

Implementation of 5'S and Kaizen Concepts in medium scale metal working industry

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Abstract : The aim of most of the manufacturing industry is to maximize its productivity by delivering high quality of the product to their customers. In this competitive scenario, every manufacturer required good quality of product with lower cost. There are many methods to achieve this goal but author used the concept of kaizen and 5'S in the manufacturing industry to achieve this goal.

Keywords : Kaizen, 5'S, Production Cost.

I. INTRODUCTION

It is very difficult for the company owners how to get maximum output from their employees. Sometimes it is felt that new machines can perform better than old machines. By doing so, the productivity can be improved upto some level. But replacing old machines with the new machines may not be the solution because purchasing of new machine means investment of money. Investment of money again goes to the reduction in the profit. If the company profit goes down, there will be low or no increment in the salaries of the employees. This cause of low increment of salaries may affect the production quality and overall productivity. In some companies, managers and middle level employees are not sincere about the process and quality of the product. They just blame the lower level employees. They don't want to take initiate the quality improvement program like TPM, Kaizen, 5'S etc. Being their non involving nature in such kind of programs, they want that process should run without any machine failure. This may not be possible if they don't have command over their junior employees. Even managers don't know the process of some maintenance programs. They adopt the formula that fire the employee who don't know about the problem solving. However in some cases it may be successful and in some cases may not be. To improve the performance of plant ,managers should organize the training program for the worker level employees. Being a managers doesn't means to sit in chair and just tell to follow the command. There are some other solutions by adopting which the overall productivity of the company can be enhanced. These are Kaizen and 5'S.

A. Kaizen

Literally kaizen means continuous improvement. Mostly it is considered that kaizen means improvement in manufacturing process only. But I think it should not be limited to manufacturing process only, it should also be applicable to the each and every activity of the process and employee which adds the value to the product. For example : sometimes it is observed that managers are likely to find they and their supervisors spend a large amount of time in their offices doing paperwork, in meetings, or in front of the computer. Managers who want to improve all aspects of their organization, including the maintenance and engineering function, must find a way to get front-line management out of the office and meetings and into the field with their direct reports. Managers and supervisors must return to doing the job their organizations hired them to do.

5'S : It is concept of managing the resources in well organized way either it may be the raw material, tools, processed product etc. so that concerned item can be accessed easily and quickly. This reduces time delay in searching the parts, tools, raw material or processed product. Employee can invest his efficiency in the working field and overall efficiency of the plant and employee increased. All different 5'S are explained as below :-

1'S (Sieri) : Remove unwanted things. Only required items should be there and items which are not in use should be removed.

2'S(Seiton) : A place for everything and everything should be in its place. Systematic arrangement should be there.

3'S(Seiso) : Cleaning of workplace should be done. Cleaning of workplace add the value in working environment.

4'S (Seiketsu) : To choose the tools and material in short time, there should be a name plate or name tag installed.

5'S(Shitsuke) : Performing 1S,2S and 3S is not the solution. We have to maintain the 1S,2S and 3S. There should not be the repetition of the 1S,2S and 3S

II. LITERATURE REVIEW

Majority of research work has been done on 5'S and Kaizen but mode of implementation, aim of implementation may be different. Sometimes mangers are trying to add the value to the product while at the same time there may be some wastes. I visited one of the food product manufacturing company,

majority focus was to develop the new automatic packing machines. In developing of new automatic machines there was huge rejection of biscuits were created. The company thinks that the there may be strike in the future and it will be very difficult to run the plant in the future without workers. If automatic would be there then the plant can be run without or only few workers. So the company tries every time to develop automatic machines and rejection was created on large scale. Creation of rejection is type of waste. If we analyze why company have to think that there may be strike in the future. There are a number of reasons to strike by the workers. Some of them are like low salary, bad attitude by the senior employees, more working hours etc. Creating new machines may be the innovation, but when we talk about a company perspective, creation of new innovation too frequently may not be in the favour of company profit.

1. Problem Formulation : I visited the company and found that most of the material is laid down here and there without proper management. This type of working environment reduces the employee efficiency and finally the out of the company.
2. Implementation of the concept : After observing the problem situation, possible solution are proposed and proposed concept is implemented. In the pictures taken from the manufacturing unit, it is observed that tools are kept in improper manner. If somebody has to work on a machine and picks a tool then he has to search the tool. Under working load on the employee, it is somewhat irritating to search the tool. For proper and smooth working condition such types of situations should not be there and every tools and tackles should be put in arranged manner. Proper arrangement of the various tools and equipment saves the working time of the employee and also keeps good mental condition.

III. RESEARCH METHODOLOGY



Fig 3.1- Tools Before 5’S implementation



Fig 3.1- Tools After 5’S implementation



Fig 3.3- Raw material Before 5’S implementation



Fig 3.4 - Raw material Before 5’S implementation

IV. RESULT AND CONCLUSION

By implementation of 5'S and Kaizen in the manufacturing unit, the efficiency of the employee increased. Increasing the employee efficiency will increase the company output.

Implementation of 5'S stops the wastage of time and implementation of Kaizen improves work flow. Beyond the pictures shown in figure, the concepts can also be applied in maintenance department, production department, quality department, store department etc.

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