

“Review OF 5S Implementation of 5S Quality Tool in Tool India Company Nagpur”

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Abstract: The Paper Represents an application of 5s technology in ‘Tool India Company’ at MIDC Hingna road , Nagpur. It is leading manufacturer of Tool compoments in the central India.5S is a systematic technique used by organizations come from five Japanese words; Seiri (Sort), Seiton (Set in order), Seiso (Shine), Seiketsu(standardize) and Shitsuke (sustain). This system helps to organize a workplace for efficiency and decrease non value added activities and optimize quality and productivity through monitoring an organized environment. This paper aims to review previous studies about benefits of 5S Implementation and its efficiency in organizations. The results show that 5S is an effective tool for improvement of organizational performance, regardless of organization type, size, its production or its service. Consequently, 5S technique would strongly support the objectives of organization to achieve continuous improvement in performance and productivity.

Keywords: 5s implementation, improving efficiency, expanding in viability, elimination of waste.

INTRODUCTION

The quality and cost of a product are essential parameters which attract the clients. It is difficult to achieve the desired quality at the cheap production cost. Hence it is necessary to use qualitative methods in production processes and reduce impractical costs at the same time. The previous methods may not be able to achieve the results. It is the most important issues of any industry or organization is to have worker and company employ in a good working climate in order to make them feel better and get more energy to complete their work. 5S is to improve the industrial benefit and working condition of employees. It is a method for set up and keeps the quality of working environment in an company, such that they can organize and maintain companies which needed less space, human effort, time, quality. 5S give direction or idea about how we think about a workplace and give a foundation for significant implementation. 5S is a technique invented by Japan. It not only simplifies the work environment but also reduces the wastage and is a philosophy and a way of organizing and managing the workspace and work flow with the intent to improve efficiency by eliminating waste, improving the flow.

Definition of 5S:- A philosophy based on five Japanese terms utilized for creating and sustaining a well organized

workplace that is more efficient and productive in operation. 5S includes Seiri (Short), Seiton (Set), Seiso (Shine), Seiketsu (Standardize), Sitsuke (Sustain).

Types of 5S:-

	<i>Japanese</i>	<i>English</i>	<i>Ki-Swahili</i>
S- 1	Seiri	Sort	Sasambua
S- 2	Seiton	Set	Seti
S- 3	Seiso	Shine	Safisha
S- 4	Seiketsu	Standardize	Sanifisha
S- 5	Sitsuke	Sustain	Shikilia

Table 1.1: 5S in Japanese/English/Swahili

1S- SORT (Seiri) :- The first step in the 5S process is Sort, or “seiri,” which translates to “tidiness.” The goal of the Sort step is to eliminate clutter and clear up space by removing things that don’t belong in the area.

2S-SET (Seition):-The second step, Set In Order, was originally called “seiton,” which translates to “orderliness.” A variety of names have been used in English: “Systematic Organization,” “Straightening Out,” and “Simplify,” for example. No matter what it’s called, the goal of this step is to organize the work area. Each item should be easy to find, use, and return: a place for everything, and everything in its place.

3S-SHINE (Seiso):-The third step of 5S is Shine, or “seiso,” which means “cleanliness.” While the first and second steps cleared up space and arranged the area for efficiency, this step attacks the dirt and grime that inevitably builds up underneath the clutter, and works to keep it from coming back.

4S-STANDARDIZE (Seiketsu):- Once the first three steps of 5S are completed, things should look pretty good. All the extra stuff is gone, everything is organized, spaces are cleaned, and equipment is in good working order.

5S- SUSTAIN (Sitsuke):- The fifth step of a 5S program is Sustain, or “shitsuke,” which literally means “discipline.” The idea here is continuing commitment. It’s important to follow through on the decisions that were made and continually return to the earlier steps of 5S, in an ongoing cycle.

LITERATURE REVIEW

5S remains a campaign of innovation, improvement, and disciplines in workplace. 5S steps are not difficult to remember but to do. There are two kinds of research literature of 5S implementation . These literatures are researches that divided into implementations in manufacturing and service company.

5S in Manufacturing Company

Basically, 5S is a management tool, which can improve housekeeping, environmental conditions, and health and safety standards that relevant to every people 5S implementation allows people to realize about the importance of good housekeeping, especially in manufacturing plan and to increase the safety climate on his research in Tool India Manufacturing Company, Nagpur, has done 5S implementation that focuses in organizing tools and improving the working environment. This research is using 5S methodology as the guidance to improving the factory. There are benefits of 5S .the pride is created in the workplace for who have input in decisions made, a clean and organized work place is safe, and increase product quality. 5S, an important tool of lean, concentrates on improving the layout of the workplace and reducing cost and waste. Moreover, 5S is simple, effective, easy to implement, and produces quick results. This makes 5S favorable over other lean tools, which may take longer to realize .

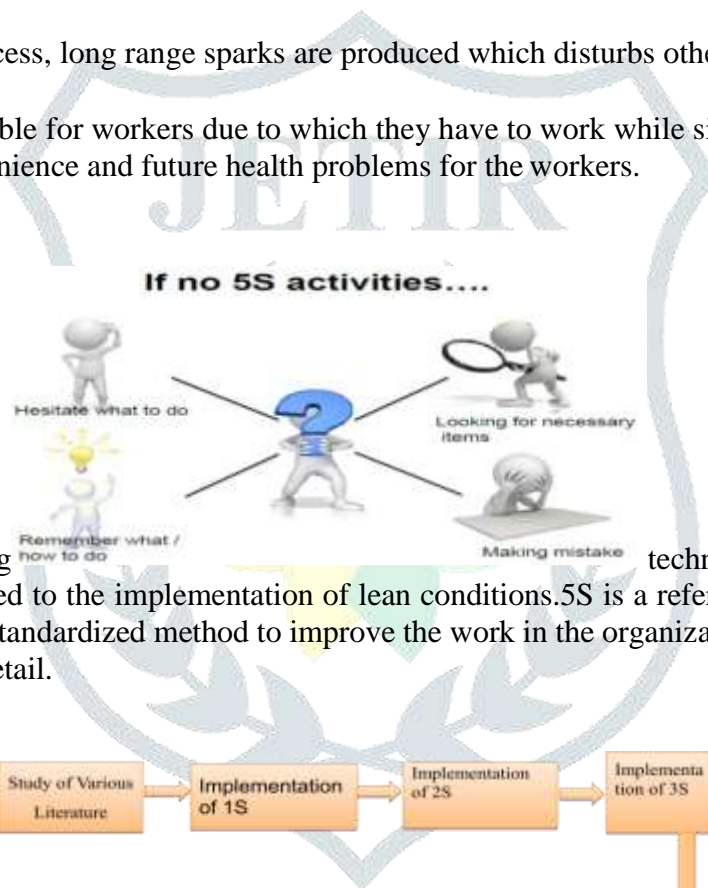
5S in Service Company

Basically, 5S implementation in service company is similar to 5S implementation in manufacturing company because both company are keeping tools, products, and information but sometimes 5S implementation in service company organizes data or information to improve the employee’s efficiency. 5S is applicable depending on the nature of company .5S housekeeping is often associated with productivity and quality initiatives is being used to examine each job process in order to eliminate routine and wasteful activities that pose potential safety hazards Good housekeeping will eliminate safety problems, improve morale, and increase efficiency, and effectiveness By its very nature, 5S could introduced good environmental management practices and can subsequently be used to improve housekeeping and employee safety and health

.5S contributes a more efficient work place and gain benefits in tangible and quantifiable monetary but it require a high level of commitment from management by motivate people and have a high level of human involvement. Parallel to that, the workers also should be encouraged to make improvements to their work place.

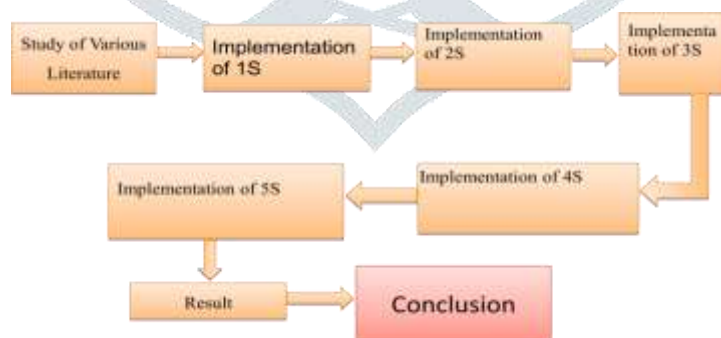
PROBLEMS IDENTIFICATION

1. No work is done in order. Work is not done in the most effective order. That’s why there is a need to find the optimize order of the work done.
2. By increasing safety, workers are not able to work properly. Workers do not take proper safety and there is no one to check their safety. They say that if they takemore safety, it disturbs them while working. Example, small things cannot be picked or handles properly while wearing gloves.
3. If any technical problem occurs in any machine work stops, which decreases productivity. Example there is only one crane and if it stops, heavy jobs can’t be able to transport.
4. Quality engineer is not available. There is no one to check the quality of the products made. And no reviews are made on the performance of the products made.
5. During grinding process, long range sparks are produced which disturbs other workers.
6. Tables are not available for workers due to which they have to work while sitting or by bending. This creates inconvenience and future health problems for the workers.



Methodology

5S is a manufacturing organization and it is used to the implementation of lean conditions.5S is a reference to five Japanese works which described standardized method to improve the work in the organization. Now we will see every method of 5S in detail.



1S -Short (Seiri)



Figure2.1.: 1S -Short (Seiri)

- Remove all the unwanted things that are at work place .
- Take all items which is not necessary for current manufacturing or operations.
- Collect those items which is only necessary.
- Only keep those things that we have to use.
- All the things were sorted by using the criterion.
- Necessary
- Unnecessary
- May not be necessary
- Identification for the causes of waste material was made.
- Rules and regulations were displayed in the workspace .

JETIR

2S-SET (Seition)



Figure2.2: 2S-SET (Seition)

- Decide place for necessary equipment
- Mark and tag the unnecessary and necessary items
- Tag the item which can be easily identified by using tag
- Determine the items tag them individually each and every items according to their use.
- Respective places were defined for all sorted things.
- Pints were used for marking different storage places
- Arrangement was made so that tools were easy to access.

3S-SHINE (Seiso)



Figure2.3: 3S-SHINE (Seiso)

- Cleaning of work place removal of dirt and also removal of dust particle
- Keep the work piece neat and clean
- Product must be shine after the shining process
- Regular cleaning of the maintained of marching. While existing
- Plan for cleaning the workspace was made
- Shelves were cleaned.
- Floors were cleaned .
- All the tools were cleaned .
- All the faults in the machine were detected and were cleaned.
- Electric boards were insulated for workers safety.

4S-STANDARDIZE (Seiketsu)



Figure2.4: 4S-STANDARDIZE (Seiketsu)

- Keep up a situation where S1 to S3 are actualized in a similar way all through the association.
- Offer chances to workers to take dynamic part in the advancement of these measures.
- Maintain neat and clean environment.
- Work only after short, set and shine.
- Creation of procedures for 4s was done
- Creation of checklists for this procedures was made
- Checklists were visibly displayed in workspace
- Job responsibilities were divided .

5S- SUSTAIN (Sitsuke)



Figure2.5: 5S- SUSTAIN (Sitsuke)

- Maintain continues working condition
- Involve all the 5s methodology.
- Analyze the '5S' rules for legitimate work environment the executives.
- Encourage the support of all, for consistency in '5S' exercises.
- Made the workers aware about 5S by continuous training.
- Workers were rewarded for following rules and regulation and for good performance.
- Poster and slogans of 5S were visually displayed in the workspace.

RESULT DISCUSSIONS AND CONCLUSION

The study shows that 5S is very effective technique for improving productivity of any organisation and increasing the safety of worker in an organisation. This paper has demonstrated the benefits of implementing 5S in any organisation. Thus the review confirms the efficiency of 5S methodologies to identify and eliminate problems in an industry as per following terms

- Productivity got increased .
- Time saving in searching for tools was reduced
- Expenses for the unwanted materials got reduced.
- Availability of more space.
- Morale of the workers increased.
- Chances of loosing of useful things got reduced
- Maintenance cost got reduced
- Reputation of company got increased
- Safety of workers got increased and safe working environment.
- Material travel time got reduced.
- Moral of the workers got increased.
- Proper communication between workers.
- Teamwork got increased.
- Neat and clean workspace.
- Defects got reduced.

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