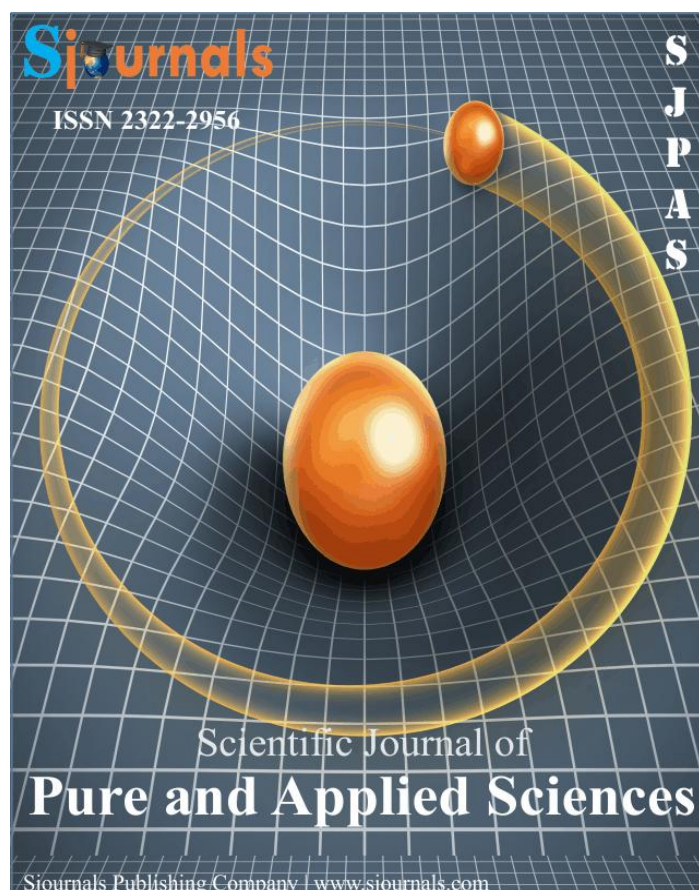


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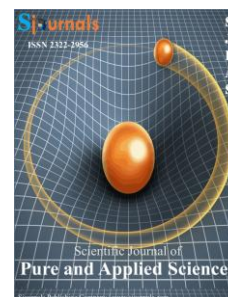
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Review article

How to write a proper HSE management system policy?

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ABSTRACT

Health, safety and environmental management system (HSE.MS) policies plays an important role in implementation of HSE factors in industrial fields and helps to reduce accident, injuries and hurt to environment. One of the key elements of HSE.MS is policy that is drafted and implemented in organizations. The purpose of this study is to provide an appropriate template for policy writing. At first, the HSE policies of many organizations were examined. Then these policies were classified according to missions, visions, and goals/commitments. The total of the collected policies was 190. Finally, according to these classifying, we proposed a proper HSE management system policy template. The proposed template helps managers of various organizations to write a proper HSE policy.

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1. Introduction

Health, safety and environment management systems, usually referred to as HSE.MS, is an integrated assistant tool composed of various factors such as organization framework, management role and operation specification (Kang et al., 2016; Alizadeh et al., 2017) that developed in the 1980s (Yan et al., 2017). This system is

people oriented, and dynamically control the risks and integrate sustainability principal into the management and operations of an enterprise (Nassiri et al., 2016; Alizadeh, 2015). At the functional level, HSE will strive to eliminate injuries, harmful health effects, and hurt to the environment (Azadeh et al., 2008; Farshad et al., 2006).

Each year two million workers lose their life due to work-related injuries and illnesses. Concerns about the health and safety of workers have increased due to the increase in the number of occupational injuries, illnesses and death. A safe, healthy and environmentally responsible work place is the right of all employees, which its responsibility is upon contracting corporations, parent corporations and the health authorities. HSE-MS is a response to address this essential need in work places (Nassiri et al., 2016).

Many organizations and companies have perceived that HSE management is an essential and vital part of modern factories and organizations (Shamaii et al., 2016). On the other hand, Safety, health, and environmental elements are delicate subjects for customers, staffs and other stakeholders (Mohammadfam et al., 2013). For example in the petrochemical industries, it aims to assure safe production, reduce risks and accidents and gain sustainable development (Yan et al., 2017). In the next instance, in order to reduce accidents and workers damages, the HSE management level must be continuously improved in construction site (Wang et al., 2012). Generally, potential benefits of Health, safety and environmental management system (HSE-MS) include: reduced injuries, incidents, emissions, wastes and operating costs, as well as improved reliability, profitability, validity and credibility (Abbaspour et al., 2010). In another study, HSE-MS is considered as an essential management tool to effectively observe and verify health, safety and environment policies in any organization and corporation (Shamaii et al., 2017). A policy is an instruction for making a decision that establishes general parameters for the decision maker (De Cenzo et al., 2011). Webster's dictionary has some of closely relevant definitions for policy:

✓ A definite course or method of action selected (by government, institution, group or individual) from among alternatives and in the light of given conditions to guide and, usually, to determine present and future decisions.

✓ A specific decision or set of decisions designed to carry out such a course of action. Such a specific decision or set of decisions together with the related actions designed to implement them.

✓ A projected program consisting of desired objectives and the means to achieve them.

One of the basic tasks confronting the safety occupational is the development and implementation of organization safety and health policies and procedures (Plog et al., 2002). Section 2(3) of the Health and Safety at Work Act 1974 requires employers, with more than four workers, to prepare and revise on a regular basis, a written health and safety policy together with the necessary organization and alignments to accomplish it and to bring the statement and any revision of it to the notice of their workers. On the other hand, when an inspector go to a site, it is very likely that they will want to see the health and safety policy because it is a primarily indication of management trend to safety and health. There have been instances of prosecutions being made due to the lack of a written health and safety policy (Hughes and Ferrett, 2012). That means, having a policy is a legal requirement (Whittingham, 2008).

Management commitment and headship includes a policy statement that should be developed and signed by the top official in the corporation. Safety and health goals and objectives should be included to assist with establishing workplace goals and objectives that indicate the company's commitment to safety. An enforcement policy is provided to outline disciplinary procedures for infractions of the company's safety and health program (Reese, 2017). The policy statement should be installed on eminent notice boards at every site and workplace and brought to the attention of all workers at induction (Hughes and Ferrett, 2012).

Policy regulates in writing the health and safety goals and standards the organization is required to achieve, ensuring that there is no contradiction between these and other business goals. The culture, values and beliefs of the highest level of management and directorship are expressed by the health and safety policy in the corporation who visibly identify with and champion the policy. The policy is committed to constant improvement of the safety management systems and needs to be reviewed and upgrade periodically (Whittingham, 2008). For this to be successful, a series of criterions needs to be created. Such criterions, or examples of good practice, are defined by comparison with the health and safety performance of other parts of the organization or the national performance of the professional group of the organization. The Health and Safety Executive publishes a yearly report, statistics and bulletins, all of which may be used for this goal. Typical criterions include accident rates per employee and accident or illness causation (Hughes and Ferrett, 2012).

It is worth mentioning that, first accident insurance policy in North America published in 1864. In 1949, the National Safety Council published a policy statement notifying the common interest of labor and management in incident prevention. On December 29, 1970, a new national policy was established, when President Richard M. Nixon signed into law the OSHAct (Hagan et al., 2015). Policies and procedures are necessary to ensure that OSHA and organization regulations for safety and health are carried out uniformly within an organization (Plog et al., 2002). Also, one components of safety and health program should be management’s commitment and safety and health policy and must develop and enforcement a set of safety and health laws and policies (Reese, 2017). A written policy statement, signed by the chief executive officer/president of the organization, should be made available to all workers (Hagan et al., 2015). A safety and health policy statement clarifies the policy, standardized safety within the company provides support for safety, and supports the implement of safety and health within the corporation (Reese, 2017). A good health and safety policy will also augment the performance of the organization in areas other than health and safety, diminish financial losses and help with the personal development of the employee (Hughes and Ferrett, 2012).

The objective of this research was collecting the HSE policies in different companies and countries and categorizing them to provide a HSE policy writing template. This means that, it is intended to be used for managers or presidents of organizations for standard policy writing about health, safety and environmental. It expected that this paper be helpful for HSE administrations around the world.

2. Methods

The first part of this research was concentrated on finding different HSE policies in organizations. It's have been done by means of general search in Google and achieve the internet address of different organizations and associations usually related to industrial fields then collecting their policies. The keywords that have been used for searching were "health, safety and environmental policy", "health, safety and environment policy", "HSE policy" and "HSE.MS policy". The total of the collected policies was 190.

We used tables used for classifying the policies. The first one table was assortment according to having or not having the company name, missions, visions, commitments or objectives, the manager's commitment sentence and signature and date. If each one of policies, as shown in first column, had the features of other columns, were shown by number 1, otherwise were shown by number 0 in its related part (Table 1).

Table 1

The policies characteristics. This measure was done by the number 1 (has) and number 0 (doesn't have).

Signature	Date	Commitment					
		sentence	Commitment	Vision	Mission	Company	Title
1	1	0	1	0	1	1	1
1	1	0	1	1	1	1	2
1	1	1	1	0	1	1	3
...
...

In the next step of the analysis, instead of visions, commitments and objectives, model templates were used. Among the policies that were gathered, there was a series of common concepts and sentences that were adopted. The aim of this work was to illustrate that how many percentages of organizations that were written these policies, have used these concepts and sentences for objectives/commitments and visions (Table 2). These templates for objectives include:

- ✓ Compliance with HSE requirements and standards.
- ✓ High priority for HSE.
- ✓ Monitoring, measuring and evaluating performance.
- ✓ Reduce and prevent pollution and wastes.
- ✓ Reporting and review of incident to improve performance openly.
- ✓ Allocate of qualified and competent manpower (human) and funds (resources).

- ✓ Maintaining safe condition and workplace for employees to prevent illness and injuries.
- ✓ If there is a risk rising, the employees have authority to stop work.
- ✓ Regular and periodic review of performance and policy to ensure performance improvements.
- ✓ Provide emergency plans to minimize loss and accidents.
- ✓ Training and awareness about policy and safety and health.
- ✓ Adopting a preventive approach to identifying health and safety and the environment risks throughout the all area.
- ✓ Encourage personnel and to develop the HSE management system.
- ✓ Responsiveness of managers and supervisors.

Table 2

Common concepts and sentences that were adopted for commitments.

Template	Policy 1	Policy 2	Policy...
Compliance with HSE requirements and standards	1	1	...
High priority for HSE	0	1	...
Monitoring, measuring and evaluating performance	0	1	...
Reduce and prevent pollution and wastes	0	1	...
Reporting and review of incident to improve performance openly	1	0	...
Allocate of qualified and competent manpower (human) and funds (resources)	0	1	...
Maintaining safe condition and workplace for employees to prevent illness and injuries	0	0	...
If there is a risk rising, the employees have authority to stop work	0	1	...
Regular and periodic review of performance and policy to ensure performance improvements	0	0	...
Provide emergency plans to minimize loss and accidents	0	1	...
Training and awareness about policy and safety and health	0	0	...
Adopting a preventive approach to identifying health and safety and the environment risks throughout the all area	1	1	...
Encourage personnel and to develop the HSE management system	0	0	...
Responsiveness of managers and supervisors	1	0	...

Template sentences for visions include:

- ✓ No any accident or incidents.
- ✓ No hurt or injury to employees.
- ✓ No hurt to environment.

In the meantime, some parts and sentences that were unrelated were omitted and no written as template sentence. Each of these policies that had one or more of these model templates, were shown by 1, otherwise with number 0 in its related part (Table 2).

3. Results

After describing the method, analysis for the policies has been conducted. A preliminary analysis of the policies collected, shows that 89.47, 18.9, 96.31, 53.15, 72.63, 84.73 percent of the policies have missions, visions, objectives or commitments, manager's commitment sentence, date, signature, respectively (Table 3).

Secondary analysis of the policies collected shows that 84.21, 68.94, 66.84, 61.57, 60, 52.63, 50.52, 36.84, 32.63, 29.47, 21.05, 19.47, 17.36, 7.36 percent of policies in their commitments, have pointed to the "compliance with HSE requirements and standards", "maintaining safe condition and workplace for employees to prevent illness and injuries", "training and awareness about policy and safety and health", "reduce and prevent pollution and wastes", "regular and periodic review of performance and policy to ensure performance improvements",

"adopting a preventive approach to identifying health and safety and the environment risks throughout the all area", "monitoring, measuring and evaluating performance", "responsiveness of managers and supervisors", "allocate of qualified and competent manpower (human) and funds (resources)", "reporting and review of incident to improve performance openly", "provide emergency plans to minimize loss and accidents", "encourage personnel and to develop the HSE management system", "high priority for HSE", "if there is a risk rising, the employees have authority to stop work", respectively (Table 4).

Table 3

Percentage of each of the HSE policy sections (mission, vision, commitment /objective, manager commitment sentence, date and signature).

Parts	Number	Percentage
Mission	170	89.47%
Vision	36	18.94%
Commitment/objective	183	91.36%
Manager commitment sentence	101	53.15%
Date	138	72.63%
Signature	161	84.73%

Table 4

Percentage and number of commitment templates that referred to in the policies.

Template sentence	Numbers	Percentage
Compliance with HSE requirements and standards	160	84.21%
Maintaining safe condition and workplace for employees to prevent illness and injuries	131	68.94 %
Training and awareness about policy and safety and health	127	66.84 %
Reduce and prevent pollution and wastes	117	61.57 %
Regular and periodic review of performance and policy to ensure performance improvements	114	60 %
Adopting a preventive approach to identifying health and safety and the environment risks throughout the all area	100	52.63 %
Monitoring, measuring and evaluating performance	96	50.52 %
Responsiveness of managers and supervisors	70	36.84 %
Allocate of qualified and competent manpower (human) and funds (resources)	62	32.63 %
Reporting and review of incident to improve performance openly	56	29.47 %
Provide emergency plans to minimize loss and accidents	40	21.05 %
Encourage personnel and to develop the HSE management system	37	19.47 %
High priority for HSE	33	17.36 %
If there is a risk rising, the employees have authority to stop work	14	7.36 %

Secondary analysis of the policies collected shows that 83.33, 72.22, 61.11 percent of policies in their visions have pointed to the "no any accident or incidents", "no hurt to environment", "no hurt or injury to employees", respectively (Table 5).

Table 5

Percentage and number of vision templates that referred to in the policies.

Template	Number	Percentage
No any accident or incidents	30	83.33 %
No hurt to environment	26	72.22 %
No hurt or injury to employees	22	61.11 %

One of the element keys that should be considered when a health and safety policy statement is being drafted, is commitment to the basic requirements of the Health and Safety at Work Act, workplace safety and training (Hughes and Ferrett, 2012), so the point that is mentioned in most HSE policies, is "compliance with the

requirements", "safe condition" and "training". Finally according to the study, our proposed template for HSE policy design is shown in the Fig. 1.

The figure shows a rectangular template for an HSE policy. At the top center is a box labeled "Policy title". Below it are sections for "Mission:", "Vision:", "Commitments/objectives:", and "Commitment sentence:", each followed by a dashed line for text entry. The "Commitments/objectives:" section includes a bulleted list of six dashed lines. At the bottom is a section for "Date & Signature".

Fig. 1. Proposed template for HSE policy.

4. Conclusion

We showed that what kind of goals and commitments were used in HSE policies. By means of this study, managers and administrators of health, safety and environmental will be able to use common and current clauses when they want to create and write their HSE policies. On the other hand, this article implicitly helps managers and HSE experts to write a proper HSE policy.

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