being well informed about the various hazards in their workplace and the possible solutions for controlling those hazards.

In ports industry across the world, emphasize has been placed on the safe behaviors of port workers and their awareness and understanding of the risks and hazards involved in their work, therefore new objective of training is produced and no longer is focused only on the increasing of productivity but also on the protection of port workers against occupational accidents and diseases attached to their work. Successful occupational health and safety practice requires the collaboration and participation of both employers and workers in health and safety programs, and involves the consideration of issues relating to occupational medicine, industrial hygiene, toxicology, education, engineering safety, ergonomics, psychology, etc. Overall, efforts in occupational health and safety must aim to prevent industrial accidents and diseases, and at the same time recognize the connection between worker health and safety, the workplace, and the environment outside the workplace.

International instruments for Occupational Safety and Health in ports has been developed through several standards either by international organizations such as International Labor Organization or national administration of individual

countries, which include mandatory requirements of training that will have a direct positive influence on the port performance, such mandatory requirements should be embodied in national certification standards covering safety, health and working practices.

3- Labor port accidents and rang of occupational hazards in Ports

Accidents and work-related injuries affected by behavior of the worker and even his state of mental and physical factor itself, not the equipment work or physical conditions and climate of the work environment , is selected the most influential in the accident or not , and has been proven in many studies in this area that the lack of effective legislation , industrial security , mostly due to the concentration of such legislation on worker protection from the dangers of physical equipment , ignoring the behavior of the same factor with the greatest impact in most cases the occurrence of the incident or not. And have targeted those studies and research to try to determine whether the incidents and work-related injuries occur because of improper actions by the worker or because of the circumstances and the working environment is safe and suitable or because of considerations together at the same time .

In light of the demonstrated results of analyzes and studies in this regard, the occurrence of accidents at work have in many cases because of the wrong act of the same factor and lack of passion , it comes that worker Adapted wrong actions like putting himself into extreme heat or contact with an electric current or harmful substances , or not passion and attention during the performance of his work , leading to a fall or collision or fall of the things he or jams between things , and so on , and for other possible causes for exposing to Working incident there no procedures for the garbage disposal which leads to explosions or fires that might occur due to non-availability of environment and safe working conditions which makes a very high impact.

There are an unlimited number of hazards that may exist in almost any Port. There are obvious unsafe working conditions, such as unguarded machinery, slippery floors or inadequate fire precautions, but there are also a number of categories of hazards that are dangerous but may not be obvious such as:

3-1 Chemical hazards, arising from liquids, solids, dusts, fumes, vapors and gases; Port workers may be exposed to chemical hazards especially if their work entails direct contact with fuels or chemicals, or depending on the nature of bulk and packaged products transferred in port activities. Work with fuels may present a risk of exposure to volatile organic compounds (VOC) via inhalation or skin contact during normal use or in the case of spills. Fuels, flammable liquid cargo,

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and flammable dust may also present a risk of fire and explosions. Chemicals include specifications such as self-hazardous acids and alkalis and oxidizing materials, and chemicals are highly toxic to various organs of the body, which includes a large number of chemicals that lead exposure to high concentrations of them to the immediate deaths of the workers.

3-2 Physical hazards, the main sources of physical hazards at ports are associated with cargo handling and use of associated machinery and vehicles. Such as noise, vibration, rotating and moving equipments, manual handling, electrical, industrial vehicle driving and site traffic. Physical factors sources include risk relating to technological center-aligned to the work environment when they contain a source of self- gravity resulting from defects in the design or the lack of specifications such as machinery, equipment, ladders and work platforms. These physical factors lead to some hazardous work environment in addition to its effects in causing occupational diseases or health problems among the workers such as atmospheric pressure, unsatisfactory lighting, working environment temperature and radiation.

3-3 Confined space hazards, as in any industry sector, confined space hazards can be potentially fatal. The potential for accidents among port workers may vary among port facilities and activities, and may include ship cargo holds, silos, sewage tanks, and water tanks.

3-4 Biological hazards, such as bacteria, viruses, infectious waste and infestations; Biological agents represent potential for illness or injury due to single acute exposure or chronic repetitive exposure.

3-5 Dangerous Goods Handling hazards, Port workers dealing with dangerous goods must know exactly what hazards these dangerous goods pose to the user and understand the basic concepts of transporting, storing and handling dangerous goods appropriately in order to reduce the risks related to these activities.

3-6 Psychological hazards resulting from stress and strain, this kind of hazard may affect health, well being, and productivity of port workers.

3-7 Hazards associated with the non-application of ergonomic principles, for example badly designed machinery, mechanical devices and tools used by workers, improper seating and workstation design, or poorly designed work practices.

Most Port workers are exposed to a combination of these hazards at their work. For example, it is not difficult to imagine a workplace where you are exposed to chemicals, unguarded and noisy machines, hot temperatures, slippery floors, etc. all at the same time. Workers do not often create hazards by

themselves, but in many cases the hazards are built into the workplace. The Port Authority responsibility is to implement the occupational health and safety principles in order to ensure that work is made safer by modifying the workplace and any unsafe work processes. This means that the solution is to remove the hazards, not to try to get workers adapted to unsafe conditions. Requiring workers to wear protective clothing which may not be suited or designed for the climate of their region is an example of forcing workers to try to adapt themselves to unsafe conditions, which is also shifting the responsibility from management to the worker. It is important for port management to maintain this condition, because many employers blame workers when there is an accident, claiming that the workers were careless. This attitude implies that work can be made safer if workers change their behavior or if employers only hire workers who never make mistakes. Everyone makes mistakes, it is the human nature, but workers should not pay for mistakes with their lives. Accidents do not stop simply by making workers more safety conscious. Safety awareness may help but it does not remove unsafe work processes or conditions. The most effective accident and disease prevention begins when work processes are still in the design stage, when safe conditions can be built into the work process.

4- The International Labor Organization role in developing OSH standards

The ILO has developed the following Occupational Safety and Health-related conventions, recommendations, guidelines and manuals, which all were supported by respective training materials to help countries understand and properly implement the requirements concerning "Port work" which the ILO named it "Dock Work":

4-1 Occupational Safety and Health (Dock Work) Convention (No. 152), 1979

This Convention includes a number of mandatory requirements regarding training delivered to port workers to ensure they receive the necessary information, training and supervision that will ensure their protection against risks of accident or injury to health arising out of their work.

4-2 Occupational Safety and Health (Dock Work) Recommendation (No.160), 1979

This Recommendation includes a provision that states the following: "With a view to preventing occupational accidents and diseases, workers should be given adequate instruction or training in safe working procedures, occupational hygiene and, where necessary, first-aid procedures and the safe operation of cargo-handling appliances."

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4-3 ILO Code of Practice on Safety and Health in Ports (2005)

This Code of Practice has replaced both the second edition (1977) of the ILO Code of Practice on Safety and Health in Dock Work, and the ILO Guide to Safety and Health in Dock Work (1976). The 1977 Code and the 1976 Guide were adopted prior to the adoption of the Occupational Safety and Health (Dock Work) Convention (No. 152), 1979 and the Occupational Safety and Health (Dock Work) Recommendation (No. 160), 1979. In addition, technical developments have outpaced the advice in these two documents. It is hoped that this revised Code will help raising the profile of safety and health issues in ports worldwide, and encourage more countries to ratify Convention No. 152 or otherwise implement its provisions. The provisions in this Code cover all aspects of port work where goods or passengers are loaded or unloaded to or from ships and includes work incidental to such loading or unloading activities in the port area. It is not limited to international trade and is equally applicable to domestic operations, including those on inland waterways. The final part of the Code gives brief guidance on matters that are not directly covered by Convention No. 152 but are considered essential to the safe and proper operation of a port. Although some working practices have been replaced by newer methods in many ports, older conventional methods continue to be used in other ports and advice on such methods has been retained in the revised Code. A very wide range of different cargo handling activities is carried out in ports. It is not practical to cover all of them in detail in one volume. However, the Code is intended to cover the most common activities. Where appropriate, reference is made to other international publications.

4-4 ILO Port Safety and Health Audit Manual (2005)

Being aware that there is a need for improvement in the application of the safety and health standards adopted by ILO, the International Labor Office has developed a Port Safety and Health Audit Manual to assist regulatory and port authorities, port managements, berth/terminal operators and other parties involved in port operations in assessing their compliance with ILO standards as well as their own policies and national requirements.

4-5 Training on Safety and Health in Ports

The ILO in collaboration with the German Technical Cooperation Agency (GTZ) has developed a training package titled "Port Safety and Health Management Guide" comprising four modules, which are outlined as follow:

4-5-1 (Module 1)

Introduction to Safety and Health Management in Ports

4-5-1.1 Maritime transport and port developments

4-5-1.2 Occupational safety and health management developments

4-5-1.3 Facts and figures on occupational safety and health

4-5-1.4 Port work safety and health issues

4-5-2 (Module 2)

ILO Code of Practice on Safety and Health in Ports

4-5-2.1 Key features of the International Labor Organization

4-5-2.2 ILO (OSH) standards & codes of practice

4-5-2.3 ILO standards and codes of practice related to port work

4-5-2.4 ILO Code of Practice on Safety and Health in Ports

4-5-3 (Module 3)

Occupational Safety and Health Management

4-5-3.1 The ILO's global strategy on occupational safety and health

4-5-3.2 Occupational safety and health management systems

4-5-3.3 Guidance for implementing an OSH management system in ports

4-5-4 (Module 4)

Toolkit for Occupational Safety and Health Management

4-5-4.1 Initial review

4-5-4.2 Risk assessment

4-5-4.3 The OSH management system audit

4-5-4.4 Safety passport training schemes

4-5-5 The Port Safety & Health Management Guide has been developed with the aim to contribute to the achievement of the following objectives:

4-5-5-1 To strengthen existing or establish adequate systems for sustainable occupational safety and health (OSH) management in ports in accordance with recognized principles, guidelines and specifications such as the ILO Guide on Occupational Safety and Health Management (ILO-OSH 2001).

4-5-5-2 To provide tools, procedures, strategic options and systems required for the implementation and application of the ILO Code of Practice on Safety and Health in Ports (2005) at international, regional, national and port level.

4-5-5-3 To complement existing guidance on OSH management in ports and to facilitate compliance with the requirements of international and national legislation, regulations, codes of practice, conventions and directives regarding OSH management in ports.

4-5-5-4 To place OSH management in ports into a wider context of maritime transport and international logistics and concepts such as social

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responsibility, responsible care, decent and safe work and sustainable development.

4-5-5-5 To provide support and reference materials, model regulations and standards for presentations, workshops, seminars, courses and passport training schemes on safety and health issues in the port industry.

5-The Importance of Implementing OHSAS 18001:2007.

OH&S management system includes the principles, processes and techniques that are used for the assessment of risk. It is principally recognized a set of rules which any management structure implement with the aim of managing health and safety issues and associated hazards are within it. It is organized internationally against any management structure compliance that can be assessed and certified. It is essentially planned and documented to approach health and safety. It provides you with a framework to identify the health and safety legislation that applies to the activities and identified hazards.

The management should insure that adequate resources are available for the maintenance of a safe work place including equipment, human resources, expertise and training. Resources can be considered adequate if they are sufficient to carry out OH&S programmes and activities, including performance measurement and monitoring. Manager's should provide visible demonstration of their commitment to OH&S. means of demonstration can include visiting and inspecting sites, participating in accident investigation and provide resources in the context of corrective actions, also attendance at OH&S meetings and issuing messages of support.

The fundamental principle of a health and safety program is to reduce injury and disease upon employees, it is very crucial in a work place. So that this system promotes the risk management as a decision of making tool in all work being carried out especially non routine work. The importance of risk management comes from the early evaluation of any work even before starting that work by identifying the hazards of that work or job then calculates the risk of these hazards by the probability of occurrence and the severity of consequences. So, if the calculated risk is acceptable the decision here to do that job but if the calculated risk is not accepted there is a set of control measures must be applied to reduce the risk to the acceptable limits. Measures for the management of risk should reflect the principle of the elimination of risk where practicable, followed in turn by risk reduction with the adoption of PPE as a last resort.

Risk management system varies greatly across industries, ranging from simple assessment to complex quantitative analyses with extensive documentation. Risk management system should be carried out as a proactive measures rather than the reactive one to implement control measures before any changes are introduced while doing the work.

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By applying of OH&S system the management structure will have emergency preparedness and response procedures. These procedures should assess potential accident and emergency response needs, plans to meet them, develop procedures and processes to be able to face and deal with them in most professional way, test its planed responses and seek to improve the effectiveness of its response. The management structure should develop an emergency plans, identify and provide appropriate emergency equipment and regularly test its response capability through practice drills. This drills should aim to test the effectiveness of the most critical part of the emergency plans and to test the completeness of the emergency planning process, this drill's practicing should be as realistic as possible to be effective. This can require a full scale incident simulation to be conducted. The results of emergencies and drill's practicing should be evaluated and changeable those are identified as being necessary should be implemented. The involvement of any external agencies in emergency planning and response should be clearly documented. These agencies should be advised as the possible circumstances of their involvement and provided with such information as they required facilitating their involvement in response activities.

By OH&S system the management structure should have effective procedures for reporting and investigating incidents and nonconformities. The main purpose of those procedures is to prevent further occurrence of the situation by identifying and dealing with the root causes. The procedures should enable the detection, analyses and elimination of potential causes of nonconformities. That procedure has to ensure that incident and nonconformities are investigated and corrective and \or preventive actions are initiated. The progress in the completion of corrective and preventive action should be monitored and the effectiveness of such actions reviewed.

As the safety culture is the development stage of the management structure in health and safety management at a particular time so, the earlier application of OH&S system will help in building up a safe working environment which leads to achieve the financial and performance targets of the management structure. It is important to note that an organization's safety management system cannot consist of a set of policies and procedures on a bookshelf. The safety management system is the manner in which safety is handled in the workplace and how those policies and procedures are implemented into the workplace. A good safety culture might both reflect and be promoted by at least four factors. These four factors include senior management commitment to safety, shared care and concern for hazards and solicitude for their impacts on people, realistic and flexible norms and rules about hazards and continual reflection upon practice through monitoring and analysis and feedback systems. It is important to remember that a management structure culture develops over a period of time and cannot be created instantly. The safety culture of a management structure develops as a result of history, work

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environment, the workforce, health and safety practices and management leadership. Management provides safety leadership and takes responsibility for creating and promoting a safety culture. Management demonstrates commitment to safety by introducing and enforcing compliance with OH&S policies and procedures. Management also encourages and promotes safety by evaluating the safety performance of all employees and offering clear and consistent rewards for contributing to workplace safety. Management accepts full responsibility for providing safe equipment and a safe workplace at all times.

6- Conclusion

Workers in the Port Industry can be faced with a variety of hazards in their workplace, which can be found in several forms, including chemical, physical, biological, psychological, non-application of ergonomic principles, etc. Because of that and the overall lack of attention given to health and safety by many employers, work-related accidents and diseases continue to be serious problems in all parts of the world. Therefore, special attention must be placed on preparing the port personnel to deal with such hazards and continuously improve the workers capability of controlling such hazards in their workplace

Management commitment to health and safety and strong worker participation are two essential elements of any successful workplace health and safety program. The most effective accident and disease prevention begins when work processes are still in the design stage.

To achieve and maintain the proper performance and productivity of the port personnel, a basic occupational training program and specialty courses should be provided, as needed, to ensure that workers are oriented to the specific hazards of individual work assignments. Such training should generally be addressing management, supervisors, workers, and occasional visitors to areas of risks and hazards and safe work practice by implementing International and national instruments, standards and guiding manuals provided by specialists concerning this mater.

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