

# Behaviour Based Safety

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**Abstract** - With the advancement of technology and strict legal norms, Organizations are becoming aware of the need to provide a workplace that is not only free of common injuries but one that also protects workers, facilities, and the environment from the consequences of more serious incidents involving safety, security, environmental, and other risks. Taking into consideration the human sufferings and economical loss due to accidents, it becomes imperative on the part of each one to prevent the accidents either by removing or controlling the hazards in industries/construction sites. Despite advances in accident prevention and providing safe and healthy environment to the industrial workers, safety at work still needs to find a complete solution. Accident prevention does not lie on inventing safe machines alone but also on improving the knowledge, skill, attitude, behaviour and morale of the industrial workers. Therefore a research study on safety management to identify the need for implementation of Behaviour Based Safety to enhance total safety culture in a petrochemical construction project. Technically, a survey was conducted as a part of the project. Questionnaire comprising of 25 questions based on behaviour based safety management were recorded.

**Key Words:** Behaviour Based Safety (BBS), Behaviour Observation and Intervention (BO&I), Questionnaire Survey, Work Permit System, HSE Policy, etc.

## 1. INTRODUCTION

Behaviour Based Safety (BBS) is the "application of science of behaviour change to real world problems". Behaviour Based Safety "focuses on what people do, analyzes why they do it, and then applies a research-supported intervention strategy to improve what people do". Behaviour is variously defined as:

- [1] How a person conducts himself
- [2] The demeanors and manners of an individual
- [3] An observable action of a person

The causes of human behaviour are associated with attitude, personality, motivation and memory, together with those physical and mental characteristics which constitute a person and his environment. Behaviour Based Safety (BBS) is a process that reduces unsafe behaviours that can lead to incidents occurring in the workplace. Behaviour Based Safety management focuses on the identification and modification of critical safety behaviours, and emphasizes how such behaviours are linked to workplace injuries and losses. Behaviour Based Safety seeks to change the person's mindset, habits and behaviours so that the "at risk" behaviour will not be performed.

## 2. METHODOLOGY

A survey was conducted as a part of the project which included Questionnaire comprising of 25 Questions about Behavioural Based Safety Management. Respondents were given 5 options based on their agreement level to the question ranging from strongly agree to strongly disagree.

## 3. DATA COLLECTION AND RESULT

For the survey on BBS Management, a sample size of 25 respondents was chosen and a questionnaire was given to each of them. They were given sufficient time to record their responses. Each of the questions had 5 options. 1 - Strongly Agree 2 - Agree 3 - Neutral 4 - Disagree 5 - Strongly Disagree. The respondents were approached individually and the questionnaire was collected from them.

Almost 90% of sample size was positive about management attitude towards Health and Safety of employees. This is quite evident from the tagline "Safety First" being imprinted on the helmet and coverall. Also many banners and notices are put up in various parts of the plant stating the management commitment towards HSE of employees.

A 90% sample size stated that safety audit, safety inspection in their department and safety committee meetings conducted regularly. Regarding the safety committee they agreed that it is an active and result oriented group.

Almost 90% of sample size said that all workplace incidents/near misses are reported in their department. This reinforces the fact that each area champions/supervisors are supposed to report at least 5 near misses in their respective areas in a month. These near misses are to be reported to the safety department and based upon their nature and importance, relevant actions are initiated by the safety department. Regarding the orderliness/cleanliness of the work area, 20% of sample size was of the opinion that it needs to be improved. Nearly 12% of workers said that they were not comfortable with work environment especially heat and dust. There were no work environments in the industry requiring worker to continuously expose to noise. All sample size agreed upon work permit system that has been followed in the plant.

#### 4. RECOMMENDATION

Organization may consider the following recommendations for initiating and sustaining a BO&I programme.

- [1] Communicate the BO&I approach and its underlying principles to all employees company-wide.
- [2] Empower employees to own and drive the BO&I process by granting them the authority to act on HSE concerns, so that they may proactively contribute towards HSE.
- [3] Provide training for safety coaches-to-be in three key areas: HSE knowledge, observation skills, and coaching skills.
- [4] Instead of a long checklist, keep behavioural observations short by focusing only on a few critical behaviours at a time.
- [5] Ensure that the BO&I approach emphasises the positive reinforcement of safe work behaviours. Encourage safety coaches to give recognition on-the spot whenever it is due. When handling at-risk behaviour, immediate intervention is necessary only when the at-risk behaviour observed may cause a hazardous situation which can lead to a workplace accident or injury.
- [6] Emphasise that the observation and feedback process must not be conducted in a confrontational manner, as it is not an inspection or audit.
- [7] Progress from supervisor-to-worker to peer-to-peer observations, announced to unannounced observations, and intra-dept. to inter-dept. observations as the WSH culture of the company matures.
- [8] Provide company rewards and incentives for repeated demonstrations of safe behaviours and good overall HSE performance.

#### 5. CONCLUSION

The survey was completed successfully and the people showed good participation. They took time to complete their survey and provided various suggestions to improve the existing safety system. The contractors also had sound knowledge on safety related issues and awareness towards safety. Almost 90% of sample size was positive about management attitude towards Health and Safety of employees. Regarding the orderliness/cleanliness of the work area, 20% of sample size was of the opinion that it needs to be improved. Display of HSE Policy at various places and clearly explaining HSE Policy would familiarize workers with HSE policy. Nearly 90% of sample size strongly agreed that rewards for safe behaviour and safety incentive programs are effective ways of improving safety culture.

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