INTRODUCTION

Behavior Based Safety (BBS) was first applied in industries and seeking to further improve safe workplace behaviours since the mid-1970s. BBS is a proactive approach by focusing attention on at-risk behaviours that can lead to an injury. Based on research of the “accident pyramid”, the large numbers of unsafe behaviours and conditions at the bottom of the pyramid will inevitably lead to a fatality.

Studies have also shown that there are about 96% of unsafe behaviours compared to 4% of unsafe conditions. Therefore, reducing unsafe behaviours can help eliminate serious accidents.

Organizations are becoming increasingly 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. Unsafe actions of people which in different circumstances could cause an accident, property damage, process interruption or create an environmental hazard.

A nearmiss incident is an unplanned event that did not result in injury, illness, or damage, but has the potential to do so. Heinrich’s Domino Theory (1931) - the accidents were caused by an unsafe act, an unsafe condition, or both. Reporting a near miss or a “close call” can provide ways for people to understand how an accident could have happened and how to prevent an accident in the future without anyone getting hurt.

Considering the human sufferings and economical loss due to accidents, it is very much essential for everyone to report nearmiss incidents so that accidents can be prevented by removing or controlling the hazards in work places. Although this is not a complete solution, still then it is a step forward for prevention of accidents and providing safe and healthy environment to the industrial workers.
Accident prevention does not lie on devising safe machines alone, but also on improving the knowledge, skill, attitude, behavior and morale of the industrial workers. Therefore, a research study on “behavioural safety aspects towards nearmiss incidents” to identify the need for implementation of Behavior Based Safety to enhance total safety culture at Paradip Refinery Project is attempted.

The following are some requirements for any approach to safety at work that brings about noticeable, lasting results and contributes to a total safety culture:

1. A strong management commitment towards maintaining and improving behavioural safety, witnessed in the regular acts of individuals at management level.
2. Respectful, trusting, open communication between management and employee groups about all aspects of safety in the workplace.
3. An open, feedback-rich culture among employees, which enables employees to consistently learn and grow.
4. A commitment to improve the profile of and attitude to health and safety and increased employee engagement in safety.
5. An emphasis on safe and unsafe behaviour; not a sole dependence on lagging indicators such as safety statistics.
6. A strong, consistent, timely reaction to the discovery of unsafe acts, whether they result in injury or not. Safety incidents are viewed as an opportunity to learn and improve.
7. Generally transparent and fair leadership from all, including managers, supervisors and owners.
8. Awareness amongst all staff of different ways to consider or query human factors – how we do, what we do, and why.

A Behaviour-Based Safety (BBS) is a process through which work groups can identify, measure and change their behaviours.

It is a process that applies the principles of the Antecedent, Behaviour and Consequence (ABC) behaviour model. This assumes that all behaviours have one or
more antecedents or activators or prompts which initiate the behaviour and one or more consequences that either encourage or discourage repetition of the behaviour.

Behavior is variously defined as:

- The way a person behaves in response to a particular situation.
- The manners of an individual.
- An outward expression of attitude.

To be successful, a BBS program must include all employees, from the CEO to the front line workers, including but not limited to hourly, salary, union employees, contractors and sub-contractors. To achieve changes in behavior, a change in policy, procedures and/or systems most assuredly will also need some change. Those changes cannot be done without buy-in and support from all involved in making those decisions.

Features of a good Behavior Based Safety Program:

- Involves a systematic & improvement intervention.
- Based on observational data collection.
- Involves significant workforce participation.
- Targets specific unsafe behaviours.
- Involves regular focused feedback about on-going performance.
- Involves data-driven decision-making processes.
- Requires visible on-going support from managers and front-line supervisors.

BBS programmes are typically driven by frontline employees; however, supervisors and managers play an integral role in promoting, modeling and reinforcing the programme. Without strong safety leaders, a BBS programme will suffer and the expected positive results may not be observed.

Managers and supervisors affect the work group in many ways:

- Their own behaviour acts as a model for those reporting to them.
Their attitudes, witnessed in what they say formally and informally, for instance in the canteen as well as at the start of a shift in front of senior managers, make their mark.

The most important effect comes from what the supervisors really do and think, not what they say, they do and think.

They behave 'on behalf of' large groups of employees at times where time is short or energy reduced. For instance, if employees are tired, their behaviour very much depends on what the supervisor does, says and accepts as reasonable from their group of reportees.

The human behavior is associated with attitude, personality, motivation and memory, together with those physical and mental characteristics which constitute a person and his environment. Behavior Based Safety (BBS) is a process that reduces unsafe behaviors that can lead to incidents occurring in the workplace.

Nearmiss Reporting System focuses on the identification and analysis of critical safety behaviors, and emphasizes how such behaviors are linked to workplace injuries and losses and development of such a system is contingent upon thorough understanding of fundamental issues. Many near-miss incidents go unreported. Many employers and employees may not identify them as a reportable occurrence, but it is more often human nature that keeps these lessons from improving the safety system. People may resist reporting for a number of reasons, including:

- They do not want to be blamed for problems or mistakes;
- They do not want to create more work;
- They do not want to be perceived as a troublemaker or careless.

No matter what may be the reason, if unsafe acts or conditions are identified and corrected, injuries most likely can be prevented. Supervisors should encourage feedback on nearmisses by maintaining a positive approach to gathering information and, avoid placing blame on an individual or group.

Behavior Based Safety is a proactive process that helps to get changes in a work group’s safe behavior levels before incidents happen. Behavior Based Safety seeks
to change the person’s mindset, habits and behaviors so that the “at risk” behaviors will not be performed. The BBS approach & nearmiss reporting in the Oil and Gas Industries are able to minimize accident, change unsafe behaviour and improve quality and safety environment.