



## Efficient Use of Workplace in Production

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### ABSTRACT

Meeting unlimited needs from limited resources is one of the most pressing issues today. If we look at the limited resources in the example of an enterprise, this is seen in the example of the time spent on raw materials, people and production. There are two types of time spent in the production process: those that add value to the product and those that do not add value to the product. Second, we can reduce the cost of the product by optimally reducing the time it takes to add value to the product. This article focuses on how to achieve cost-effectiveness in enterprises through the efficient use of the workplace and the proper organization of the workplace, as well as the prevention of potential inconveniences. The aim of the work is to introduce 5 C of the Japanese manufacturing industry methods of effective workplace organization to local enterprises and ultimately to prevent losses. The article provides analysis tables for the introduction of the 5C method and information on the proper organization of the workplace. A student who understands the article well will learn more about how to be effective in the workplace. And based on this information, they will be able to manage and improve their workplace.

### Keywords:

Seiri (Sorting), Seiton (Sorting), Seiso (Keeping Clean), Seiketsu (Standardization), Shitsuke (Improvement), Red tab, Yellow tab, Green tab

**Introduction.** Time spent in business and production is one of the most important factors

influencing it. By organizing the workplace properly, we can save time and make the most

of it. Today, through the proper use of workplace techniques in production processes, an enterprise is able to generate higher returns with the raw materials and resources it constantly consumes. One of these methods is the so-called "5 S" method. This method is one of the requirements of TPM, named after the initials of the Japanese language, Seiri (Sorting), Seiton (Regulation), Seiso (Cleaning), Seiketsu (Standardization), Shitsuke (Improvement) are widely used in the Japanese manufacturing industry. is a method that has been used. The clutter of the workplace, of course, first of all prevents the employee from making positive decisions during the work, and the employee becomes confused, not knowing what to do. And after using the 5S, the workplace expands and everything is in place and in order.

### The main goals of 5S are morale and efficiency in the workplace.

The 5S method emphasizes that time is not wasted by searching for things by assigning a location to everything. It also quickly becomes clear that something is missing in the designated area. The advantages of the 5S methodology stem from deciding what to store, where to store it, and how to store it. This decision-making process usually stems from a consensus of employees working together, which creates a clear understanding of how the work should be done between employees. Also, 5 C instills ownership in the process in each employee. In addition to the previous text, another key difference between the 5S and "standardized cleaning" is the Seiton. *Seiton is often misunderstood, probably due to attempts to translate it into an English word beginning with an "S" (e.g., "sort" or "correct").* The basic

concept here is to order things or actions in a way that matches the workflow. For example:

- tools should be stored at the place of use;
- workers do not have to bend over and over again to pick up tools or materials;
- Flow paths can be changed to increase efficiency, etc.

### 5Ss are described as follows

**Seiri (Sort).** This function includes reviewing all tools, materials. Save at work and only what you need. All the rest is saved or discarded. In the Seiri stage, all equipment in the workplace is divided into groups that are constantly and not always used in daily work processes. The following objectives will be achieved at the qualifying stage:

- Reduce the time lost in searching for them by reducing the number of devices;
- Due to the ergonomic location of the equipment, the employee can bring the equipment, and reduce the time required to transport it to its place;
- Facilitate visual inspection of the workplace;
- Expansion of useful workplace by removing excess items;
- Improve workplace safety by removing material barriers to certain activities.

Application: All equipment in the workplace is inspected and its location is assessed to determine whether it is necessary or not by calculating daily use. Unnecessary tools or items are

removed. The workplace should be free of anything other than everyday equipment

(Picture 1)



Figure 1 (Workplace arrangement)

**Seiton (Adjust or adjust in order).** This function is focused on efficiency. When it

translates to "Edit or Edit," it seems more like sorting or tidying up the workplace, but the

goal is to organize tools, equipment, and parts in a way that helps the workflow. For example, tools and equipment should be stored where they are used (i.e., flow path correction) and the process should be set up in a manner that provides maximum efficiency. In the Seiton stage, the optimal location of all the allocated equipment in the workplace to perform its function is determined. Application: When placing work equipment, the tools and

equipment are placed in a logical order depending on the sequence of use, as a result, it is easier for employees to work with them. For example, frequently used equipment should be stored in the closest place to the workbench, where it is easy to find and retrieve. Equipment that is rarely used for daily needs, such as equipment used during weekly maintenance processes, should be stored at a distance that does not interfere with the worker.



Figure 2 (Special place for each device)

Seiso (keeping clean or systemic cleaning). This feature helps keep the workplace and equipment clean and tidy. At the end of each shift, daily activities, the workplace is cleaned and everything is put back in place, which makes it easier to know what to put where. It's important to know that everything is where it should be. The important point is that keeping it clean and tidy should be part of your daily routine. Seiso means keeping the workplace, all tools and equipment clean at all times. While this may seem like an easy task, getting it done on a regular basis may require

more attention at first. Checking the equipment during cleaning allows you to detect and correct faults in them, as a result of regular cleaning of the equipment prolongs the operation of the equipment. Workplaces, especially in manufacturing, need to be kept clean, which can lead to many inconveniences and negative consequences.

Application: Cleaning should be part of the day-to-day work: responsible persons should be appointed, cleaning schedules should be drawn up and staff should be provided with the necessary cleaning supplies.



Figure 3 (Keeping the workplace clean)

Seiketsu (Standardization). This function consists of operations that are standardized operations or work in a consistent and standardized manner. Everyone



Figure 4 (Possible inconveniences in the workplace)

knows what the responsibility is to maintain the above 3S. The Seiketsu stage includes the standardization of processes related to the 3 stages mentioned above. Procedures will be

established to implement them and audits will be conducted to verify their application. Visual aids and on-the-job training can be used to make procedures easier for employees to understand.

Shitsuke (support). Finally, this last function means saving and reviewing standards. Once the previous 4S is installed, they will become a new way of working. Focus on this new way of working and don't let it gradually return to the old way of working. However, when a problem arises, such as a

proposed improvement or a new operating method, a new engine, or a new output requirement, it is advisable to consider the first 4S.

**Introduce 5S in your organization**

The way to implement 5S in any organization is to first identify areas that need to be addressed, and then continue to fix or improve. In particular, you should use a labeling system as follows:

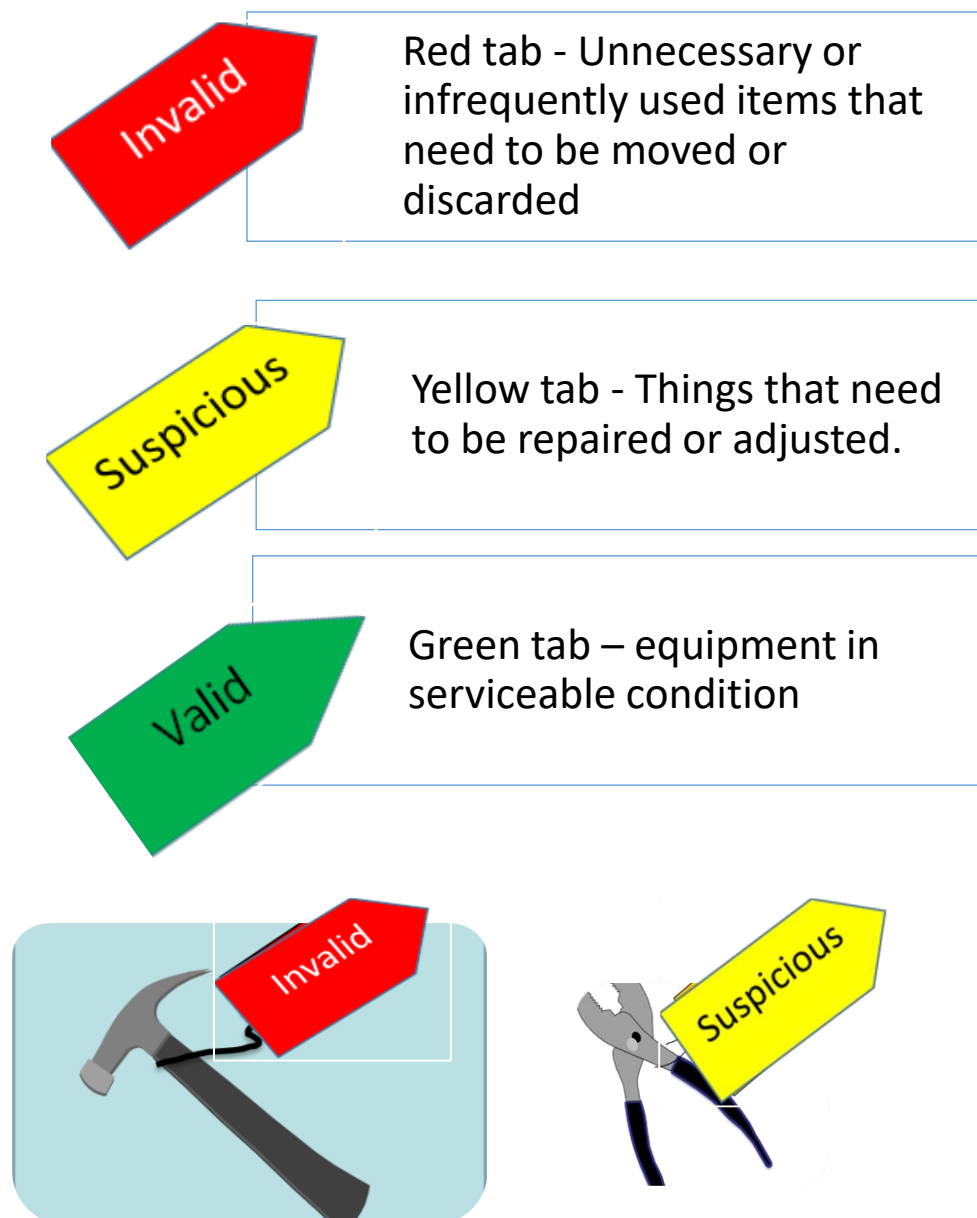


Figure 6 (invalid tool)

Figure 7 (Tool to be repaired)

Table 1

AUDIT SHEET FOR 5S										
Section:					Date:					
Auditor:					Time:					
0= not suitable; 1= very little compatibility; 2= partially compatible; 3= high compatibility; 4= full compatibility										
Take what you need and remove the rest					0	1	2	3	4	Comments and corrective action
Sorting	All unnecessary items (equipment, etc.) are removed from the workplace									
	Availability of equipment not required									
	Convenient location of equipment and supplies									
	The presence of only essential equipment in the designated boxes									
	Proper organization of the warehouse									
There is a place for everything and everything is in place.					0	1	2	3	4	Comments and corrective action
Regulation	Marking of places for each device (marker, tape)									
	Use of storage systems and their control									
	Jobs and careers are clearly defined									
	Availability of personal lockers									
	Availability and availability of safety equipment									
Look for ways to keep clean and tidy					0	1	2	3	4	Comments and corrective action
Cleanliness	Keep the workplace clean and tidy									
	Hygiene of machinery and equipment (partial oil leakage)									
	Box cleanliness (suitability) and timely emptying									
	The department has a regular supervisor									
	Creating a clean and tidy work environment in the workplace									
Create a standard for the above. Carrying out work while maintaining the standard					0	1	2	3	4	Comments and corrective action
Standardization	Openness and usability of the system for all									
	Employee awareness of their responsibilities									
	The accuracy of divine tasks and how they are used									
	Availability and implementation of innovative ideas									
	Accuracy of the above 3 C standard and compliance with current requirements									

Maintain high standards and constantly improve them		0	1	2	3	4	Comments and corrective action
Improvements	Availability and use of the checklist						
	Regular review and application of 5S rules						
	Last month's efficiency						
	Each employee is trained according to their duties						
	Be able to see employees 5 C efficiency						

The organization can organize the state of the workplace according to the requirements of 5S by conducting a survey of workers and operators on the basis of the above table in the correct organization of the workplace.

**Conclusion.** In conclusion, with the right organization of the workplace, the company not only achieves efficiency, but also reduces the cost of production. The 5S standard is an important factor in this. Efficient use of time and saving it is the basis for efficient use of resources. Hence we tried to focus on how to achieve cost-effectiveness in enterprises through the efficient use of the workplace and the proper organization of the workplace, as well as the prevention of potential inconveniences.

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