

## **IMPLEMENTATION OF SAFETY CULTURE IN AUTOMATIVE COMPONENTS MANUFACTURING COMPANY**

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### **ABSTRACT**

Within the automotive component manufacturing industry a high proportion of occupational accidents are as a result of lack of awareness, training and in correct work practice, it is the relationship between safety culture and safety performance. The concept of culture is now widely used by those who conduct research on implementation OHS safety culture and work-related injuries, promotional activities and mind stimulating exercises are effective tools for raising and maintaining the profile of occupational health and safety (OHS) within an organization. It is important to maximize the impact of health and safety promotions, and to ensure that consistent, desired message is conveyed. The aim is to implement the safety culture in a positive anyway proactive way. Effective communication brings together people, process, and systems. The challenge is to implement safety culture in all levels of the organization, through effective strategies such as published materials, displays, media, training and Internet. To achieve a positive safety culture it is essential to gain management commitment and workers involvement in the decision-making and problem-solving processes. The benefits can lowering the lost time injury rate, and can include economic and social gains

Keywords— Implementing safety culture, behaviors based safety through trainings.

### **1. INTRODUCTION**

Many organizations are doing excellent job to increase their occupational health

and safety (OHS) systems but they fail to capitalize on the promotional opportunity and mind stimulating exercise that this presents. They tend to focus their OHS promotional activities and mind stimulating exercise on displaying the number of days since the last time injury (Greek, 1995). Promotional activities and mind stimulating exercise is the “application of science of behaviour change to real world problems”.

Promotional activities and mind stimulating exercise “focuses on what people do, analyses why they do it, and then applies a research-supported intervention strategy to improve what people do”. This only measures the output of the system and may give a false sense of security leading to a reactive approach to OHS (Earnst, 1997). The research that identified to be promotional activities and mind stimulating exercise program must include all employees and also management commitment to OHS, are key aspects of safety culture (shaw and Blewitt, 1996). To achieve changes in behaviour change in policy, procedures and systems that allow continuous safety improvements, knowledge factors, and improvements in work environment (Griffiths, 2001).

Miller( 1998) recommends that organizations that have sufficient OHS management systems and engineering controls in place before implanting the promotional activities and mind stimulating exercise to improve the workplace culture. The rewards for improvement in investigation within organization and continuous safety rules adherence employees ( Vecchio-Sadus, 2000, 2001, 2002). To be successful, the promotional activities and mind stimulating exercises program used must be based on scientific knowledge. It has proven that “behaviour influences attitude and attitude influences behaviour”. The goal is should be small gains over and over again; continuous growth. Promotional activities and mind stimulating exercises are a not quick fix. It is a commitment.

There are numerous programs on how to implement promotional activities and mind stimulating exercises. They vary in price, detail and commitment, but goal is always the same: eliminate injury rate. Focusing on workgroups, in static settings was demonstrated to be most efficient at behaviour change and injury reduction.

## 1.2 Fundamentals of promotional activities and mind stimulating exercises

According to Thomas R. Krause. 80-95% Of accidents came from unsafe behaviours. Fig 1 shows that, according to Thomas R. Krause. Behaviour is a leading indicator of safety. That is, human is the elementary factor resulting in accidents. Unsafe behaviours will lead to risk conditions and various mistakes which ultimately lead to loss or more severe accidents. To reduce the number of accident we must start from building safe behaviours first.

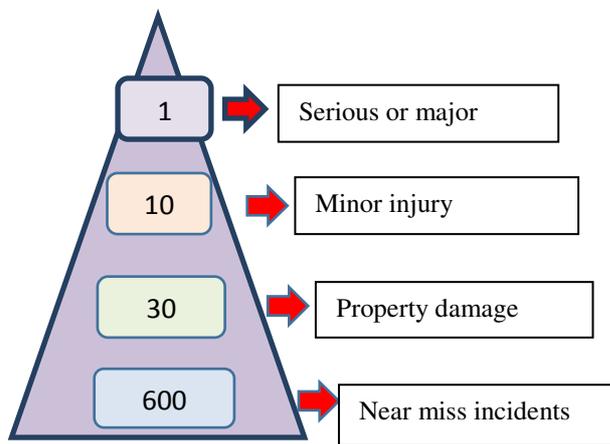


Fig 1. Behaviour

Behaviour underlies as a root cause for all the accidents. Hence, we are concentrating on promotional activities and mind stimulating exercises to enhance positive safety culture

### 1.3 problem definition

The following are the unsafe behaviours defined by the industry while the employees working.

1. Adjusting / cleaning/ / loading & unloading while machine in running condition.
2. Two hand control operated by two persons.
3. Working height without safety belt & helmet.
4. Pneumatic tools like doors, guns, lines wrong handling.
- 5 Operators working in welding / gas cutting / air cleaning without wearing personal protective equipment.
6. Handling chemicals without PPE's (goggle / face shield / rubber gloves / aprons).
7. Pulling the trolley during material movement affects the spine.

From the above stated problems the five problems are related with non-adherence the personal protective equipment (PPE).

Hence the above problems are compressed to following.

1. Non-adherence of PPE.
2. Adjusting & cleaning of machine in running condition.
3. By-passing the existing safety mechanisms.

4. Operating powered handling material equipment without equipment.
5. Pulling the trolleys.

#### 1.4 incident rate

The sated five problems which play a major role in incident rate of the company. Five factors often resulted in first aid injuries. The incident rate is calculated using guidelines provided by IS: 3786:1993 “method for computation of frequency and severity rates for industrial injuries and classification of industrial accidents”.

Incident rate

Total no. of first aid injuries × 1000

—————  
Average no. of workers employed.

#### 1.5 Scope and objectives

Scope of the project is to eliminate the behaviour to develop safe environment. General unsafe behaviour exhibited from the employees are:

1. Non-adherence.
2. By-passing the safety mechanisms.
3. Adjusting, cleaning machine in running condition.

Main objective of this work is

1. To develop injury free culture in organization.
2. To reduce the incident rate of company

## 2. LITERATURE SURVEY

**Douglas J. Myers et al., [2014]** said that the concept of culture is now widely used by those who conduct research on safety and work-related injury outcomes. We argue that as the term has been applied by an increasingly diverse set of disciplines, its scope has broadened beyond how it was defined and intended for use by sociologists and anthropologists.

**Anne Richter et al., [2004]** discusses about safety cultures, drawing on the differentiation, integration and ambiguity scheme introduced by scholars of organizational culture. An ethnographic approach has been applied in the study of meaning and symbols relating to work, hazards, occupational accidents and prevention

**James D. Westaby et al., [2005]** developed and tested a new theory of behavior, entitled behavioral reasoning theory. The theory proposes that reasons serve as important linkages between beliefs, global motives, attitudes, subjective norms, and perceived control),

intentions, and behavior. An underlying theoretical assumption in this framework states that reasons impact global motives and intentions, because they help individuals justify and defend their actions.

**E.Scott Geller et al., [2001]** this article reviews the behavioral science approach to preventing workplace injuries, which is currently being applied successfully in numerous companies worldwide. Unlike the traditional command and control approach to occupational safety, behaviour based safety (BBS) provides tools and methods employees can use to take control of their own safety performance.

**Ching-Fu ChenPilo et al., [2013]** safety behavior is viewed as a critical determinant of airline safety performance, and thus it is crucial to identify the factors which may enhance such behaviors.

**Rokeach et al., [1968]** Defined 'attitude' as a learned orientation which focus towards the object and situation which provides a tendency to respond favourable or unfavourable to the object situation.

**McSween et al., [1995]** Revealed that the behavioral approach to injury control has a number of advantages to the management and they can approach the people in the

natural setting where they problems occurred in such particular works area.

### 3. METHODOLOGY

This project deals with the promoting safe behaviour to develop injury free culture in the organization. The incident rate has been growing due to unsafe behaviours exhibited by the employees while working. While promoting safe behaviours automatically the unsafe actions will decrease and the incident rate will come down.

#### 3.1 Promotional activities and mind stimulating exercises

In order to promote and enhance health and safety awareness amongst employees, it made interesting and attractive, It should be positive (do not only deal with negatives), enjoyable, and involve communication between all levels of the organization. Promotional activities and mind stimulating exercises are also used to motivate employees include:

#### 3.2 Step by step approach

- Defining safety culture in company.
- Displaying safety culture in company
- Board displays.

- Pamphlet distributions
- Safety posters
- Special campaigns.
- Issuing of safety pocket card
- Motivation
- Behavior based safety training

### 3.3 Defining safety culture in company

Safety culture defined as “the way we do things around here” is that this not only includes, but appears to link culture directly to behavior. Safety culture is the attitudes, values, norms, beliefs, that particular group of people share with respect to safety and risk. It refers to extent to which individuals and groups will commit to it

- Personal responsibility of safety.
- Act to preserve safety.
- Enhance and communicate safety concerns
- Adapt and modify behavior based on lessons learned from mistakes.

### 3.4 Displaying safety culture in company

Displaying of company culture is nothing but used to give awareness about the safety in easier way to be understood even by uneducated peoples. Nowadays many awareness programs are conducted by every sector but peoples have no time to hear due to the busiest hours. So it is the time for us to create a precaution about the safety in easier way that should attract the peoples to learn about the concepts. The display boards may be either video or pictures which should be impressive and easily to be understood by public. The work we implement should be top-notch by including each and every precaution steps.

### 3.5 Board display

PPE's code boards are displayed at all plant shop floors to aware the members, spread the information about importance PPE's and to insist the right PPE's for right job. PPE's board displays are play vital role in all plant shop floors to aware both educated and uneducated members. Some of the snap shots of PPE's code displayed boards are mentioned below.

### 3.6 Pamphlet distribution

A Pamphlet is a small booklet or leaflet containing safety information or arguments about a single subject. The safety information contain in pamphlet is very

clear and meaningful. It is mainly used to aware to follow safety rules in company. Safety pamphlet are distributing to every employers, employees by HSE managers or safety officers. Safety pamphlets are also distributing to public for improve the safety knowledge. Safety department members are also periodically distributing the Pamphlets to every new joining employers, employees and also daily visitors of the company.

### **3.7 Safety posters**

Posters do not constitute a health and safety program in themselves but have greater value when integrated with an overall planned program of risk communication. Posters can overcome language problems through the use of illustrations and symbols. To maintain attention, posters should be kept on a special display board (not cluttered with other notices) and changed at frequent intervals. As it is not always possible to involve all employees in every OHS activity, it is important to promote the activities of the OHS personnel. An OHS notice board with pictures of the OHS Committee, and the health and safety representatives is a simple tool to demonstrate employee involvement. Consultative committee meeting minutes

should be in a format that is most likely to be read by employees.

### **3.8 Safety Campaigns**

Safety campaigns week' is a opportunity to implement the promotional activities and mind stimulating exercises to increase the safety knowledge inside of the organization. There is no targets to meet, just a promotional activities associated with health, safety and life style issues. The events aims to promote the activities a happier and healthier workplace by raising the level of awareness amongst employees and demonstrating commitment from organization. Competitions are conducting in all level of employees and issuing reward and gifts for winners. There is good participation in Health and Safety Week from all levels of organization.

### **3.9 Issuing of safety pocket card**

Health and safety pocket cards are published by the HSE (Health Safety and Environment) department and are a legal alternative to the HSE approved Health and Safety pocket cards. The pocket cards are suited to issuing to workers, providing them with a personal copy of the Health and Safety cards. All employers are required by law to either provide workers with a pocket card or to display the HSE

approved poster Pocket card is simplified, easy to read, version of the poster. In simple terms, using numbered lists of basic points, the pocket card outlines what employers must do, what workers must do and what to do if there are concerns with the health & safety in the work place.

### 3.11 Motivation

To instil positive attitudes and behaviors toward OHS, proactive programs must be designed with employees needs in mind. This information can be obtained through a short survey. A post-course survey should be undertaken to appraise the impact of the seminar or training, and to identify areas for improvement. We can motivate the employees through by training and providing high quality of PPE's, good look of PPE's, good comfortable PPE's etc. Motivation should play vital role in all organizations to achieve the positive safety culture of the organization

### 3.12 Behavior based safety training

The commencement of BBS training program is essential that people at all levels receive the appropriate raining. Such a program incorporates a number of elements.

- **Raising the safety awareness:** This is the one the principle objectives of the training program

me. Poster campaigns, targeting both safe working practices and the cause of accidents and ill health, should be used to raise awareness.

- **Coaching:** Line managers, supervisors should receive the frequent coaching and that coaching should be documented by the self-operating procedure.
- **Reviewing the consequences of unsafe behavior:** Regular feedback sessions are necessary whereby accidents arising from unsafe behavior are reviewed with the reference to the direct and indirect cases of those accidents. By the way no doubt that people learn from the others mistakes.
- Once the program has been established and it is necessary to monitor frequently. Similarly in the case of observers, they may lose heart if they see no action being taken following their observation.

BBS is not based on assumptions, personal feeling, and/or common knowledge. To be successful, the BBS program used must be based on scientific knowledge.

Behavior-based safety supplements other elements of an organization's safety

process by supporting safety practices and providing data that helps the organization prioritize and address conditions and design factors that contribute to unsafe acts. By using this BBS system we can reduce the accident and improve the safety culture as desired.

## CONCLUSION

This project has outlined a number of different marketing tools that can be used to promote management commitment and employee involvement in OHS by fostering participation and co-operation at all levels in the decision-making process. Observation, evaluation, and safety survey has been made then few problems are identified for that promotional activities and mind stimulating exercises made to give awareness for the uneducated peoples by distributing the pamphlet distribution, safety pocket cards, board display, training, safety campaigns, members involvement, creative activities and video displays. Mind stimulating exercises mainly implemented for well-known safety knowledge persons. By involving the management commitment in promotional activities and stimulating exercises concept and behavior modification techniques such as intervention, the incidents in the month of August, September, October &

November has been reduced. Hence incident rate also reduced gradually. The PPE consumption from stores can be easily increases in number by implementing of promotional activities and mind stimulating exercises. Successful involvement of middle management persons.

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