Study regarding the Steps of Occupational Health in Safety Management System

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Abstract: - In this paper are presented the essential elements of the risks evaluation on health and occupation security and case study regarding the implementation procedure of health and occupational security management system at workplaces. Evaluation results are presented in the paper using the method of formalized instruments. Schedules have been identified for assessment of job descriptions and proposed measures for the factors to which the risk exceeds the part of acceptability for the workplace. Also, it was identified a hierarchical order of preventive measures.

Key-Words: - quality, risk factors, risk management, assessment, occupational health and security management system.

1 Introduction

Health & Safety law requires employers to look after the health, safety and welfare of their employees. They must also consider others who could be affected by their work, for example clients, contractors and visitors to their premises.

Employers also have a duty to identify, assess and control safety risks and must write down the significant findings of their risk assessment if they have five or more employees [1].

Providing a safe working environment need not be a difficult or time-consuming exercise, particularly if you are in a low-risk environment. The most important thing is to make safety part of your business culture, driven by a commitment from the top of the organization.

Benefits of working safely include fewer accidents, reduced insurance premiums, a better-motivated workforce and peace of mind [2].

Occupational Health and Safety Management System is a simple and effective way for companies to manage health and safety.

The management representative is responsible for ensuring that the quality policy is understood at all levels at the company. The quality policy is reviewed when:

- The effectiveness of the quality management system being reviewed at management review meetings;
- Development of activities;
- New goals and objectives are being set.

Each OMRON site in Japan has set up its own health and safety management committee in accordance with the Occupational Health and Safety Law. The committee formulates a yearly plan and promotes activities to enhance worksite safety and health. In fiscal 2007, no occupational accidents resulting in loss of workdays occurred at OMRON. This was mainly attributable to OMRON's commitment to promoting employee health and safety in the workplace, as well as OMRON's production lines, which employ relatively few dangerous or hazardous processes. A statistics of occupational accident frequency rate in Japan is presented in figure 1 [3].

How we meet each of the OHSAS 18001 requirements, and to what extent, depends on many factors, including: the size of your organization, the location of your organization, the nature of your organization’s culture, the nature of your organization’s activities, the nature of your organization’s legal obligations, the nature of your organization’s OH&S risks.

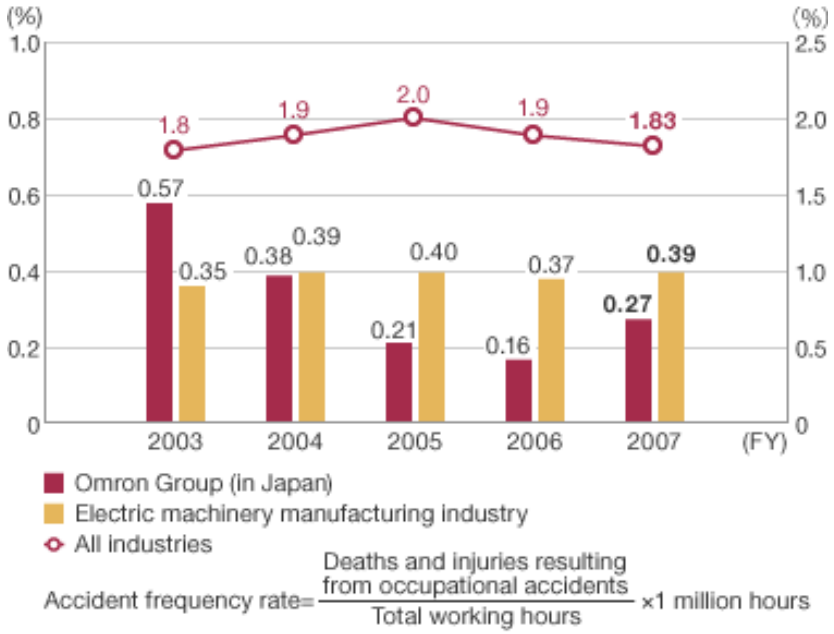

Fig. 1 Occupational accident frequency rate

2 Occupational health and safety management system (OH&S)

Health & Safety law requires employers to look after the health, safety and welfare of their employees. They must also consider others who could be affected by their work, for example clients, contractors and visitors to their premises.

OHSAS 18001:2007 was designed to be compatible with ISO 9001 and ISO 14001:2004. This will be helpful if we want to design, implement and operate an integrated quality, environmental and occupational Health and Safety Management System. Implementing an OHSAS 18001 management system will benefit in:

- reducing risks;
- giving competitive advantages;
- helping companies stay in compliance with legal requirements;
- improving overall performance.

Development and implementation of occupational health and safety management system in an organization is justified by the following considerations:

- a desire to create a unified framework for OH&S management activities;
- implementing the principles and methods of improving the performance of OH&S;
- protecting employees by reducing / eliminating the dangers of accidents and professional illness;
- limiting the civil and criminal liability by satisfying the legal regulations on OH&S and other requirements applicable;
- raising staff consciousness and responsibility towards the health and safety;
- increase customer confidence;
- improving management practices;
- improving the image of the organization, by satisfying the requirements relating to OH&S.

The steps of occupational health and safety management system are illustrated in the following figure 2. Implementing the health and safety management system we should:

- establish roles and responsibilities within the system.
- develop procedures for consultation and communication of OHS information to employees and other interested parties.
- document your processes and develop a system of document and data control.
- apply an operational control system.
- establish emergency plans and procedures.

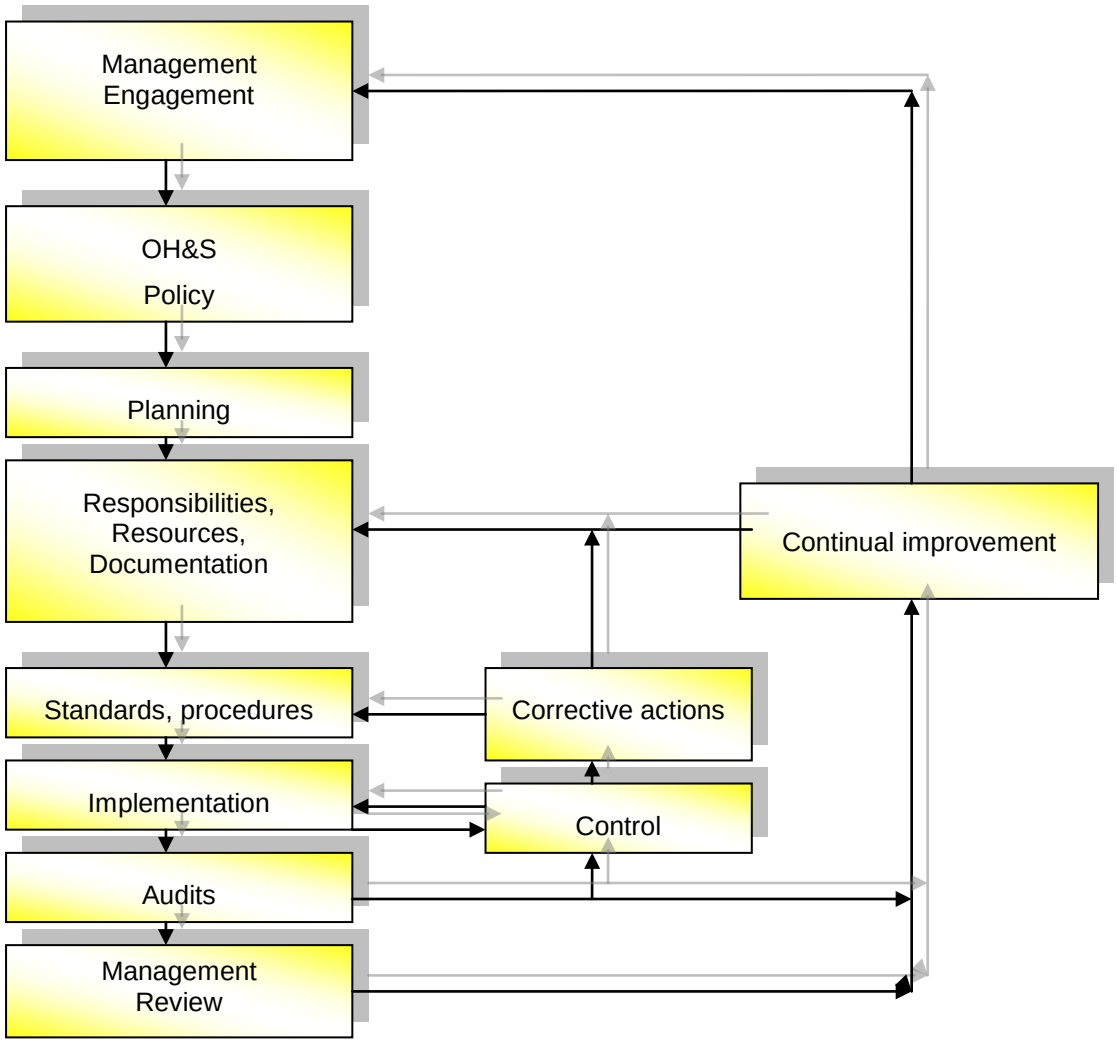

Fig.2 The steps of occupational health and safety management system

3 Case study- Risks Assessment of Accidents and Occupational Health at Workplaces

The process of risk management in order to asses the risks of accidents and occupational health at Workplaces includes:

The case study consists of risks assessment of accidents and occupational health at workplaces. Overall level of risk calculated for workplace is:

$$Nrg5 = \frac{\sum_{i=1}^{35} r_i R_i}{\sum_{i=1}^{35} r_i} = \frac{1(7\times 7)+1(5\times 5)+4(4x4)+24(3x3)+5(2x2)}{1x7+1x5+4x4+24x3+5x2} = \frac{374}{110} = 3.40$$

This value falls within the category of jobs with low level of risk to the environment. The result is specified by “Assessment sheet”, which is observed that the total of 35 risk factors identified, only 6 above, as part of the risk, the value of 3, one falling into the category of factors maximum likelihood, one

falling into the category of high risk factors and 4 others falling into the category of medium risk factors.

The 6 risk factors that are unacceptable are:

- F12 (the partial risk - level 7) by the direct shock: the unlinking cables; achieve accidental elements remaining under tension, the accidental breaking of conductors LEA on the same route, to manoeuvre the station and wrong positions;
- F13 (partial risk - level 5) electric current:: the electric shock by indirect; emergence voltage step;
- F17 (the partial risk - level 4) lowered the air temperature in cold season;
- F24 (the partial risk - level 4) dynamic effort: work manual digging, clearing, handling and manual cable positions and forced to work in the vicious landfill;
- F31 (the partial risk - level 4) travel, stops in dangerous areas: the ways of auto access; the task of lifting;
- F35 (partial risk - level 4) of non-protective equipment (personal protective equipment).

To reduce or eliminate the 6 risk factors (which are unacceptable in the field), are necessary measures presented in the generic "sheet of proposed measures" to workplace. As regards the distribution of risk factors generating sources, the situation is as follows (see figure 3):

- 42.86% of their factors of production;
- 20.00%, environmental factors of own workplace;
- 8.57% load factors own workplace;
- 28.57% own worker factors.

Analyzing the evaluation sheet it is found that 48.57% of the risk factors identified may have irreversible consequences on workers (death or invalidity).

4 Conclusions

The essential steps of a successful safety management system are:

- setting a policy - signed by those at the top management of the organization;
- assessing safety risks - anticipating what could cause problems and making sure there are proper controls in place;
- making people responsible - letting people know the crucial role they play in safety;
- informing, training and supervising staff, and co-operating with others too;
- reviewing things regularly or whenever anything changes.

The advantages of the OHSAS certification for an organization are:

- Achieving the occupational health and safety by eliminating and/or by reducing the potential causes of professional accidents and sickness.
- Ensuring the organization's control over the dangers, accidents and risks of the employees at work.
- Fulfillment of potential auction criteria.
- Reducing the work incidents and accidents that involve the organization's legal liability.
- Improvement of employees' labour conditions.
- Effective planning of the activities at the place of work.
- Increasing the employees' awareness regarding the importance of safety at work and of their own physical and mental health.
- Increasing employees' motivation and communication by participating within the process constant improvement and of reducing the risks at the place of work.
- Improvement of the relations with industry and regulatory bodies.
- Improvement of business image, marketing and competitiveness by means of a management system acknowledged through certification.

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