

Safety Audit Management in Mechanical Workshop

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Abstract: Safety audit management in mechanical workshop is critical to safety of lives and tools. A quantitative statistic available through data generated from 10 mechanical workshops in Bayelsa State capital city of Yenagoa. The paper employed a simple percentage to analyze the collected data from the field. The study highlighted the safety audit objectives, the application of safety audits, effective use of safety audits, the steps in conducting a safety audit, the use of PPE in a particular work environment. It is concluded that safety audit management in mechanical workshop measures the success of preventive strategies over life of people and tools. It is therefore recommended that safety audit should be conducted mechanic workshop at regular intervals.

Keywords: Safety, Audit, safety audit, management, mechanic workshop.

INTRODUCTION

The safety audit expands the concept of inspections beyond the readily visible aspects of the mechanic workshop. The safety audit is designed to take account of quantitative information available through data on injuries, incidents reports, insurance claims, accident reports, first aid records and any other documents that can provide an indication of performance. In looking at the administrative structure in mechanic workshop, attention is drawn to the support mechanism that provide the foundation for hazard management and accident prevention. These include: policy development, training strategies, planning schedules, target and objectives setting, consultation arrangements communication and information systems, issue resolution techniques.

Employers and management require a system that identifies and measures the performance of all the organization's activities. It is often the case in mechanic workshop that all the responsibilities and controls are not clearly defined. Equipment

is monitored through planned maintenance. The objectives of safety audit include, to assess the operational risks, the identification of hazards, potential hazards and accident causation factors, and to carry out a critical review, the organization's administrative arrangement is to ensure compliance with any legal requirements and to measure performance against a set of standards in the mechanic workshop.

Mechanical workshop is prone to the occurrence of various hazards, accidents and fire outbreaks, these include mechanical explosion, fire, toxicity etc. The major purpose of safety audit management is to save lives and other assets within the workshop. The management and protection of workers in industrial operations involves engineering controls, material substitution, process change, revised work practice, equipment change, administrative control and use of personal protection equipment (PPE), first aid fire protection devices. The rate at

which homes, hotels and industries or other industrial operations area, accidents are experienced by owners or users because of poor maintenance of machines, removal of safeguards and non-application of safety audit because they are perceived as hindrance to faster production (ILO, 1984).

In addition, preventive measures are neglected by workers and/or management of the organizations which caused such accidents or dangers in offices, homes, hotels, and industries (Bailey et al, 1989).

LITERATURE REVIEW

Safety:

The term “safety” refers to the state an individual or organizational management get into which gives him or them assurance that they are away from danger or harm. It is also the consciousness of sudden happenings which militate against healthy conditions. Safety as earlier defined as the freedom from danger or precautions against undesirable occurrences that endanger lives. Safety according to Hornby (2001) being secured, protected, un-injured, out of danger and not involving risk. According to International Labour Organization (ILO,1984), Safety involves the elimination of hazards that are open to employees and the product line. In another school of thought, safety is seen as “free from danger or risk while on the job”.

Safety movement started in American industries after the industrial revolution of the 18th and early 19th centuries. Safety should therefore be an integral part and most important part of operations in all walks of life either in various homes, offices, hotels, industries etc. Safety practices and behavior to be maintained by people to avert injuries or losses, must be inculcated in its operations (Ronald and Caserand, 1978).

According to International Labour Organization (ILO,1984), the purpose of all safety programmes is to prevent the occurrence of accidents and to increase productivity.

Safety audit

The health and safety audit subjects the whole workshop or work system to closer examination. In this content, the work system includes both the work environment and the management environment. The management environment includes responsibilities that are reflected at the workshop or workplace in specific quantifiable terms. The need to establish standards that measure variables, such as the provision of information, the adequacy of instruction and training, and the levels of cooperation and consultation, are now imperative as these matters are factors in the legislation of most jurisdiction.

Conducting a safety audit and applying personal prevention equipment

One may conduct an audit alone or using a team. A safety audit consists primarily;

- A continuous measure
- Measure the success of preventive strategies
- May use numerical tools for summing up, in which case different performance indicators and/or headings may be given different weightings
- Emphasize key performance indicators such as management, policy and procedures,
- Identify causes of action at the reporting stage
- Can use action scores to set priorities for follow-up
- Utilize checklists as a tool
- Must be followed up to see that remedial action has taken place.
- Can lend themselves to graphical reporting
- Assist with clear setting of further goals.

Personal Protection Equipment

Personal Protection Equipment (PPE) is a safety clothing and equipment worn or held by a worker to protect some parts of the body against exposure to specific occupational hazards and accidents.

Various types of PPE e.g Head protection, Hard hats (Helmet), Hair protection, Hearing protection (Ear Muffs), face and Eye protection, goggles and spectacles, Helmets and hand shield, face shields, respiration protection equipment, air purifying, air supplying, noise masks, respirators, aspirators, hand, foot and leg protection, gloves and hand leather, safety shoes, rain- boots, foot guards.

Steps in conducting a safety audit

The essential steps in conducting a safety audit are;

- * Decide the scope of the audit. Is it to cover all the workplace, a particular part or particular operations? Is it to tackle long-range or short-range issues?
- * Compile a set of major headings for the audit, these can include policy, procedures, consultation, management, training, monitoring, for example.
- * Construct checklists for each heading. There may be one checklist or there may be several to allow for greater detail.
- * Decide reference standards for questions.
- * Ensure that the questions in each checklist are clear and precise.
- * Consult with stakeholders in the workplace on the audit, these include safety and health representatives and committees.
- * Put together the documents or data input forms and computer software to handle the audit. Ensure that these include a rating system, provision to act on findings and bring up an action taken or not taken.
- * Line up people who will carry out the audit.
- * Run a pilot audit to iron out the problems.
- * Run the audit, this may be periodic or continuous.
- * Properly record all data collected.
- * Initiate action where the audit determined is required.
- * Ensure that recommended action is followed up to ensure it has occurred.
- * Review the audit through consultation mechanism to ensure that it is adequate to pick up the problems which lead to accidents and injury.

The Application of Safety audits

Employers and management of mechanic organization require a system that identifies and measures the performance of all the workshop's activities. Safety for employees and equipment are guaranteed in the mechanic workshop. This can be clearly seen in mechanical firm where all the structure has the occupational health and safety function reporting through to the personnel (ie. Human resources) manager, while the bulk of the hazards and accidents are occurring in the operations and maintenance areas. Risk communication is difficult at the best of times and even more complex if the lines of communication are unsatisfactory.

It is best if the occupational health and safety function as such reports directly to the head of operations. In addition, the responsibilities and accountabilities of line management for health and safety must be clearly defined. The application of safety audits is well suited to identifying the strengths and weaknesses in an organization's approach to safety management. The safety audit is used to identify how hazard and accident causation factors are being recognized; reported and controlled, the effectiveness of policies and rules, information systems, reporting techniques and training.

Effective use of safety audits

The safety audit includes the application of workplace inspections but goes much further to not only inquire into the visible components of a particular activity or piece of equipment, but to look at relationship in terms of whole workshop, of work system ie.

MANAGEMENT – PEOPLE – EQUIPMENT –
PROCEDURES – MATERIALS – ENVIRONMENT –
COMMUNITY.

RESEARCH METHODOLOGY

A basic research survey conducted in the capital city of Bayelsa State (ie Yenagoa). A well-structured safety audit questionnaire of about 100 copies distributed to 100 respondent from 10

mechanic workshops workers and employers (owners). A simple percentage, frequency distributional statistical technique was employed for analysis of the study.

Though, out of the 100 copies of the questionnaires, only 80 were retrieved by the two research assistants for the study analysis. This was to verify that safety audit management in

mechanic workshop measures the success of preventive measures over workers, owners and equipment.

Data Analysis and Results.

The collected data was analyzed using a simple percentage method in the course of the study. The details of the analysis are contained in the table below:

Table: Distribution of responses to questionnaires concerning safety audit.

S/N	Question	Percentages of response			
		Yes	%	No	%
1	Are you sure safety audit measurement in mechanic workshop measure success of preventive measures over life of workers and tools?	78	97.5	2	2.5
2.	Is there correct type of fire extinguisher for workers use in case of fire accidents?	70	87.5	10	12.5
3.	Are workers in the mechanic workshop wearing personal preventive equipment (PPE) at all times?	78	97.5	2	2.5
4	Is there any relationship between safety audit performance and success of operations?	76	95	4	5
5	Is there any effective safety audit model every day	75	93.75	5	6.92

Source: survey data, 2021.

From the above data analysis, it shows that safety audit management in mechanic workshop measures success of life of workers and equipment. Going by the study, 97.6% out of the total respondents (80) agreed to the above assertion. Other results opted from the above analysis revealed that 70 (87.5%) out of the total respondents confirmed that there is correct type of fire extinguisher located on the wall of mechanic workshop for saving lives and equipment in case of fire accident.

The study analysis also indicated that workers in mechanic workshop wore Personal Preventive Equipment (PPE) at all

times in the work environment as confirmed as 78 (97.5%) out of the (80) total respondents.

Finally, majority of the respondents that is 76 (95%) out of the total population reiterated that there is a significant relationship between safety audit performance and success of industrial operations. In addition, there is positive effectiveness of the safety audit model for mechanic workshop every day as validated in the above analysis as 75 (93.75%) out of the total population.

CONCLUSION AND RECOMMENDATIONS

The study so far discussed safety audit management as a relevant safety model for effective performance of industrial activities in mechanic workshop. The safety audit management of both workers and equipment in mechanic workshop is most preventive strategy, from the overall analysis of the study, it clearly shows that there is a significant relationship between

safety audit management and success of the industrial operations in the mechanic workshop. In order to remedy such ugly situations that is, hazards and accidents, then the following recommendations are made including workers should wear PPE at all times in the mechanic workshop; safety audit should be properly conducted at regular intervals, effective use of safety audits by the managers of the workshops, hazard and accident signs as well as all safety rules should be maintained and observed.

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