



Occupational Safety and Health (O.S.H) Towards Green Environment Practices at Malaysia Small and Medium Manufacturing Sector

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Abstract

Implementation OSH is so important in Malaysia workplace, especially in Small and Medium (S&M) Melaka manufacturing sector, In this paper, we would like to include the New Strategic practices as a new parameter in order to improve the number of percentage of an accident in the workplace. There are four components as understanding, commitment, practice and behavior influence the improvement of this research towards green environmental practices. Primary data from 20 S & M manufacturing sector in Melaka was taken through a Phone call interview survey on 14/12/2017-15/01/2018. These research highpoints the problems in the Melaka manufacturing sector such the high occupational accidents which are probably due to lack of non-compliance of the requirements of Occupational Safety and Health Act (OSHA) 1994, Guided Self Regulation Environmental Mainstream Tools (EMT). This study is to promote several management practices such as training and safety management, understanding of self-regulation, enforcement and auditing towards EMT practices. From the analysis, we found that with good compliance will reduce the accident case at the workplace.

Keywords: Compliance, behavior, S&M Manufacturing, Environmental Mainstream Tools (EMT)

1. Introduction

OSH and Green environment movement in Malaysia has been scrutinized due to lack of managing culture and non-compliance of the requirements of Environmental Act, Occupational Safety and Health Act (OSH Act), Factory and Machinery Act and others related Act. This research discussion a tools name Environmental Mainstream Tools (EMT)[12]. EMT has seven elements to measure the compliance of OSH manufacturing workplace towards green environment. With the lofty goal to develop an industrial society and those involved in development projects that have an intrinsic culture of pride in environmental excellence (EE), the Department of Environment (DOE) has embarked on a program entitled "Guided Self- Regulation" (GSR). To assist the regulated community (RC) to achieve the state of self-regulation, the DOE has formulated a set of environmental mainstreaming (EM) tools to be implemented in the organizations and industrial premises

The benefits of this practices and tools bring a solution for both parties (Malaysia Government and Small and Medium manufacturing sector). Roughly there are about 415,000 registered manufacturing employers in Malaysia. About 200, 000 in the Manufacturing sector and about 128,000 is S & M manufacturing, Melaka S & M organization around 22,000 units. 1500 is S & M manufacturing sector.[23]

1.1. Problem Statement

Small and Medium manufacturing facing many challenges in implementing OSH that may directly or indirectly hamper their ability. The researcher is going to analyze the major problem in S & M manufacturing sector as accident case keeps increase reported accident case in S & M manufacturing rate 50% - 80 % higher than big company [1], due to lacking management and conforming to the basic requirement.[2-3], poor connecting monitoring between industrial and enforcement department,[4-5]. No benchmarking on OSH and environment [6-7], lack of promoting safe work environment and culture practice at the workplace[8-9]

1.1.1. Poor Connecting Monitoring Between Industrial And Enforcement Departments



Small & Medium manufacturing lack of knowledge, skill and others source to implement OSH in their workplace example Human resource education background may only in secondary or high school which they may not expose to any skill in OSH and poor connecting monitoring between industrial and enforcement departments such as DOSH Most S&M human resource person may expert in admin and human resource task but not in managing OSH, for them operation cost is more important is compared to spend money on OSH which is not value ended. Laurence, D found that the majority of S & M face difficulty in implementing OSH as they lack expertise, resources, or manpower [3]. Accidents in workplace can be prevented if employers and employees are more sensitive or have good safety behavior [4-5]. An employer shall hire a right person for a right task in managing their OSH, look to a multi-skill person who may help in manage their OSH, Human Resource, and Admin Department. They do not understand what is OSH and why need to spend more budget on it. They even do not notice that the practice of the work it expose them to danger or health problem in long-term. Deros, B.M., et.al found that management commitment is manifested in various ways such as having safety education and training, giving rewards, and empowerment of employees to make decisions [2]. Investment in safety education and training will allow employees to gain the necessary safety knowledge and help them to work safely.

1.1.2. No Benchmarking On OSH And Environmental

This is a process to identify which organizations are implementing and practicing in accordance with the laws and regulations. A proper OSH implementation is important to ensure compliance with laws and regulations and thus decreasing the compensation paid, understanding the concept of Ice-Berg will help S & M in reducing their cost in long-term. It is important for them to work together with other organization in the surrounding, with multinational and enforcement agency in sharing skills, knowledge and new regulation. Studies by Suazo, G.A., and Jaselskis, E.J, Teo, A. L., and Phang, T. W. have found that safety measures taken in the workplace can lead to better safety performance. In order to generate higher returns [17-18], it is important for the SMEs to acknowledge the importance of Occupational Safety and Health Act (OSHA). If safety problems and health risks in the work environment can be controlled, the country's economic competitiveness will improve. S & M are usually involved in industries that are not technologically adaptable or those which are not flexible in their work organization [13-14]. According to Dupre, D [15], the "risk of having an accident at work is higher for workers in companies with fewer than 50 employees and for the self-employed".

Employers shall practice what have been plans and commit to do and practice the right thing at the right time and right environment to motivate employee's example what has stated in OSH. This good practice needs a safety operation procedure as a guideline or any procedure such work as high permit, hot work permit, and machine safety operation. Employees practice what has assign from the top management as what has stated in internal regulation, check what is the best practice can be implemented in work towards the green environment, training and education are one of the sources to make sure all concern person know what and who need to practice OSH in their workplace. Practice what understands in OSH and improvement process including to contractor or any visitor

1.2. Lack Of Promoting Safe Work Environment And Culture Practice At Workplace

It is important to the employer through their manager to practice a good OSH management culture; this culture shall practice leadership through the example which the commitment from the top to practice a good culture begins from them. A good culture needs time to implement and practice, it needs to implement step by step to avoid culture shock which may give a negative impact to the organization. They must ready to change their culture in right time through a culture in which the right to a safe and healthy working environment is respected all levels, where government, employers, and employees actively participate in securing a safe and healthy working environment through a system example ISO 45001 of defined right, responsibilities and duties such setting a OSH committee, and where the principle of prevention is accorded the highest priority as in safety and health policy and Environmental Policy. According to Heinrich Theory, 98% of workplace accidents can be eschewed or prevented [1], most of the accidents are caused by the factor of human behavior instead of the factor of machinery or engineering. The employer in S & M Manufacturing only look at the current condition of their survivor such productivity and efficiency, the iceberg concept, this concept is to manage organization OSH management costing, Plan, Do, Check and Action concept is a proper concept to manage OSH towards a better environment at workplace in OSH are far away from their mindset. S & M manufacturing need a culture change, change to be more aware of OSH Concept and it may need time and commitment from the young generation to do it for a better future.

1.3. Methodology and Data Collection

This research involves only documentation study through conceptual framework and primary data, Data collection is through phone conversation to all participation by asking a few questions on OSH Environmental budgeting, policy, competency, internal auditing, training educating, committee members and top management commitment through YES OR NO answer. Data collection is from 14/12/2017-15/01/2018 and selected sampling, OSH and EMT analysis and practices regulation were used as a method for primary data collection.

1.4. Result and Discussion

This framework is a process adapted from theory PDCA, it is a nonstop process because managing OSH towards green environment is a nonstop process, new regulation, new system new Act, new skill, and knowledge need to upgrade and updated from time to time, follow the changing of technology, human behaviour and the request from the surrounding such population of manufacturing.

In this research, understanding the need for the requirement, commitment from top management and employees, practice the right procedure in workplace and behavior to practice the safe and healthy procedure at the workplace. Through this framework will create a new strategic in adoption, grading, and education system implementing to strengthens the process continually. in this research, a Deming Circle theory be using, Plan (P), Do (D) Check (C) Action (A) – PDCA by Dr. W. Edwards to managing[10] OSH towards green environment at the workplace. (Figure 1)

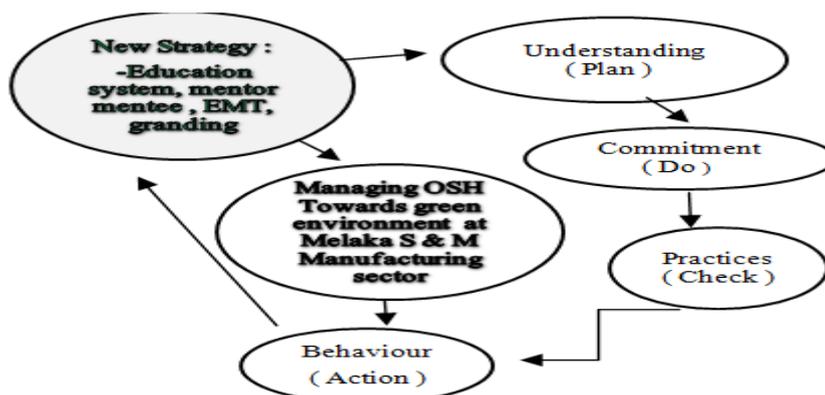


Figure 1: Research Conceptual Framework design

1.4.1 Understanding

This is a beginning process for managing OSH towards the green environment by the employer at S & M manufacturing sector, understand the need of the Malaysia regulation in OSH and Green environment through understanding OSH Act and Environment Act requirement from time to time. Not only to understand the Act requirements but also understand why they must implement OSH towards green environment at their workplace, the advantages and disadvantages when implementing OSH, and how to overcome any disadvantages problem, where to get more information on OSH skill and knowledge. The stage is more to planning stages, and it must be carried up properly with affect others step in later.

Plan ■ Think about where you are now and where you need to be.

■ Say what you want to achieve, who will be responsible for what, how you will achieve your aims, and how you will measure your success. In this stage, the concept of 5 W I H – What, Where, Who, When, Why and How example why You may need to write down OSH Policy or Environmental Policy who shall responsibility through it when can implement, what to implement and how to monitor?

1.4.2 Commitment

Top management Commitment is very important to carry up any activity such as company safety policy, company environment policy and others related to OSH and environment. Without the commitment from top management, all activity will consider fail, without a budget and approved from top management all activity cannot implementing, commitment to follow and obey any regulation from time to time such law/regulation armament example environment clean air 2004 to 2014 regulation.

Do ■ identify your risk profile? And Do what you have a plan.

■ Assess the risks, identify what could cause harm in the workplace, who it could harm and how, and what you will do to manage the risk and it shall in your plan to overcome the risk of any emergency, example you need an emergency response plan and team, the team have to do as in the plan. Decided what the importance, very important so important, urgent, so urgent and very urgent to organize your activity into your plan.

Top management Commitment is very important to carry up any activity such as company safety policy and others related to OSH, Without commitment from top management all activity will consider fail, without budget and approved by top management all activity can not implementing, commitment to follow and obey any regulation from time to time such law or regulation, Commitment to assign a person in charge (PIC) for in charge in OSH Environment example OSHA Supervisor or Officer and setting a OSH committee members with fully authorised to the chairman carry up their duties without fear.

1.4.3 Practices

Employers shall practice what have been plans and commit to do and practice the right thing at the right time and right environment to motivate employee's example what has stated in OSH and Environment policy, regulation, and act. This good practice needs a safety operation procedure as a guideline or any procedure such work at high permit, hot work permit, and machine safety operation

Check ■ Measure your performance or Monitor you progress performance

■ Make sure that your plan has been implemented – 'paperwork' on its own is not a good performance measure. You have to check on the progress performance effectiveness to make sure it follows what you have planned and do. Assess how well the risks are being controlled and if you are achieving your aims. In some circumstances, formal audits may be useful, internal and external audit will help the organization to measure their progress achievement level and how their employees understand through what they implement including investigating the causes of an accident, incident or near misses if happening.

DOSH has initiated action plans for implementation to improve OSH. Among them, special consideration has to be given to the small and medium manufacturing industries where fatalities are common. Skill and knowledge upgrade through training & education will increase employees awareness on workplace safety and health. Setting organization safety policy to prove top management commitment

1.4.4 Behavior

Behaviour-based safety focuses on employees' behaviour but employers must show a good attitude and behaviour in carrying up the good practice of OSH towards green environment, leadership through example to be followed by others employees, this is a step where everyone has to practice what has been understanding, commit to a good behaviour and attitude to achieve OSH vision and goals. It is

suitable for a variety of industry sectors, from construction and manufacturing industry to food processing. It is based on the principles of behavioral psychology and is a technique for modifying the behavior of employees to enable them to work in a safe manner.

Act ■ Review your performance or action through any weak point

■ Learn from accidents and incidents, ill-health data, errors and relevant experience, including from other organizations. This is a process to identify any weak point in process of implementing any activity such internal or external audit, take action to overcome it or improvement through 'never-ending improvement' 'fast action' to reduce any risk including review policy and others necessary action.[10]

It is important to the employer through their manager to practice a good OSH management culture; this culture shall practice leadership through the example which the commitment from the top to practice a good culture begins from them. A good culture needs time to implement and practice, it needs to implement step by step to avoid culture shock which may give a negative impact on the organization. The important point is they must ready to change their culture at the right time.

Monitor staffs behavior to follow any best practice in OSH environment. Monitor Employees behavior in their workplace and it involves a diverse culture and language from a different country such Nepal, Indonesia, Vietnam need a proper strategic, to make sure they follow the regulation setting by top management or OSH committee members by carried up their duty safely.

Self-Regulation

Employees practice what has assign from the top management as what has stated in internal regulation, check what is the best practice can be implemented in work towards the green environment, training and education are one of the sources to make sure all concern person know what and who need to practice OSH in their workplace. Monitor Employees behavior in their workplace, make sure to follow the regulation setting by top management or OSH committee members is carried up their duty. Monitor contractor and others visitor behavior when entering the organization to make sure not any regulation been breaking due to their bad behavior.

1.5 New Strategic

This is a new process to make the framework more strengthen as mentor-mentee and adoption system where S & M manufacturing sector can go through a multinational organization to be a mentor sharing any information on how to improve OSH at the workplace or sharing any facility example training room. This process also involves enforcement department where they can adopt some organization for guiding them in proper information on managing OSH towards green environment example one enforcement officer may adopt one organization in beginning to improve and implement a proper OSH towards green environment.

Grading is the process to identify S & M manufacturing level in managing OSH towards the green environment, through it multinational company can identify what to share, how to help and guild the concern organization, at the same time, it can be used as a guideline for the enforcement department to choose a right organization for adoption. At the same time, this grading can create awareness among employers and employees and the surrounding community on how this organization level in managing OSH towards green environment. It shall implement with a grade sticker stick at the main door entrance to office and no at MYKKP system which only the OSH person in charge aware of it.

The education system is a process to create an awareness labor on OSH management skill and knowledge, this is a long-term process to create a new culture of managing OSH among S & M manufacturing sector. This process involves a school education system where basic of OSH shall be been teach in college, university or secondary school where produce our labor market. It shall be a compulsory pass subject and no as a co-curricular activity only the overall framework is a nonstop process to full fill any changing in future culture from time to time.

Training is part of continuing education for adult learner, for current local employees shall not facing any costing on training, organization can claim the cost from Human Resource Development Fund (HRDF) or PERKESO training fund, the problem is how to train foreign workers, most of the accident case today is caused by foreign workers due to communication, language and lack of training problem, to overcome this problem, the National Human Resource Centre shall create a language course such as Hindi, Vietnam, and others for organization Human Resource Officer or manager to communicate with this foreign workers, through this, organization can assign the concerned officer to be internal trainer to train these foreign workers about OSH towards green environment, or government to allow organization spend some budget from HRDF to train concern foreign workers only in OSH towards green environment with bond after contract including training in Environmental Mainstream Tools(EMT) towards green environment at workplace.

1.6 Primary Data Result

Primary data from 20 S & M manufacturing sector in Melaka was taken through a Phone call interview survey on 14/12/2017-15/01/2018. Result showing lacking management and conforming to the basic requirement.[2-3]

Table 1: Data Collection Status

NO	Industrial Area	Total Small and Medium Manufacturing	Total Manpower
1	Bukit Rambai and Tangga Batu	Six	424 pax
2	Kelemak and Rembai	Three	230 pax
3	Krubong	Two	275 pax
4	Masjid Tanah	Four	342 pax
5	Cheng	Three	211 Pax
6	Jasin	Two	185 pax

From table 1 data, the participants from Bukit Rambai and Tangga Batu manufacturing is animals feed producer and related to animals feed, this company has operated more than 15 years in the area. Participants from Kelemak has involved one human food manufacturing and operate about 15 years at the location, Rembai industrial area involves two wire manufacturing company where remove from Taman Merdeka and Paya Rumput Melaka, they actually have operated as the wire producer for 10 years, only move to the location Rembia 5 year ago. Krubong participant is from one papermill company operate more than 20 years and one is plastic company, operate 15 years, participants from Masjid Tanah is, two from human food producer, operating above 15 years, and two is plastic manufacturing producer which has operated 15 year, Cheng industrial participant is involved one printing manufacturing, two stamping manufacturing, all of

them are operating more than 15 years, for Jasin industrial area, participants are from Paper and paper mill manufacturing, they operate more 15 year, most of the participant is operating more than 15 years and they shall understand the requirement of DOSH and DOE but very sad they are not aware on OSH and environment after long year of operating, this is why they are been selected in this research.

Data collection is through phone conversation to all participation by asking a few questions on OSH Environmental budgeting, policy, competency, internal auditing, training educating, committee members and top management commitment. questionnaire as below:

Does your organization have any allocated budget for OSH?

Any OSH and environmental Policy in your organization?

Any competency person such as confine space entry supervisor, Schedule waste management person (Cepswam), OSH leader or supervisor?

Top management commitment is at the top level? an example join OSH meeting? Or encourage OSH training?

Conduct any training and education? Any training schedule or plan?

Setting any OSH committee and Environmental committee? who is the chairman?

Any internal audit team for OSH and environmental? Carry out an audit in a year? (adopted from www.doe.gov.my/emt)

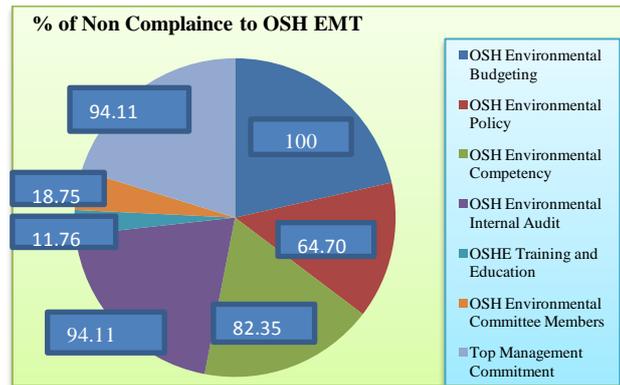


Figure 2: Non-Compliance To Activity

Table 2: % of non compliance

OSH & Environmental Budgeting	OSH & Environment Policy	OSH& Environmental competency	OSHE Training and Education
100%	64.70%	82.35%	11.76%
OSH & Environmental Committee	OSH & Environment Internal Audit	Top Management commitment	
18.75%	95%	95%	

Safety policy is compulsory when organization total employees achieve 5 people (figure2, table 2 – 64.70% non compliance), OSH committee is required when total employees achieve 40 people and above (figure2, table 2- 18.75% non compliance), training and education in OSH in needed as requested by Occupational Safety and Health Act 1995 Section 15,figure 2, table 2 -11.76% non compliance , others such internal audit (figure2, table 2-95% non compliance). Top management commitment is the keywords to the success of the OSH management system figure 2, table 2 – 95% non compliance, the key index measurement on this matter is from their policy implementing, OSH budgeting, top management involvement in any OSH activity, Chair OSH committee meeting and setting an active and effective OSH committee member.

Environment policy, environment committee, and auditing is involved in all organization, it under Department of Environmental Director General Order through Guided of Self Regulation (GSR), it including Environment Policy, budgeting, monitoring committee facility, competency, reporting, communication and transparency, in this survey it only involves some of the GSR requirement.

The prospects and strategies for a green growth economy cannot be entirely understood without fully taking into account for the production, technology and management practices of small and medium-sized manufacturing sector (S&M), for example in clean production (CP). In this condition employers need a information and knowledge in a green environment through the agency such as 'MY HJAU' or Perbandanan Technology Hijau Melaka;

Ensuring that S &M is fully participated in the efforts towards green growth and benefit from policy changes to promote is a key challenge for the transformation ahead. They must get ready for the change and seek a better life and future for a survivor of this Mother Nature. (Yusup et al., 2014). In OSHA stated responsibilities of the employer under section 15 example provision of information, instruction, training, and supervision, section 16 mention employer must have a safety and health policy is their employees more than 5 persons, section 26. duty not to charge employees for things done or provided. Section 24 mention on employees duties example cooperate with the employer or any person on occupational safety and health as required by OSHA 1994, section 25 duty of employees not to interfere with or misuse things provided pursuant to certain provisions, even it mention too, for supervisor or manager to identify hazards, risks and taken the necessary action to reduce the hazard through Job Safety Analysis (JSA) or Hazard Identify Risks Assessment and Analysis Control (HIRAAC) .

1.6.1 OSH& Environmental Budgeting

Through the survey (figure2), we notice that 100% of the participant does not have any budgeting for their OSH and environmental operation due to the mind of management tough that it is not important and wasting. Example for their OSH committee to carry up any awareness activity or motivation budgeting. They only using their operational cost when is really needed such requested by the enforcement department such Department Of occupant safety and Health (DOSH), no special allocation budget for OSH & Environmental form all of this participant.

Apart from OSH legislation, SME manufacturing implementation of OSH is also affected by the size of the company. Holmes, N found that SME businesses are not effective in implementing OSH because the management put the responsibility on employees to look after their own safety in the workplace[19], SME manufacturing business is a family business and culture on managing OSH is zero. (Cooke, W. N., and Grauschi, F. H 1981) found that the inspections on workplaces carried out by the authority managed to reduce workplace accidents. Enforcement authority such Department Of Occupational Safety and Health (DOSH) should carry up inspection at least quarterly and not yearly to all SME manufacturing sector. DOSH shall carry up education and auditing system without punishment in first or second time, guild them to be a success in managing OSH, punishment system will make them tension or stress and give out in OSH management. In addition, the appointment of personnel to carry out OSH matters at the workplace is important for an effective implementation of OSH, but the appointment of an employee will add employment cost to companies.

1.6.2 Top Management Commitment

Top management Commitment is very important to carry up any activity such company safety policy(table 2- 64.70% no compliance) and others related to OSH, Without commitment from top management all activity will consider fail, without budget and approved by top management all activity can not implementing, commitment to follow and obey any regulation from time to time such law or regulation, Commitment to assign a person in charge (PIC) for in charge in OSH Environment example OSHA Supervisor or Officer and setting a OSH committee members (table 2- 13.75% no compliance)with fully authorised to the chairman carry up their duties without fear. Commitment to setting internal organization procedure and regulation including internal audit team(95% no compliance figure 2), commitment to giving cooperation with external auditor example enforcement department such DOSH.

Employers shall practice what have been plans and commit to doing, practice the right thing at the right time and right environment to motivate employees in OSH. This good practice needs a safety operation procedure as a guideline or any procedure such work as high permit, hot work permit, and machine safety operation. Employees practice what has assign from the top management as what has stated in internal regulation, check what is the best practice can be implemented in work towards the green environment, training and education are one of the sources to make sure all concern person know what to practice in their workplace. Practice what understands in OSH and improvement process to the contractor or any visitor. Implementing OSH needs considerable financial investment as employees need to be sent for training and re-training, allowing time off for training to create awareness and understanding as well as a continuing commitment of resources in updating OSH information within the organization.

1.6.3 Training And Education

Small and Medium (S & M) manufacturing sector through the Human Resource Department need to improve their OSH practical to reduce accident case, financial may is an issue but should not be a big issue because our Malaysia government are preparing many incentives or grant for S & M implementing their OSH example Department of Occupational Safety and Health, National Institute Occupational Safety and Health (Training & information), National Human Resource Center (NHRC)and Human Resource Development Fund (advice and Training Fund), Even some Federation such Federation of Malaysia Manufacturer (FMM) and Malaysia Employers Federation (MEF) also can provide an advice and training to S&M with zero or minimum cost. The important is Employer need to understand on Training Need Analysis (TNA) to train the right person for a right knowledge in the right time at the right place, most of the employer are fail to perform this matter causes wasting of training source by train a wrong person for a wrong task, in this research , most of the participant are success to using their HRDF properly to conduct training and education on OSH and environment.(only 11.76% no compliance)

How about a foreigner or foreign work? Most of the accident case at SME are involving foreigner due to lack of skill and knowledge, communication involves the principal of Training Within Industrial Job Instruction And Job Relation(TWI-JR/JI) is a big issue today. The principal of OSH cannot delivery to the foreigner are caused high accident case among SME employees. To overcome this problem, the government through HRDF to allocate same budgeting to train basic OSH for the foreigner at S&M manufacturing, The Levi can deduct from the foreigner salary as practices for local employees through amendment of the law. Training is part of continuing education for adult learner, for current local employees shall not facing any costing on training, organization can claim the cost of Human Resource Development Fund (HRDF) or PERKESO training fund, the problem is how to train foreign workers, most of the accident case today is caused by foreign workers due to communication, communication links institution to the external environment. It is through exchange of information that managers are informed of customer requirements, availability of materials, the demands of shareholders, government regulations, and the reaction of society [20].

1.6.4 OSH& Environmental Competency Person

An employer shall hire a right person for a right task in managing their OSH, look to a multi-skill person who may help in manage their OSH, Human Resource, and Admin Department. Through understanding the need of the Malaysia regulation in OSH and Green environment through from time to time and implement OSH towards green environment at the workplace, the advantages and disadvantages when implementing OSH, and how to overcome any disadvantages problem, where to get more information on OSH skill and knowledge. The stage need a competency person who can manage it properly(figure 2- 82.35% non compliance) on co-operating social responsibility (CSR) in OSH and environment such creating a better and healthy working environment not only for an employee but also the surrounding community through some open door activity with the community members such seminar, inviting plan visit. Important is to understand what they what to achieve in their OSH plan and vision.

1.6.5 OSH and Environmental Audit

Employers shall practice what have been plans and commit to do and practice the right thing at the right time and right environment to motivate employee's example what has stated in OSH. This good practice needs a safety operation procedure as a guideline or any procedure such work as high permit, hot work permit, and machine safety operation which may need an audit team to make sure all OSH and environmental regulation are practiced by all parties in the workplace.(table 2-95% non compliance) Internal OSH promotion is to create an awareness among employees and visitor in the organization, promotion can be implemented through campaign such OSH

safety week, training , workshop and caution and danger point or safety operational procedure , safety policy, safety committee, compensation and career management , this all strategic including will increase employees motivation towards managing OSH at workplace. All promotion activity must involve all level participate such employees from all level including foreign workers. Training is part of continuing education for adult learner, for current local employees shall not facing any costing on training, organization can claim the cost from Human Resource Development Fund (HRDF) or PERKESO training fund, the problem is how to train foreign workers, most of the accident case today is causes by foreign workers due to communication, Without communication, there would be no direction, and without direction, management are left handicapped and confused, employees are left struggling with daily task. Conversely, without an effective communication structure in an organization, the day to day planning will be ineffective, making organizational aims and goals un achievable[20].

1.6.5 Safety Culture and Compliance Improvement

The key practices include reducing the number of fatalities and injuries, making sure safety issues receive proper attention, and ensuring that members of the organization share the same beliefs about risks and accidents. Numerous studies have concluded several factors to have key influence in creating conducive workplace to a positive safety culture. The key factors are management, individual and behavioral work force[16], and rules and procedures.

It is important to the employer through their manager to practice a good OSH management culture; this culture shall practice leadership through the example which the commitment from the top to practices a good culture begins from them. A good culture needs time to implement and practices, it needs to implement step by step to avoid culture shock which may give a negative impact on the organization. The important point is they must ready to change their culture at the right time.

Changing a culture is no easy, it may take some time, 2, and 3 or 10 years it depends on how to commit the management on this matter, it is important to change owner mindset first, follow their others management staff and employees, leadership through example is very important in this process of changing culture. Monitor Employees behaviour in their workplace; make sure to follow the regulation setting by top management or OSH committee members are carried up their duty. Monitor contractor and others visitor behaviour when entering the organization to make sure not any regulation been breaking due to their bad behaviour. This process is to identify any weak process to improve in the future to create a safe work culture.

Environment Mainstream Tools (EMT) has seven elements to measure the compliance of manufacturing workplace towards the green environment as (figure 1.1). This tools is connected to OSH practices towards green environmental, example a clean production (CP) will created a health and healthy environment, it will contributed to good productivity and efficiency. A clean production such as proper manage schedule waste through re-use, recycleclng , storage, and inventory by using Electronic schedule waste inventory management system(Eswim), will created a healthy environment to employees and motivate them. Cleaner Production (CP) was known as a preferred strategy for achieving an efficient use of natural resources and pollution prevention. In this condition employers need a information and knowledge in green environment through agency such 'MY HIJAU' or Perbandanan Teknologi Hijau Melaka; CP can be well-defined as the use of key concepts in the overall prevention, eco-efficiency, environmental strategies, full life cycle and etc.



Figure 1.1: EMT TOOLS

Environmental Policy (EP)

The environmental policy (EP) of successful organizations uses strong and unequivocal statements to convey their environmental commitment to their employees, clients, stakeholders and the public. The EP is disseminated to all relevant parties and translated into action in the organization's work procedures, materials purchasing a policy, business decision making process and cascades down to the supply chain. Environmental Policy is not a paper written by the organization, but is a committed to be follow by the employer and employees of the organization.

Environmental Budgeting (EB)

Sufficient budget must be set aside solely for the purpose of taking measures to comply with the environmental regulatory requirements and other environmental-related efforts. At the design stage, a budget must be available for the design and installation of the pollution control facilities, while at the operational stage; budget must be allocated for proper operation and maintenance of pollution control systems and management of waste generated by the industry or project development. The environmental budget also includes the cost of setting up of laboratory facilities, provision of personnel, and purchase of performance monitoring equipment

Environmental Monitoring Committee (EMC)

The success of an organization to comply with the environmental requirements is contingent upon the relevant personnel in different departments in the organization playing their role in an effective manner. To promote collective responsibility to be environmentally

compliant, two monitoring committees are set up: one at the working level, the other at the policy level. At the working level, the committee known as the environmental performance monitoring committee (EPMC) is chaired by a senior official of the organization and it meets on a monthly basis, or at a minimum, once in a quarter. At the policy level, the committee is known as the environmental regulatory compliance monitoring committee (ERCMC), which meets at a minimum, once a year. The chief executive officer or chairman of the organization chairs the ERCMC.

Environmental Facility (EF)

The primary components of the environmental facilities (EFs) include industrial effluent treatment system, air pollution control system, best management practices, and associated support facilities Such as laboratory, performance monitoring equipment, online instrumentation system, and waste management infrastructure. The above form an integral part of the company's overall infrastructural planning, which cannot be compromised.

Environmental Competency (EC)

The relevant personnel involved in discharging various environmental responsibilities within an organization need to possess the required competencies. The personnel includes those who have been assigned the task to perform DOE-regulated functions: to manage waste and supervise the operation of best management practices, air pollution control, and effluent treatment systems. The organizations must draw up a comprehensive training program to produce competent persons and trained support staff to ensure full compliance with the DOE requirements in the regulated activities. Type Of Competent Person as below:

Certified sediment and erosion control(CSEC)

Certified environmental professional in Industrial influent Treatment system (IETS) operation (CePIETSO)

Certified environmental professional in scrubber operation (CePSO)

Certified environmental professional in bag filter operation.(CeBFO)

Certified environmental professional in schedule waste management.(CePSWAM)

Environmental Reporting and Communication(ERC)

A formal communication channel must be established for reporting environmental concerns and system upsets which warrant prompts action to be instituted. Internal reporting can be initiated to report on regulatory compliance status of organization to the top management or department head. ERC requires systematic analysis data, summarized in appropriate format for easy understanding

Environmental Transparency (ET)

To foster rapport with the immediate neighbours, promote green image and improve public confidence, companies are encouraged to be more transparent in their environmental compliance and achievement. This process can improve organization image through (ET)

1.6 Conclusion

The research objective is to investigate the practice of managing conforming to compliance OSH act, Environmental act and others related regulation from time to time, identify collaboration among employees, employers, enforcement department through auditing, creating a new strategy of promoting OSH towards green environment. Promote several management practices such as training and safety management, understanding of self-regulation, enforcement and auditing towards EMT practices.

Behaviour-based safety focuses on employees' behaviour but employers must show a good attitude and behaviour in carrying up the good practice of OSH towards green environment, leadership through example to be followed by others employees, this is a step where everyone has to practice what has been understood, commit to a good behaviour and attitude to achieve OSH vision and goals. It is suitable for a variety of industry sectors, from construction and manufacturing industry to food processing. It is based on the principles of behavioral psychology and is a technique for modifying the behavior of employees to enable them to work in a safe manner.

OSH case at the workplace can be avoided with the teamwork from both employers and employees on top of regular enforcement from the enforcement agency such as the Department of OSH. Workplace accidents are preventable and safety measures could help reduce the severity of workplace injuries. Workplace fatalities and permanent disabilities were more likely to be severe compared to non-permanent disabilities.

The best practices among industrial players, especially with respect to occupational safety and health, should be shared within the industry. The top management, workers, and DOSH must combine forces and try to prevent future workplace accidents by addressing the root cause of accidents. It is undeniable that a combination of rules from the government, attitudes from the workers and good practices initiated by the top management will create the positive safety culture in the workplace.

Employers understand on co-operate social responsibility (CSR) in OSH and environment such creating a better and healthy working environment not only for an employee but also the surrounding community through some open door activity with the community members such seminar, inviting plan visit. Important is to understand what they want to achieve in their OSH plan and vision.

Supporting from Department Occupational Safety Health (DOSH), Department Of Environmental (DOE), And National Institut Occupational Safety Health (NIOSH) will ensure S & M Manufacturing understand what is OSH and Environment at the Workplace, create their commitment through implementing OSH at the workplace, it can build the best practices among them to improve their working behavior towards safety and clean environment for a better surrounding environment. Existing S & MOSH issues posed a need to understand the influence of S & M capabilities such as the management commitment, legislative role, demographic profiling, and external support on current OSH implementation status. Further empirical work is needed to further understand how these factors and other possible factors impacted OSH implementation in S & M manufacturing sector. The most important is S & M Manufacturing ready to change their culture for a better future for the organization, at the same time to influence employees to support the implementing an improvement in OSH.

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