

A close-up photograph of a sewing machine needle stitching a piece of light-colored fabric. The needle is positioned vertically, and the thread is visible as it passes through the fabric. The background is slightly blurred, showing the metallic parts of the sewing machine.

***Quality  
Improvisation of  
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Using 5S System***

***Source: Textile Review***

# Quality Improvization of Apparel Industry Using 5S System

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**Source: Textile Review**

## **Abstract:**

The increase in demand of better quality and productivity in apparel industry made us to seek a system or a concept to meet the requirement for producing better quality product. After a prolong study on several concepts, we chosen 5S system in the best one for the decreasing the demand faced by apparel industries. In this work, we have planned to implement a concept for enhancing the work efficiency, environmental safety and standard process flow. This work starts with clearing up the company by disposing the wastages, place the tool in an order according the layout then the working is cleaned and maintain regularly. At last all activity is measured and sustains the discipline. Implementing this innovative method reduces the wastage, minimise the handling time and increase the profit of an organization.

## **Introduction:**

5S is a method for organizing a workplace, especially a shared workplace (like a shop floor or an office space). The methodology originates from a Japanese housekeeping idea named because of the five Japanese words each designing with a letter Se or Shi. They are seiri, seiton, seiso, seiketsu and shitsuke.

**Sort** - “When in doubt, throw it out”

**Straighten** - “A place for everything, and everything in its place

**Sweep** -” “The best cleaning is to not need cleaning”

**Standardize** - “See and recognize what needs to be done”

**Self-discipline** - “The less self-discipline you need, the better”

The key targets of 5S are workplace morale and efficiency. The assertion of 5S is, by assigning everything a location, time is not wasted by looking for things. Additionally, it is quickly obvious when something is missing from its designated location. 5S advocates believe the benefits of this methodology come from deciding what should be kept, where it should be kept, and how it should be stored. This decision making process should lead to a dialog which can build a clear understanding, between employees, of how work should be done. It also instills ownership of the process in each employee.

## Literature Survey:

The 5S concept has its origin in Japan (first within Toyota) in the later part of 20th century. Each of the five S's denote the first letter of five Japanese words (Seiri, Seiton, Seiso, Seiketsu, and Shitsuke) that outline the steps involved in modern workplace management / housekeeping.

The logic behind the 5S practices is that organization, neatness, cleanliness, standardization and self-discipline at the workplace can help production of high quality products and delivery of high quality services with little or no waste, and with high productivity.

The 5S has become the way of doing business not only to impress the customers but also to establish effective quality processes as prerequisites for good products and services.

We may carry out the 5S training and implementation separately or as part of ISO9001:2008 / Lean Manufacturing / Six Sigma implementation.

With its universal appeal, 5S can be effectively implemented in any organisation from any business sector.

The learning objectives of our 5-S training kit are:

- To understand the 5-S concept
- To learn the 5-S implementation steps, and
- To learn how to assess the 5-S implementation status

5S brings out the logic of lean. It is a "lean enabler." Larry Simmons, general manager and the main 5S guru at Merritt Tool, has a more down-to-earth view of all this. "It's a way to help people get more done by working half as hard so that the company can make more money," he says. This view is enthusiastically shared by A.P. Merritt, Jr., president of Merritt Tool and son of the founder.

When Mr. Simmons was introduced to the concepts of 5S several years ago, he could see how the techniques could help the shop reduce setup time by as much as 50 percent. That's all he needed to say to convince Mr. Merritt that 5S was well worth his support.

5-S can be defined as

### Seri (Sort)

It is an action to identify and sort the available items at workplace as wanted and unwanted items. Remove all unwanted items like old/torn files, expired receipts, waste papers, broken pens or pencils and dump in a carton box. The whole idea of doing this is preventing disturbance and overcrowding caused by unnecessary items. Now sort the wanted items as low use, average use and high use items. Keep things of low use, which you use once in six months or a year, for example reference books or Tax and insurance papers at a distance. Place the things of average use (used once or twice in two months or

6 months) in the centre and things of high use, which you use frequently, can be kept right at the work station.

### Seiton (Set-in-Order)

Now that we have sorted out the things, the next step is to set them in order of their use. Place the old files in the lower most drawers, and the things like cello tape, stapler, stapler pins, file clips pens, pencils on top of the table. Label the drawers and cupboards for convenience. Use a pencil stand to place pens, pencils, ruler in that. Use Trays to place forms, envelopes and papers. The ultimate goal is that if any one needs some thing they could get it within 30 seconds at your workstation.

### Seiso (Shine)

Do not wait until the work place gets dirty. Clean your workplace on a regular basis, including your furniture, equipments so that they do not get a chance to get dirty. You can even assign a person for doing this job for you.

### Seiketsu (Standardise)

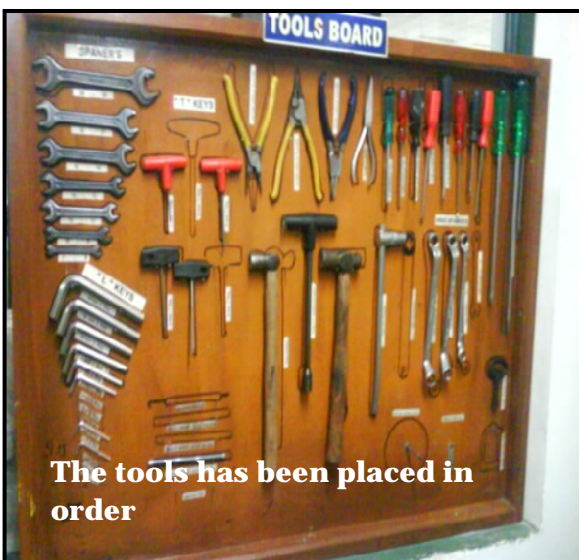
Create guidelines or standards to keep your work area organised, orderly and clean. Make the standards visual and obvious. By doing this it will be helpful for you and others to follow. For example, you can put a label of "Personal" on one of your drawers where you have kept your personal documents, so that no one else other than you can open it.

### Shitsuke(Sustain)

This is a condition, which ensures that you follow all the above-mentioned steps on a regular basis as away of life.

There is no point of cleaning when you cannot maintain the same. Once you have set the standards and methods it becomes your duty to review it from time to time. Educate every one about 5S, for maintenance of office standards so that each individual can be more productive and thoughtful.

## Study of Implementation of 5S Technique in Shahi Exports:





Adaption of innovative ideas

### Problems Addressed:

When applied to a factory, 5s can help you solve the following types of common problems:

- Space crowded with parts and tools.
- Unneeded items stacked between workers.
- Excess inventory on the floor.
- Excess items and machines hinder process flow.
- Equipment is dirty and not serviced regularly.
- Needed equipment, such as tools, is difficult to find.

### Methodology:

- 5S is a Japanese word meaning Housekeeping.
- 5S is a basic technique to enhance the workplace appearance and give a pleasant work environment.
- 5S is a methodology for organizing, cleaning, developing, and sustaining a productive work environment.

The 5 concepts which have to check and introduced in the workplace that are,

1. *seiri* (Sort),
2. *seiton* (Set in Order),
3. *seiso* (Shine),
4. *seiketsu* (Standardize), and
5. *shitsuke* (Sustain)

### **1-S SEIRI (Clearing up):**

SEIRI is distinguishing or sorting out between wanted and unwanted items in a place and removal of the unwanted

#### **Implementation steps:**

- Take Before Photos
- Segregate wanted & unwanted materials in all Zones

### **2S-SEITON (Organizing):**

- A Place for everything and everything in its place

#### **Implementation steps:**

- Identify all materials by Name/Number/Color code etc.,
- Design a suitable storage place / parking slots and fix the place for storing each item depending on the frequency of usage
- Establish a method of storage for each item which is easy to see, pick and place with X, Y alignment.

### **3S-SEISO (Cleaning):**

Sweep your workplace thoroughly so that there is no dust anywhere.

#### **Implementation steps:**

Prepare Cleaning schedule for all Zones covering

- Where to clean - Area
- What to clean -Item
- When to clean - Frequency
- Who has to clean - Responsibility
- How to clean - Method & Cleaning tool or Kit.

### **4S-SEIKETSU (Standardizing):**

Standardizing all the 5S activities throughout the organization

#### **Implementation steps:**

- List out the various activities of 5S.
- Follow the guidelines for floor marking through out the organization.
- The Following things to be standardized:



## 5S-SHITSUKE (Training & Discipline):

Measure, Maintain & continuously improve the 5S activities.

### Implementation steps:

5S Chairman & Zone leaders should monitor all the 5S activities continuously

Create work discipline with the help of employees working in the particular area and to suit the requirement.

### Before Implementation Of 5s Technique In Star Cones:



## After Implementation of 5s in Star Cones:



Disposal of wastage & kept the required things



Placing every tool in the order

Workplace is cleaned & maintained

## Result and Discussion:

5S is the best policy adapted by changing the worker mentality for increase of production, continual improvement and to promote the profit to an organization.

Though the policy provides various benefits, this system is not adapted by many organizations due to the lack of involvement of the people, unaware of this policy and the huge cost involvement in implementing.

We suggest to an industry for implementation of this system by knowing them the importance of 5s policy, the benefits obtained by both the worker and the company and enhance the profit, name and fame to an organization.



## Conclusion

We conclude our innovative project in the Star Cones loom by achieving the following benefits, the process of the industry is analysed and made correction due to that they get clarity in reducing the unwanted work and effective utilization of resources in the industry, and we train how to maintain the industry .which helps to improve their performance in their day to day activities.

After implementing the 5S the industry get the following benefits

- Reducing the stoppage time of the loom increases the overall quality of product.
- The defective items are reduced
- The floor space is utilized properly
- Material handling time is reduced
- Employee involvement is improved
- Easier and safer work environment is partly achieved

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