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SECURITY MANAGEMENT SYSTEM AND OCCUPATIONAL HEALTH IN SOUTHERN COUNTRIES

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Abstract

The study attempts to explain the occupational safety and health management system that has been practised in a few Southern countries and also to analyse a case study of Japan's management system in preventing industrial accidents. The discussion presents the issues of the industrial accidents phenomenon in the local and global degree. It is revealed that the industrial accident phenomenon has been a serious phenomenon in Malaysia due to organizational factors or the factor of the individual behaviour. The study also discovers that the effectiveness of Japan's management practice in handling industrial accident phenomenon through its 'working culture' as based on Kaizen concept of attitudes has successfully led the countries to their peak in the world. Thus, this study is significant not only to highlight the seriousness of the industrial accidents in Malaysia and other southern countries, but also to help lessen employees' burden and trauma by practicing a more systematic safety management in International Labour Organisation (ILO), as well as by upholding Japan to be the role model in the implementation of industrial safety programs, especially occupational safety and health management system (OHMS) programs.

Keywords: Safety and health, Japenese safety and health, Southern countries, ILO

Introduction

Industrial entrepreneurs play an important role in an industrial country. In an industrial area there will be groups of society in which they will supply the human power to the factories and also the services sectors. Members of this industrial society will also be the huge consumer to the products of the factories. Thus, the welfare concept for the community of the industrial society is very significant and needed to be taken into consideration by the industrial entrepreneurs in operating a particular enterprise. Seeding only from the habit of less taking care of the welfare, be it the health and safety of the employees, sometimes it can be diverted into something more serious, for example industrial accidents. This phenomenon is seldom be taken seriously by industrial entrepreneurs, the industrial society or even the government.

Industrial accidents highlight the weaknesses of the inner bureaucracy system of a particular factory or company. On the other hand, the industrial accidents also revealed how problematic the accountability of the employers towards their employees' welfare. There is a big gap between the industrial entrepreneurs and the awareness of the needs of employees' welfare, for instance to make optimum use of the ability of the company in preventing industrial accidents. They seem to concern more on the short term profit that their company can make and the involved cost in business rather than considering on having complete safety equipment for the employees besides having a safer work place. This article aimed mainly to explain on the occupational safety and health management system that has been practiced in a few Southern countries. Discussions had been discussed on the issue of the industrial accidents phenomenon in the local and global degree. A final objective is to analyse a case study of Japan's management system in preventing the industrial accidents.

In year 2001, the International Labour Organization (ILO) had provide a general guideline on the occupational safety and health management system (OHMS) as an inspiration

for all the countries around the world including the Southern cou... For most of the countries and also Asian countries, the Japan's OHMS has become the ... to the legislation of the occupational safety and health management system to theirs. In maintaining the uniformity in the OHMS in most of the Southern countries, a frame work had been produced during the ILO Convention / Japan – Asian Pacific Regional on OHMS on 22 May – 24 May 2001 at Kuala Lumpur. Further analysis on the safety industrial system among the involved countries such as Australia, New Zealand, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Singapore and Thailand had been carried out. As a result of the convention, a network research between the field of OHMS, trade unions and also health agencies had been created. Formation of research partners was officially performed by these countries; Bangladesh, Japan, Malaysia, Mongolia, Nepal, Pakistan, Philippines, Thailand and Cambodia. (Kogi, 2002)

There are four different approaches among the countries that use OHMS, such as:

i. Mandatory legislation for countries like Indonesia and Singapore.
ii. Voluntary basis system monitored by the ruling party and had the recognition in certificate form (Australia, New Zealand, China and Thailand)
iii. The policy of promoting OHMS through the legislation guidelines by OSH agency (Hong Kong, Japan, Korea)
iv. Voluntarily encouraging in adapting OHMS with absence of the government by creating a specific role model to be followed (Malaysia, India)

In the process of performing OHMS, the organizations need good training and guidance from qualified consultants. Most of the Southern countries have their own agencies or organizations which were established by the government in conducting the practice and recognition. For the multinational companies which had invested to the Southern countries, they owned the certificate of competency of OHSAS 18001 in performing OHMAS, especially the Japan's and Korean's investors. The implementation summary of OHMS in a few Southern countries is as tabulated in Table 1. A study on cause of industry accident was done scientifically by Heinrich on 75, 000 thousand employees and he had produced *Domino's Accident Theory*. For him, the accidents are caused by five factors sequentially namely, social environment, someone's error, act or state of insecurity, accident and injury. His theory approach underlay other future research on causes of industry accident. Research on large industry accident disaster has been committed by Kletz (1990) in his book entitled *Learning from Accidents in Industry.* He has analysed high accident which occurred by stress and other causes of accidents. Some industrial accidents studied were Nyprochemical factory explosion in Flixborough, England on 1st of June 1974. Due to that explosion, 28 were dead and heavy casualties and serious destruction happened to the factory and nearby area. Government has to investigate carefully and set up the Advisor Committee on Hazard to find the causes of accident and propose several measures of prevention so that similar event will not happen again.Investigation results show that there is weakness and negligence in the management of inventory examination on the chemical substance in the factory. Modification done to the factory was also not systematic and not according to the specification that was set. Weakness also had been detected in human resource management level, namely an engineer that runs the pipe installation was unqualified. According to Kletz (1990:69) "the men who constructed the pipe did not even know that expert knowledge was needed. As a result, they produced a pipe that was quite incapable of with standing the operating conditions". Investigation committee had adduced some suggestions as a prevention move of industry accident from repeating including area plan that is suitable, selection of quality building materials and placement of qualified workforce. Loss due to explosion amounted to 200 million pounds. In fact said Kletz (1990:73) "its cost the industry many times more in the extra equipment they were required to install, and the extra procedures they were required to carry out".

Other accident studied was industrial accidents in Union Carbide Plant in Bhopal, India on 3rd December 1984. Accident caused by 25 tan leak methyl-isocyanate from storage tank and sacrificed 2000 people, but in some reports stated that the death was up

to 10,000 people. At the same time, 200,000 people were injured. Most of the victims stayed near the factory. The nuclear plant mishap in Chernobyl, Ukraine is also being discussed by Kletz. It was caused by the weakness of the employees who do not own enough skill to run the nuclear plant. They also did not follow the work manual properly. According to Keltz, safety instructions should be followed at all times unless an exception has been authorized at the appropriate level after a systematic consideration of hazards (1990:105). This incident had killed 30 life and had caused the radioactive effect for 30 years to the locals and a number of 30 million people around Europe are predicted to be infected by cancer in that period of time. (Kletz 1990:102)

Apart from that, Gloss and Wardle (1984) also write about the industrial accidents that happen. They had listed down all the huge disaster of industrial accident. These include Flixborough, Ukraine, Rhodesia, Nevada, India and the one at Sao Paulo which had killed 227 people. Their writing also touches on a few accidents that happened in early 1900's and 1930's such as the Titanic mishap incident. Analysing from the writings about the causes and factors of industrial accidents, Gloss and Wardle came out with a few steps in preventing accidents. Other research on the preventing accidents steps includes one by Kletz (1990), the Peterson collection (1980) such as Peters "Systematic Safety", Brown "System engineering in the design of a safety system" and Tarrants "The evaluation of safety program effectiveness", Ridley, an engineer with him research entitled "Safety at Work" (1987) and there is a special edition journal on the occupational safety and health management system entitled Labour Studies Journal written by Deutsch (1981).

Research carried out by Wangel (1997) on the industrial accidents suggested a few steps on preventing the industrial accidents. One of them is by increasing the ability of the community members of the occupational safety and health in the industries. They should always meet up and discuss about the best way in dealing with industrial accidents. Smaller companies can take the bigger multinational companies as their role model in performing the accidents prevention practice in industry. Consistency of campaigns and practices on the danger aspects at work place to the employees need to be sustained. The most important thing is the support and initiative from the management to pay more attention towards the issues of safety and health of the employees in the industry. According to Wangel's research, using the macro perspective, the government that enforce the rules from the micro perspective is the relationship between both employer and employees is always in a state on conflict when it comes to handling hazards and industrial accidents. Wangel also listed the common conflicts that usually arise between the employer and the employees. For example, the employees love to take their annual leave during the festive season because by that time, they are allowed to be on a longer leave, whereas the employer will not allow that to happen for they do not want to be in any state of shortage of human power during that period of time. The pressure and tension experienced by the employees can actually leads to the industrial accidents.

Conflicts also arise about the longer working hour, in which the employers want the employees to work on a longer period to achieve the targeted production level but the employees disagree somehow for they think that they are in need of a good rest to continue working normally. In the issue of occupational safety and health, the employers always neglected the ergonomic equipment for safety while working and the preparation of an unsafe working place (Wangel 1997:253). The practice of safe working system will help to stifle the industrial accidents. Thus, the management plays a very important role in making this working system a success. Usually, the employees will follow the orders and the rules stated by the employers. And for this matter, the employers should have a team of human resource management with an expert in the health and safety field. The human resource management such as the choosing the employees and giving practice is a very significant element in preventing accidents at work place. And for that matter, many research had been carried out on the role of practice towards the issue of occupational safety and healthy.

Gloss and Wardle also write about the importance of practice to the employees. The safety training at work place can be divided into two major parts which are the training when facing emergency cases and the public safety at work place and also the skills training in

handling the machinery in order to prevent any harmful mistakes that can lead to industrial accidents. Practice can be done inside or outside the working place. For the employee who just signed up for the work, the training department should provide them with an orientation week. During this period of time, they will be exposed to the significant things to the company such as their objectives, the departments in the organization, the rules and regulations, the safety measures, the high risk places, safety equipment and also the fire practice in case of emergency. When they are put in the production department and they will be in charged with the machinery, their supervisor will give tasks as well as the practice and explain about the procedure in handling the machinery until they are qualified to handle it by themselves. According Ridley (1987), formal safety practice is divided into two parts; which are the general practice and the special practice. For the general practice, the modules are prepared to a few groups such as the induction seminar for the new employees, the constant practice about the safety issues; for instance to inform about the company's safety policy, explaining it to the trade unions or representative of the employees who is a member of the committee member of safety organization in the industry, training for the supervisors, to briefly explain from the perspective of rules and regulations to the executives and finally to the group of directors so that they know about the updates of the rules and also the safety and health of their employees. While specific training including safe work system, emergency practice, special equipment in factory, and ways to use emergency protection equipment, fire drill and security checks training are given. The trainings given will at least be remembered, appreciated and practiced by the employees, as stated by Ridley, 10% of what he *read*, 20% of what he *hears*, 30%of what he *sees*, 50% of what he *sees and hears*, 70% of what he *sees as he talks*, 90% of what he *says as he does a thing* (1987:166).

Writings on legislation especially about the Occupational Safety and Health are also produced by scholars. Research by Ismail Bahari describes the allocation of the Act of Occupational Safety and Health 1994 as the basis for the own arrangement of safety and health steps at the work place. The descriptions about the relationship between this act and the working environment that need to be prepared are very easy to be understood and useful to the organizations especially industry. According to him, before 1994, Malaysia had various specific acts and rules about the occupational hazards. Table 4.1 shows the list of Acts and rules that had been used by the government in the enforcement of the occupational safety and health issue. These Acts and rules are not uniform and some of them were enacted by ad hoc and were used in certain conditions only.

Table 4.1 Examples of Act and Rules List That Is Gazetted by the Government

ACTS AND RULES	HAZARD AND JOB
Environment Quality Act, 127, 1974 and	Toxicant and schematic Subsidiary Legislation
Factory and Machinery Act, 139, 1967	Safety and Health in factory and handling of machinery
Atomic Energy Licensing Act, 304, 1984 and its rules	Safety and health handling ionizing tradiation
Electricity Supply Act, 447, 1990	Electric security
Occupational Safety and Health Act, 514, 1994 and	Health, safety and welfare at the its rules workplace
Source: Ismail Bahari 2002:9	

Legislation of various Acts and Rules which are different about the occupational safety and health hinders the employer and employee to follow it. According to him "these difficulties have raised the selective compliances phenomenon; which is the compliance to the allocation and need of an Act and Rule, based on the enforcement firmness" (Ismail Bahari, 2002:8). This phenomenon causes failure in the implementation of industry accident prevention at the

workplace. At the same time, the employers also feel that they don't have much responsibility on the occupational safety and health issues. Kamal Halili (2001), explains further deeply about the legislative provisions in the Occupational Safety and Health Act 1994, Factory and Machinery Act 1967 and Employee Social Security Act 1969. Things that are explained are the purpose and the scope of the act, safety and health officer, duty of the employer and employee and so on. The discussion about the court cases that had trialled occupational safety and health cases are very important in understanding the court's attitude towards industrial accident cases. Section 15(1) set aside that it is the duty of the employer and everyone that are working on their own to make sure that they practice safety, health and welfare practice of their employees at the workplace.

Matters covered by the duty of the employer includes the provision and maintenance of plant as much as that can be practiced, safe and without any risk to the health, arrangement act to ensure, safety and risk absence to the health with the usage and operation, handling, storing and transporting plant and material, preparation of information, order, training and supervision as needed to ensure, till that can be practiced, safety and health of the working employees, till that can be practiced, regarding to any workplace under the supervision of the employer or the people working on their own, conduct the maintenance work under a safe and risk absence and preparation and maintenance of way to go in and out workplace safely, and preparation and maintenance of environment to the employees, till that can be practiced, safe, risk absence to health, and enough and gives facilities to the employees (Kamal Halili, 200; 38-38).

He questioned the expression "till that can be practiced" that was in the section. He questioned whether that expression gives freedom to the employer to prepare, for example equipment and training till employers' capability only and the government cannot determine a certain standard. A few factors need to be considered to determine the meaning "till that can be practised", namely the danger of the risk involved, state of knowledge about the risk or danger and the way to wipe out or to decrease the danger or risk, whether the suitable way exist to wipe out or decrease the danger or risk (Kamal Halili, 2001; 40). In an effective human resource management, employee's welfare is very important. The employee's welfare includes the journey to and from workplace and when he is working. If there is an industrial accident or road accident while going to and from workplace, it is also the responsibility of the human resource management. Social security scheme that is suitable need to be carried out by the industry for the employees. In Malaysia, social security scheme can be obtained from private insurance companies or from the government scheme under the Social Security Organisation (SOCSO) and Employees Provident Fund (EPF). For the purpose of this study, only the SOCSO scheme which is taken by most industries in Malaysia is focussed.

Industrial Accidents in Malaysia

A report that is quite complete about the industrial accidents in Malaysia was provided by PERKESO. That is also if there are reports made to get the industrial accident compensation. Occupational Safety and Health Department don't have a complete report on it. Industrial accident cases have increased since 1998 to 2000. In 1998, 85338 accidents were reported, and this number increased to 92074 accident cases in 1999 and continued to increase to 95006 cases the following year. Even though in 2001 and 2002 the numbers have decreased to 85869 and 81810, the numbers of employees involved in the accidents are still high. (http://www.perkeso.gov.my/melayu/statistiks3.html). The decrease in the number of the people involved in the accidents in 2001 and 2002 is because "the country's economic condition that is affected by the economic recession of the countries that are Malaysia's key partner, especially America because, especially global demand for the electronic goods slacken and affect the country's economy" (SOCSO Annual Report 2001:11). Due to the above state, job opportunities have degenerated and the number of active employees that are protected under SOCSO scheme declined as much as 16.8%.

At the same time also, SOCSO with the cooperation with the Occupational Safety and Health Department, National Institution of Occupational Safety and Health (NIOSH) and trade unions and employers' association has carried out the effort to nurture awareness of safety and health at the workplace. In 2001, number of males involved in accidents are 69569, while females are 16357.

Highest number of accidents was in the manufacturing sector. In 1999, as many as 40,730 were involved and as many as 4963 were permanently disabled. In 2000, the number increased to 41331 cases and the victims who were permanently disabled were 5440 and death was at 282 cases. This sector has a higher risk compared to the other sectors. Most of the manufacturing sectors have machines, equipment or dangerous chemicals. Without correct and safe operation, it can cause industrial accidents. Expenditures paid in compensation interest form of payment and other SOCSO schemes, are increasing every year. Table 4.3 shows the sum paid to the industrial accident victims in Malaysia, namely in 1998, as much as RM444,775,126, in 1999 as much as RM497,043,523, in 2000 as much as RM608,311,584, in 2001 as much as RM638,384,165 and in 2002 as much as RM722,354,935. According to Human Resource Minister, "total interest paid by SOCSO was increased as much as 52 percent, from 497 million ringgit in 1999 to 754 million ringgit last year (2003). This means total interest payment was increased to 66 percent from the subscription fees collected in 2003, compared to 55 percent in 1999" (Fong Chan Onn 6 February 2004.

The above statement by the Human Resource Minister shows that total compensation paid to industrial accident victims is high and this shows that the industrial accident phenomenon is a serious phenomenon in Malaysia. Maybe industrial accidents can be decreased if the employer has a high commitment in the accident prevention effort in the work place. In a few court cases trial, shows that employers often conflicted for being careless in order to prepare a safe working environment to the employees. So, next discussion displays a few examples of court cases regarding the carelessness of the employer until it caused accidents to the employee.

Epistemology Cause of Industrial Accidents

Industrial accidents are caused by one of the factor which is the weakness of the organization factor or the factor of the behavioural of the individual. The theory that combines both these factors is known as various cause of industrial accident theory. Accidents at the workplace are an aspect that is difficult to be avoided. However, the employer are always concerned about the accidents at the work place because accidents will affect the production, also becomes the cost that need to be borne by the company. Jaffries (1980) gives three matters that can cause accidents, namely the individual himself, the employee's own risk such as the employee's competence and job design, social environment of work such as brightness, noise and so on.

Mc Cormich and Illgen (1981) state that occurrence of accidents is related to the relationship between the environment or atmosphere and individual. Also the combination of one or more of these factors as described in Figure 2.3]. According to Robbins (1978), the causes of the accidents in generally can be classified either by human or environment factor. Accidents associated with human factor are due to their human weaknesses such as negligence, consuming alcoholic drinks, fantasizing or imagining, inability to carry out duty and other several kinds of human frailty.

Environment cause on the contrary involves the workplace's condition including equipment and physical, factory physical condition and the general working environment. Research by United State Institute of occupational Safety and Health (NIOSH) discovers that the dull condition in workplaces, loading task and insignificant are the factors that lead to high level of stress undergone by the employee. Negligence among employee always leads to accidents. According to report filed by the Department of Factory and Machinery, Ministry of Human Resources, the attitudes of being nonchalantly become the main reason for the occurrences of many accidents in industrial sector. According to Gilmer (1977), those who are more experienced and smart would less encounter accidents in workplaces. Some factors which are related to the workplaces' condition could cause accidents, take the lightning factor at workplaces for instance and 25 percent from the numbers of accidents at workplaces happened due to the poor lightning condition. Other relevant factors include the temperature and humidity at workplaces. According to the research in a few West Country, the rate of accidents tend to increase when the temperature of particular space in workplaces become too

low or high. Same thing applied to humidity, which sometimes accompanied with hot climate making the working environment uncomfortable and later could leads to negligence and accidents.

Another factor of work scenario exists in form of inappropriate equipment that is not suitable for one particular task or work. For example, heavy works that are supposed to be operated by machine such as fork-lift would become very dangerous if ever to be conducted with manpower. Same goes to processing or production machine equipment, electrical wiring in factory and others need to be examined frequently to make sure they stay in good condition, as any damages would bring harm to the jobs. Descriptions above show two main categories of causal to accidents which are unsafe situation and action. Unsafe situation involves few environment physical aspects that might lead to accidents such as oily floor, poor lightning, narrow paths and others. Unsafe actions include any misbehaviour that could lead to accidents or failure in accomplishing work achievement and certain level of performance. There are four factors that could lead to the happening of both safe and unsafe actions in which human is the first factor. Employees are less been given attention and specific exercises by the administration. The supervisors do not provide the correct order or work procedures and precautions in workplaces. At the same time, overtime work can cause fatigue and negligence towards machinery work procedures which could cause industrial accidents. For less experienced employee, the mistakes in estimating towards the work procedures has always cause accidents.

The second factor is the work environment which is not systematic. The factory management has no complete plan on machine layout, table, raw materials, safe route and workplaces. Without the correct logistic management, it could cause hardship in doing work and leads to industrial accidents. If chemical substances are not kept in a safe place, it could cause explosion and being affected by the poisonous substances. The leniency in management while taking action on employees that had violate the safety procedures could create a culture in which safeties are not matters in workplaces.

The third factor is associated with technical factor. Weak maintenance towards machines could cause any unsafe dysfunctional in machines. Old machines are often modified by neglecting the basic security features which can ultimately cause accidents and injures towards the machines' handler. Intensive training in handling new machines is also often neglected by machines' manufacturers and company. Operating new machines would merely depend on the limited manual and procedure. Without sufficient amount of information, industrial accidents could happen especially towards the new employees who operated the machines. The social structure factor also contributed to industrial accidents. There are industries that use short-term contract employees. These employees consist of those who are still studying or due of being unemployed, felt pressured. Hence, they are inadequately trained due to the limited period. If there a high reservation, all employees are required to do overtime work. At the same time, they would feel stressful because the company has to accomplish certain quantity in a very short of time. This situation could make the employees feel stressful and neglected the procedures of machine operation in which will consequently cause accidents.

Japan's Management Practice in Industrial Accidents Prevention

Japan's system of management has been worldwide spread. Southern countries specially have practically practice the Japan's system of management from the Japanese entrepreneurs whom invested in overseas and their countries that it subsequently becomes their culture of working. Culture of industrial accidents prevention in Japan has long been practiced. They are supported by their ruler in nurturing the culture of industrial accidents prevention. Many efforts have been carried out by them following just how the government has hold a campaign of Occupational Safety and Health. The campaign is divided into few stages which are:

- **The National Safety Week** that is solemnized every 1st of July to 7th July. This campaign has been started since year 1928 until now. The National Safety Week is aiming to promote voluntary safety and health activities in the industries, to enhance the public awareness concerning occupational safety and to ensure the firm implementation of safety activities. This campaign is organized by The Ministry of Health, labour and Welfare, and The Japan Industrial Safety and Health Association. Events made including the security checks at workplaces, conferences, poster with slogan competition, emergency training, and safety awareness campaign among families and The National Safety in 1st of July which is attended by the Prime Minister who will deliver the awards. The slogan for year 2001 is "Taking 'Safety First' over the New Century-Zero Risk in The Workplace".

- **The National Industrial Health Week** is solemnized every 1st of October to 7th October since year 1950. The National Industrial Health Week is aiming to improve the awareness of the general public concerning industrial health, to ensure worker health through voluntary industrial health management activities at workplaces, and to create comfortable working environments".

- Other campaigns included things done by Japan Industrial Safety and Health Association, Japan Construction Safety and Health Association, Japan Boiler Association, Japan Crane Association Safety, Association of Construction and Loading Vehicles and Japan Association for Working Environment Measurement.

The effectiveness of Japan's management in handling industrial accidents phenomenon has captures the eyes of many countries in practicing Japanese management culture in industry. The Japanese society has their culture of work which has successfully lead the country to its peak of the world. The Japanese society is said to practice these cultures;

- The employees are hardworking and well disciplined.
- They are loyal towards their employers.
- They prioritize the importance of the group (company or department) rather their own personal importance.
- They emphasize the increase of productivity and product quality produced while reducing the wasted yield and cost.
- They are always ready to increase their efficiency in work.
- The managers and employees emphasize more on long-term success than short-term profitability.
- Employees practice the collectively negotiate activity with employers through Company Union Establishment (Internal Organization) (Kamaruddin Said, 2002).

The concept 'working culture' associated with attitudes and practice of work that belied by a society. The attitudes and work practices are embodied collectively and recognizable as features that coloured the behaviour of society in production fields. Due to this collective nature of behaviour in the production fields, the behaviour is regarded as a culture-working culture.

Kaizen's Concept

Masaaki Imai (1991) believes that Japan has successfully rebuilt the economy since 1950s because of the rapid growth of new attitudes in the production process that applied the basis on Kaizen's attitudes in which it emphasizes on increase of goods quality through quality control

philosophy that is comprehensive. This Kaizen attitude become well establish as a result of effort and energy poured by the association of Japan Scientist and Engineering Union, Japan Productivity Centre, Japan Standard Association, Japan Quality Control Central Association, and Japan's Managers' Association. This attitude is then recognized as a production philosophy in which the understanding is expanded to all Japan through the cooperation of Japan Academicians and Giant Companies' Managers. Musashi Japan Technology Institute is one of the organizations that plays important role in spreading this Kaizen's concept through programmed management training. The effort to expand the concept lesson has always supported by the senior managers of big companies like Toyota, Japan Steel Works, Kayaba Industry, Fuji Xerox, Yokogawa-Hewlet-Packard, Pentel, Kobayashi Kose, Komatsu, Canon, Ricoh, Toyoda Gosei and others. (Kamaruddin Said, 1997).

According to Masaaki Imai, the continuous multi increase concept focused more for thoughts that oriented on production process product. In short, kaizen encourages the improvements in production process, and thereby always give major interest to quality control that is comprehensive in every production level. Referring to this kaizen concept, as for example, Taichi Ohno, when holding the post of Deputy President of Toyota, have inaugurated kanban concept, namely manufacturing concept, distribution and component stock goods reserve based on current need only (just-in-time). This kanban concept is useful being benefited so that it is not only the component stock goods reserved does not, in fact if the component that is better has been produced, the component that will be replaced the not discarded and detrimental due to stock that there is inside would not be massive. Kaizen involving one production concept that is comprehensive, so awareness has to be buried in work culture all party: management and employee. This concept has been being benefited by economic Japanese industrial because of the existence of strong relationship and cooperation between management and employee since 1950 an decade. Kaizen objective was to generate product that is high quality and can compete in market, especially international market. "Theory" Japanese generally production combine kaizen concept with desire innovative. By as innovation need and always kaizen emphasized, so every job branch in field of scientific research, technology design, design production, production and marketing should always collaborate closely. Kaizen-innovation chain influences research process and development (R&D) on every firm. All these aspects coincide and make possible firm moves pro-active. In conclusion, Japanese work culture that mostly alleged base on this kaizen concept had successfully strengthen the position of Japanese in market that is high-tech due to capacity reduce production cost and the price in by market able to increase goods quality (Kamaruddin Said, 1997).

Higher Management Party	Middle Management Party	Supervisors	Workers
1. Make sure so that kaizen will be introduced as a corporate strategy	1. Arrange the strategy of kaizen policy implementation such as that ordered through management practice	1. Use kaizen concept in work process arrangement and worker arrangement	1. Practice kaizen concept through the suggestion system and small radius activity quality
2. Prepare support and order kaizen implementation through the distribution of various sources,including the finance source	2. Use kaizen concept in structure arrangement management in every division and work level	2. Prepare a formula and plan for kaizen implementation and process production, including line guide so that it is understandable by workers	2. Practice high discipline quality all the time

3. Prepare a formula of policy and objective from various agencies as referred to the kaizen policy	3. Graded and repair work performance and product quality that is produced in every division and level production	3. Improve communication atmosphere with employee while upgrading the spirit to work	3. Improve the spirit to become an employee that is successful in solving problems
4. Study the effectiveness of kaizen through the policy monitoring and the audit the result	4. Train workers on kaizen policy through the intensive and continuous training program	4. Support and help all small radius activities and prepare the infrastructure to listen to and record it in any form to improve quality	4. Improve the skill and work performance through various programs training in field that involved with production process
5. Build various system, rule and structure personnel that is suitable to kaizen policy	5. Give support and help to workers so that they can increase their skill and equipment to resolve any form of problems in production process	5. Upgrade discipline work all the time 6. Help workers in a way that is in the kaizen implementation	

Conclusion

One of the most significant elements of the current industry nowadays is active employees for they can bring a lot of profits and gain towards the entrepreneurs industry. If they are involved in the industrial accidents that will surely cause them injuries or may become disabled, they can no longer work as the industrial employee. Thus, this research had been carried out to help lessen their burden and trauma.

The number of industrial accidents that had been recorded in Malaysia is rather high and the compensation pay from the social safety organization, SOCSO is also high. In 2002, a value of RM 700 million had been spent to pay the compensation for the victims of the industrial accidents. The recorded number accident on that particular year was 81,810 and the Victim of Permanent Disabled was 858 cases. Even though many efforts had been taken by the government together with the industrial entrepreneurs, trade unions, NIOSH, NGO and individual, but still the number of industrial is rated in a high level and every day there must be cases of industrial accidents reported. This shows how serious the situation is in Malaysia, but many didn't notice about that fact.

The Southern countries also experienced this phenomenon of industrial accidents. It eaves a negative impact towards the government, industries, community and also the involved individual. Awareness steps and a more systematic safety management had been practiced in ILO and it is joined by the members of the Southern countries. Japan had been up hold to be the role model in the implementation of the industrial safety programs, especially the OHMS program. (Refer to the Appendix 1)

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Appendix 1 :

Development of Safety and Health (Hygiene) in JAPAN

1911	The Factories Act was promulgated. (Put in force in 1916)
1927	The "Green Cross Motif" was adopted as a symbol mark of safety.
1928	The National Safety Week was initiated.
1929	Ordinance on the Factory Accident Prevention and Health (Hygiene)
1932	National Industrial Safety Convention was initiated.
1935	Ordinance on Boiler Control Act promulgated.
1936	Ordinance on Safety and Health for Civil Engineering and Construction Work Sites promulgated.
1942	The Research Institute of Industrial Safety was established.
1947	Labour Standard Law promulgated The Ministry of Labour was established. Ordinance on the Occupational Safety and Health, etc. put in force.
1950	Nation Occupational Health Week initiated as an independent activity.
1951	Ordinance on the Regulation for Prevention of Tetra-ethyl-lead Hazards promulgated.
1952	No Accident Record Movement initiated.
1953	Nationwide Safety Organization (Predecessor of the JISHA) founded. The "White Cross Motif" was adopted as a symbol mark of occupational health. The National Occupational Health Convention was initiated. (The Convention was held in 1967 under a renewed name of "National Industrial Safety and Health Convention".)
1955	Special Protection Act for Silicosis, etc. promulgated.
1956	The Research Institute for Occupational Health was established. (The Institute was reorganized in 1976 as "National Institute of Industrial Health".)
1958	Industrial-Accident Prevention Five-Year Plan formulated.
1959	Ordinance on Safety of Boilers and Pressure Vessels promulgated. Ordinance on Prevention of Ionizing Radiation Hazards promulgated.
1960	The Pneumoconiosis Law promulgated.
1960	July1of every year was designated as "People's Safety Day"
1960	Ordinance on Prevention of Organic Solvent Poisoning promulgated.
1961	Ordinance on Safety and Health at Work under High Pressure promulgated.
1961	Special financing for safety measures taken by small and medium-sized enterprises, and Round Special Medical Examination for Small and Medium-sized Enterprises initiated.
1962	Ordinance on Safety of Cranes and Other Similar Equipment promulgated.
1964	Industrial Accident Prevention Organizations Law promulgated. Japan Industrial Safety and Health Association, and Japan Safety and Health Associations by industrial sector were established.
1965	"Safety and Health Motif" was adopted by integrating two separate motif. "Green Cross Award" was granted to persons who had made distinguished contributions in the field of occupational safety and health, for the first time.
1967	Ordinance on Prevention of Lead Poisoning promulgated. "Department of Safety Engineering" was established in the National University of Yokohama.

1968	Ordinance on Prevention of Tetra-alkyl Lead Poisoning promulgated. An industrial safety seminar for business executives was initiated. "Green Cross Exhibition", which is annexed to the Occupational Safety and Health Convention, was initiated to display protective equipment, etc.
1969	Ordinance on Safety of Gondola promulgated. The 16th World Congress on Occupational Health was held.
1971	Ordinance on Prevention of Hazards due to Specified Chemical Substances promulgated. Ordinance on Health Standards in the Office promulgated. Ordinance on Prevention of Anoxia, etc. promulgated.
1972	Industrial Safety and Health Law promulgated. Ordinance on Industrial Safety and Health, etc. promulgated.
1973	The Zero-Accident Total Participation Campaign was initiated.
1973	Ordinance on Industrial Safety Consultants and Industrial Health Consultants promulgated. The Tokyo Safety and Health Education Centre was established.
1975	Working Environment Measurement Law promulgated.
1976	The Guideline for safety assessment of chemical plants was published.
1977	The Subsidy program for small and medium-sized enterprises' health management was initiated.
1978	The University of Occupational and Environmental Health was established. The Silver Health Plan was announced. This plan was developed in 1989 to "Total Health Promotion Plan (THP)" In 1978, The Osaka Safety and Health Education Centre was established.
1979	Ordinance on Prevention of Hazards due to Dust promulgated.
1981	The Subsidy program for working environment management at small and medium-sized enterprises was initiated.
1982	"Safety Work Cycle Activity" in construction industry was proposed. Japan Bioassay Research Centre founded.
1983	Ordinance on Industrial Safety and Health was partially revised (safety measures for industrial robots)
1984	Construction Industry Safety and Health Training Centre was founded.
1992	The Industrial Safety and Health Law was partially revised (for creating a comfortable working environment).
1997	The Ninth International Conference on Occupational Respiratory Diseases was held in Kyoto.
1999	The Japan International Centre for Occupational Safety and Health (JICOSH) was founded.
2000	Japan Advanced Information Centre of Safety and Health (JAISH) was founded.