

The feedback Management of health and safety at work as a tool for decision making

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Abstract— Today, safety management is part of global management system of the enterprise. This management presents itself as a set of methods and practices that help an enterprise to understand its risk to lead the safety management to a high level of performance. In this context, companies must develop as a tool for corporate knowledge to put the item on practices to generalize and which to avoid. The feedback appears, therefore, as a necessary tool for businesses. However, the practice of feedback and its approach to implementation remain an issue specific to the company. As part of this work, we propose a model management system for health and safety, and as part of improving the performance of this system, an approach that we are part of the improvement of feedback. While relying on the analysis of actors technical, human and organizational efforts in this practice.

Index Terms—feedback, ohs management, safety, OHSAS.

1 INTRODUCTION

In the recent years, safety management has become an essential requirement in industry to remain competitive. This is because the long term success of an organization is dependent on its ability to improve its operations by reorganizing itself, so as to meet the challenging environmental contingencies on a continuous basis.

However, the success of these systems is not standardized systematic. It may indeed sometimes seem redundant to the existing arrangements or be incomplete. Its approach, sometimes too prescribed, too formal or too rigid is also likely to personnel subject to multiple controls, to reduce its autonomy, to go against him when he is supposed to be, paradoxically, the first beneficiary.

As part of continuous improvement, the feedback is the way to make ever more powerful devices to prevent accidents by ensuring detect deviations from the expected situation, to understand why, in can be taken into account and react accordingly.

The main objectives of the paper are:

1. To evaluate the OHS status in the company;
2. To examine people's attitude towards the OHS.
3. To explore benefits in integrating the feedback management systems..

2 PRESENTATION OF SAFETY AND FEEDBACK

Generally, in industry, the term security is used to designate:

- Safety for the product: this aspect of safety is actually a component of quality. It relates to the safe use for the customer of the product produced, which is why conform to specifications or standards.

- The safety of installations or industrial security: facing the major accidents, chronic risks and protection of residents.

This security is dominated by the history of dependability and enriched by many theories and developments in the last twenty years (human reliability, organizational approaches, resilience, safety culture).

- Occupational safety: this form of security for the prevention of occupational accidents and diseases of the company's employees. It includes fields as varied as the prevention of occupational hazards, hygiene, health workers, improving working conditions, workstation ergonomics, space planning...

Meanwhile, safety management, the emergence of safety in business, knows from various definitions, they sometimes show quite specific, especially in the normative literature, technical or commercial, which characterizes variously as:

- A set of interrelated or interdependent elements intended to establish policy and objectives of safety and health at work and to achieve these objectives;

- Part of an overall management system that facilitates the management of risks associated with the activities of the organization relating to health and safety at work. It includes organizing, planning activities, responsibilities, practices, procedures, processes and resources to develop, implement, review and maintain the organization's policy on OSH (OHSAS, 1999).

Note that this evolution of the term is due to changes in its concept, which, from an approach is part of another, has become a global, independent, interacting with other disciplines, and it uses the approaches developed in the field of management and management, particularly the systemic approach as part of a management system of health and safety at work. Historically, we identify four eras that characterize the evolution of safety management in its global sense.

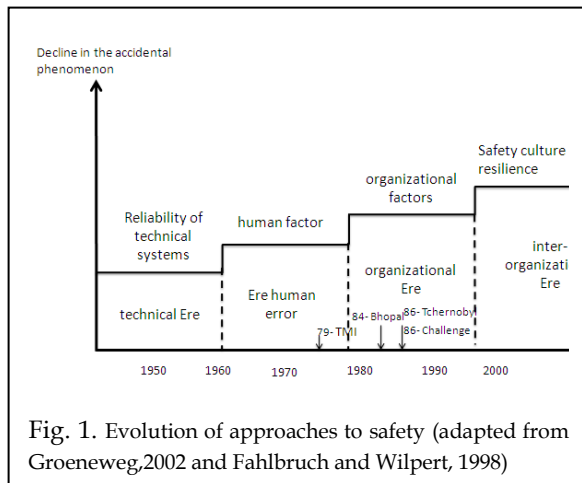


Fig. 1. Evolution of approaches to safety (adapted from Groeneweg,2002 and Fahlbruch and Wilpert, 1998)

In reality, the factors shown in the figure (Fig.1) are the basis for improving safety, therefore, whatever the approach of OH & S management, technical factors, human and organizational must be taken into account when developing the system of OH & S management.

Although the application of these standards and compliance are essential first steps in establishing an environment of work, however security does not seem not yet guaranteed.

The feedback concept is one avenue for addressing the OHS challenge. It has the requisite complexity. It concerns the frames of reference around a commitment to safety management, complementing an OHS.

The feedback is therefore a way to make every day more efficient devices for accident prevention, ensuring detect deviations from the expected, to understand the reasons for location, can be taken into account and react accordingly.

-The "event" feedback is based on the occurrence of an event which the company wants to understand the origin so as to avoid repetition.

It applies not only to major events, but also to those who have high potential gravity. For this, the event encourages recovery Feedback from the field the largest number of accidental events, even the most benign in order to identify cases in which it is necessary to find out more, the measures will be decided in view of the findings of the analysis to be conducted.

-The feedback "weak signals" to anticipate the occurrence of undesirable events, this form of feedback differs from the previous one by the simple fact that no event marking is actually occurred. It is rightly anticipate the occurrence. It should be noted at this point that investigations of most major accidental events have highlighted the presence of weak signals detected by the company, without for all existing organizations do have interpreted as a potential source a very serious accident.

-The "positive feedback", to identify best practices .Even less present in the companies met the feedback "weak signals" "positive feedback " is not more to learn from accidents or malfunctions, but to identify good practices and to strengthen

them.

This form of feedback is in its launch phase in companies sought for this review. It is based on the same desire to teach others from experience. The difficulty lies in the ability to analyze practices and their detection and reinforcing good practices.

3 SAFETY MANAGEMENT SYSTEM AND SAFETY BEHAVIOUR

3.1 Safety Management System (SMS)

This system is considered as the set of integrated mechanisms in the organization, comprising policies, strategies, and procedures , designed to control the risks that may affect employees' health and safety.

few empirical works evaluate the psychometric properties of the scales proposed to measure the SMS concept , and no consensus has been reached about the specific dimensions making up the system. The concept is non-operationalized.

We consider that an adequate safety management system must contain six key dimensions: OH&S policy, Hazard identification, risk assessment,legal requirements, Communication, consultation,training & participation of workers, operational control, incident investigation, non-conformance,corrective & preventive action, performance measurement & monitoring, statistic and control. Apart from the theoretical contributions from the abovementioned literature, in the process of developing the measurement scales of each dimension we used as reference dimension used in the OHSAS.

3.2. Safety behaviour

The model proposed based the theories of job performance distinguishes between various components of performance. With regard to safety, safety compliance and safety participation can be treated as safety behaviour or components of safety performance in another study, we can measure self-rated safety behaviour by three safety behaviour measures. They were named as structural safety behaviour (concerning participation on organized safety activities), interactional safety behaviour (concerning safety activities in the daily work in interaction with co-workers and management) and personal safety behaviour (measuring behaviour promoting personal protection). It is assumed that safety related behaviours such as safety compliance and safety participation can be considered as components of safety performance. Safety compliance represents the behaviour of the employees in ways that increase their personal safety and health. Safety participation represent the behaviour of employees in ways that increase the safety and health of co-workers and that support an organization's stated goals and objectives.

4 PURPOSE OF THIS STUDY

The main objectives of the paper are:

- (i) To evaluate the OHS status in the company;
- (ii) to examine people's attitude towards the OHS
- (iii) to explore benefits in integrating the feedback management systems.

For evaluate the OHS, we use the audit safety, and we use a Safety Culture Questionnaire for measurement the safety behaviour, our objective is to present a feedback system of safety culture in company, this way aide us to identify best practices, therefore we present the positive feedback.

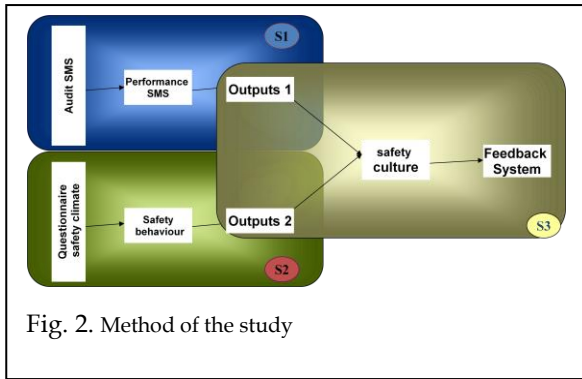


Fig. 2. Method of the study

The perceptions of the employees about the six safety management practices and their safety behaviour were measured with the help of a questionnaire. We used the Safety Culture Questionnaire. It contained questions covering areas of management commitment (9 items), safety training (6 items), workers' involvement (5 items), safety communication and feedback (5 items), safety rules and procedures (5 items), safety promotion policies (5 items) and safety behaviour (12 items). The content and substance of most of these 47 questions.

The measurement scales of the concepts used in this work were constructed following a multiple indicator approach. Thus each concept was measured using various items or variables.

Of the questionnaire, scales (1=strongly disagree, 2 = disagree, 3=neither nor agree, 4 = agree, 5 = strongly agree).

The performance indicators were measured subjectively. The respondents had to report their degree of satisfaction with these indicators on a 5-point Likert scale ranging from "1 = very unsatisfied" to "5 = very satisfied". The level of satisfaction with the

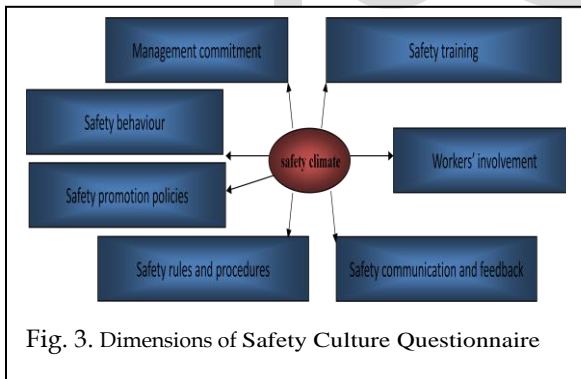


Fig. 3. Dimensions of Safety Culture Questionnaire

The performance of SMS were measured with the help of a Safety audit.

It contained questions covering six key dimensions: OH&S policy, Hazard identification, risk assessment, legal requirements, Communication, consultation, training & participation of workers, operational control, incident investigation, non-conformance, corrective & preventive action, performance measurement & monitoring, statistic and control.

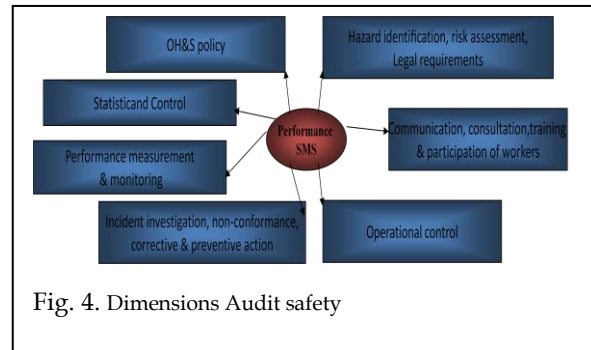


Fig. 4. Dimensions Audit safety

5 FEEDBACK MANAGEMENT OF SURVEY

5.1 Performance SMS

We noted the presence of a good safety culture, integrated into everyday practices. The level of involvement and listening to the leadership and supervision is very satisfying. The results of the statistics are improving continues. The control of risk after the analysis was made to these fruits. Through the Journal Improvement we see that actions have allowed to improve and complying with the requirements of a certifiable SMS and also the Moroccan regulations for performance management system.

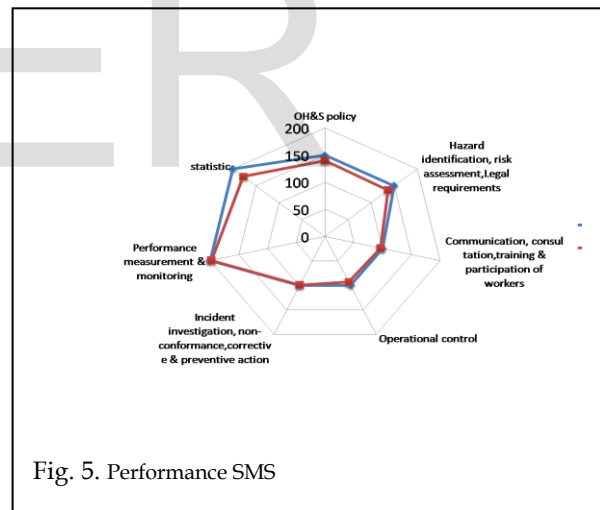


Fig. 5. Performance SMS

5.2 Safety Culture & behaviour safety

Analysis of the results allows us to deduce that the staff has an OSH culture is an integral part of their daily lives and are less exposed to risks in the business elsewhere.

Depth analysis of the responses of this company shows that the most obvious difference from other companies, the score is tied to the management dimension.

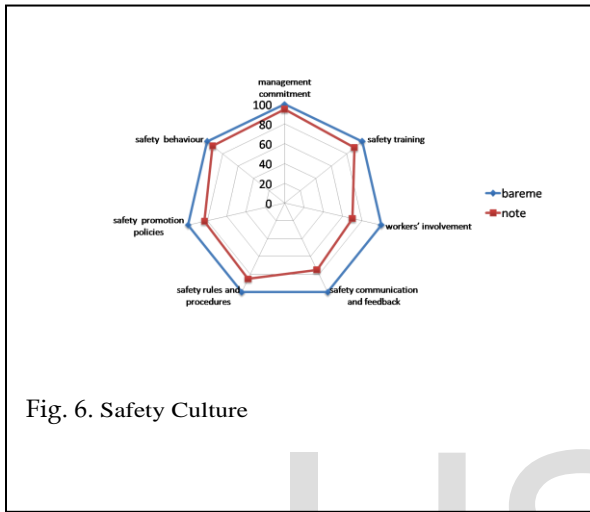
The perception that the staff that management does not work quickly enough to solve the problems of safety and that is after an accident;

The survey also shows us that there is still work to be done at the control and management of occupational risks,

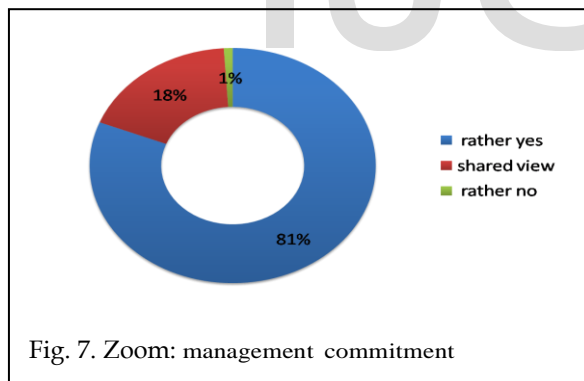
which are more known against behavioral risks are known only partially and we see very often confusion between risk behavior and its causes.

Specific training in behavior exists but does not reach the desired extent and it is not beneficial to all categories.

Suggestions for improvement were directed towards improving organization and work procedures are highly desirable. Other proposals on communication supports were asked.

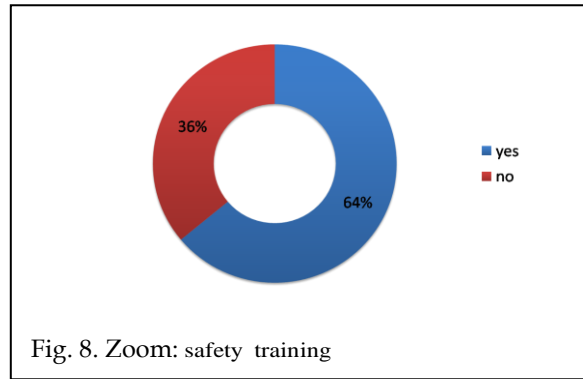


5.2.1 Zoom: management commitment



The survey results show that for the majority of employees of the company safety comes first everything. Only 1% of surveyed showed that the key is to have a quality production. Safety could be managed only by the rules and procedures such was the response of 43% of surveyed, while 57% do not agree the same idea with them.

5.2.1 Zoom: safety training



64% have linked the adoption of unsafe behaviors lack of training and awareness in this area, they also criticized the quality of training and argue that awareness and insufficient.

6 CONCLUSION

This review has examined the recent literature and has summarized briefly the extent to which OHS risks are taken into account in the project management and industrial safety practices, with special focus in the company.

We have thus provided a review of research and practices addressing the relationship between improvement of OHS and feedback and an overview of some of the tools, methods and approaches being developed or adapted to improvement OHS.

This study shows us that In short, according to the results of the current work the only factor that has a direct effect on safety behaviour in OHS is the fluid communication between organisation members and the transmission of information to the worker. That communication does, however, depend on the level of commitment of the firm's management. Thus management's commitment towards safety has an indirect effect on safety behaviour via communication.

Our perspective is to improve the feedback management for knowledge transfer from one company to another following an intervention at the first company, appears capable of improving safety climate thereby also reducing the accident rates

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