

RISK ASSESSMENT BY IMPLEMENTING MS5 IN TOOLBOX TALK

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Abstract— The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization's health and safety management. One of the important tools of safety culture is StepBack 5x5 which is a simple activity that encourages workers to identify and deal with hazards associated with all tasks for all jobs. It helps to promote a hazard management culture through continual self monitoring of their job site and work activity. The higher the risk factor of the job they are undertaking, the more important it is to do effective StepBack 5x5 reviews all day long. The goal of the project is to provide effective awareness to the workers in the Toolbox talking and train them to identify the hazards in their work area and assess all possible risks by performing the five steps of MS5 tool which is the customized concept of StepBack 5x5 and eliminate or control the hazards by suitable effective control measures and engineering measures.

Index Terms—StepBack 5x5, MS5, Toolbox talk.

I. INTRODUCTION

This is to execute an effective safety culture in the industry and assess all possible potential hazards in the job site. Management systems and their associated policies and procedures depend upon the actions of individuals and groups for their successful implementation. The successful execution of the procedure requires the actions of properly trained individuals who understand the importance of the underlying intent, who accept their responsibility for the task and this can be done by a healthy safety culture. So I am implementing MS5 which is the customized tool of STEPBACK 5 X 5 safety tool concept in the Toolbox talk which is a risk awareness process and performing an Every Minute Risk Assessment.

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A. About MS5

Ref [1] Safety culture is the core of internal environment for safety management system, and it is significant for the enterprise's safety. By using the concept of STEPBACK 5 X 5 which is one of the effective safety culture tool I formed a tool called as MS5. This tool will help in the assessment of risk or hazard in the job site by implementing it in the Toolbox Talking. The MS5 provide three objectives to the workers and they are;

"I take 5 Minutes for my Safety and the one of my colleagues."

"I take control of the situation."

"I apply the 5 steps of a proper risk assessment before starting my job."

As the objective signifies the workers will be aware of their job and its surroundings and takes control of the situation, the five steps of MS5 helps them to assess the risk in their job.

a. Stepback 5x5

Stepback 5×5 is a personal planning tool developed to help all of us to ensure that we perform even the most mundane of tasks without getting hurt. It is used to assist us in maintaining awareness of our environment at all times and aid in the identification and control of immediate hazards as we go about our day-to-day work, as in Ref [7].

It is based on the principle of 'ENGAGING THE MIND BEFORE THE HANDS' by:

1. Stepping back 5 paces from the job
2. Investing 5 minutes (nominal) to step through the job in your mind and identify plans to control hazards before starting the job
3. STEPBACK 5 x 5 is an informal personal planning process. It is essentially a mental JHA applied before starting ALL jobs.

The process encourages sharing of information and experiences with others, Ref [7].

b. Customization to MS5

In MS5 where M represents Minutes of 5 taken for the safety assessment process in the Toolbox Talking and S represents the Steps of 5 taken for the assessment of risk while working. In this MS5, safety culture and hazards involved on the job is discussed on the Toolbox Talking which takes approximate timing of 5 minutes. An awareness of the hazard involved in their job and the safety precautions

to be taken is also discussed in the toolbox talking. The whole meeting will be an interaction session and all the employees are set free to discuss about their problems them facing during their job and suggestions from their side. The workers are trained to work safely and assess the risk involved on their work while performing by following 5 simple steps.

Those 5 steps are:

1. STOP! Consider the task.
2. IDENTIFY! Detect potential hazard.
3. THINK! Assess the risk.
4. PLAN! Decide on precautions.
5. PROCEED! Perform the task safely.

B. Toolbox Talk:

"Toolbox Talks", "Toolbox Topics", "Safety Chats", "Tailgate Meetings" or whatever your organization calls them is a brief safety talk or meeting about a specific subject at the beginning of the shift. These talks can be done in a variety of ways but is typically a brief (2-5 minute) interactive discussion meeting on something safety related. Toolbox Topics are used to cover a variety of short safety training subjects and to remind employees each day before they go to work, the importance of being safe.

Toolbox Talks are quick and easy trainings to enhance OSHA's safety requirements. Toolbox Talks cover a wide range of topics ranging from workplace electrical safety to lifting basics. Toolbox Talks also help create and an environment to discuss task specific or timely safety communications, identify problems or highlight specific safety concerns/risks.

II. METHODOLOGY

This Program consists of two parts:

- RISK AWARENESS
- RISK ASSESSMENT

A. Risk Awareness:

12 high severity risks are taken and awareness about the risks is given to the workers by the following for methods. They are

1. Posters
2. MS5 Awareness Booklet
 - TBT (Toolbox Talking)
 - MOM (Minutes of meetings)
 - Attendance List

1. Poster:

Each risk is taken for each week. The poster will contain the three contents.

Name – Image – Slogan

The name of the risk, An image representing the risk and a slogan about the risk will be on the poster.

2. MS5 Awareness Booklet

Based on the 12 severe risks a booklet is prepared stating the way to conduct the awareness, contents to be discussed are all provided to make the awareness program more effective. The Awareness booklet will contain the following contents.

They are

1. Why Is This Theme Important?
2. Questions For Launching The Discussion
3. Responses
4. In Conclusion: The Key Points
5. Examples Of Accidents

Using this booklet the awareness will be given in the toolbox talking to the workers and the minutes of meeting and attendance is taken in the same booklet. The minutes of meeting and attendance is tear able as they must be forwarded to the higher level hierarchy manager.

Toolbox talks:

It is done in a variety of ways but are typically a brief (2-5 minute) interactive discussion meeting on something safety related. The Awareness about the risk of the week will be given in the TBT.

Minutes of Meetings:

It is also known as protocols or, informally, notes, are the instant written record of a meeting or hearing. They typically describe the events of the safety meeting where the awareness of the risk of the week is given.

Attendance:

Attendance list is a formal procedure to record the conductor of the TBT and the employees attend the TBT. It is the Procedure of the Team leader to forward the MOM and attendance list to the up line managers.

B. Risk Assessment:

1. Booklet
2. Risk Assessment Record

Booklet

It will be provided to each worker in which the 5 steps of MS5 are followed. In that there will be columns for each step and the workers can fill up them and double check it with their supervisor. The 5 steps are

1. STOP! Consider the task.
2. IDENTIFY! Detect potential hazard.
3. THINK! Assess the risk.
4. PLAN! Decide on precautions.
5. PROCEED! Perform the task safely.

These 5 steps will help the workers to identify and assess the hazard in their work area and procedures.

		RISK ASSESSMENT CHART			
		UNLIKELY	POSSIBLE	LIKELY	VERY LIKELY
Severity	DEATH PERMANENT DISABILITY	Yellow	Orange	Red	Red
	SERIOUS TEMPORARY DISABILITY	Green	Yellow	Orange	Red
	SLIGHT MEDICAL TREATMENT	Green	Green	Yellow	Orange
	MINOR	Green	Green	Green	Yellow

Figure 1: Risk Assessment Table

Risk Assessment Record:

All the assessed risks from the booklet will be consolidated and will be recorded in a database. The recorded risks will be eliminated or controlled by engineering or administrative or control measures.

III. RESULT

Till now awareness program for 6 risks have been provided to the workers, one awareness in one week basis through toolbox talk and identification of hazards & assessment of risks are done. Also assessment of risks is done by the five steps of MS5 assessment. The identified hazard and assessed risks are updated in the CAR software and appropriate corrective actions will be implemented.

EFFECTIVENESS OF MS5	
AWARENESS PROGRAM	HAZARDS IDENTIFIED
1. Fall from height (Platform, Stairs, Ladders, etc..)	27
2. Slip, Trip & Fall	31
3. Fall of tools / Other items	17
4. To be run over / Squeezed by a vehicle.	8
5. Asphyxias (Confined space,...)	9
6. Caught / Squeezed by a moving machine (Conveyors,...)	18
ASSESSMENT PROGRAM	44

Table 1: Effectiveness of MS5

IV. CONCLUSION

Thus by implementing MS5 in to Toolbox Talking, the risks in the work area are assessed efficiently by training the workers to assess risk by themselves in their work area or in the task they perform. The assessed risks are uploaded in the corrective action report and those risks are eliminated or controlled by necessary engineering or administrative or behavioral control measures.

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