

# Introducing Standard Operating Procedure on a Manufacturing Plant

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**Abstract**— Standard operating procedure (SOP) is one of the main factors by which a company can maintain its quality. All the instruction gives guidance to ensure that the process is conducted in a consistent way. A SOP should have all the detail about the process and all the SOP's should be updated if there is any update in the process. All the SOP's should have a similar format and a monitor to check whether all the SOP's are followed or not. These papers have all the important areas of considerations and steps which are required when a SOP is made.

**Index Terms**—SOP, Documentation, Microsoft excel, SOP general format, developing SOP, Standardization

## I. INTRODUCTION

Standard operating procedure is the set of documents of instruction made by a company to help workers to achieve better quality, effective production and uniformity in the performance. It has many names in a much different country or the company but the most common name is SOP. Standard operating procedures are used in many sectors like clinical research, health safety and production. In production, it helps in quality, quantity, and safety. The set of procedure gives all the kind of information to the worker.

A SOP describes all the fundamental and technical operational process of an organization. The document SOP is used to provide all the general information or guideline about a process to maintain its quality.

All the station in a manufacturing plant should have an set procedure so that they can maintain the same standard in all the product i.e. all the product have same efficiency and quality. All organization may have different requirements but all have a common goal of no error and fine product.

## II. OBJECTIVE

In today's world's if you are investing time and energy in some documents then it has to be effective and it should be followed by the person it is made for. Some of the reason to invest your time and energy in SOP are as follows.

- 1.It increases the quality with quantity of the product.
- 2.All the workers will have the set procedure, by which it decreases the number of false.

- 3.All the tools and the machine will be given accordingly.
- 4.All the safety instruction will be given.
- 5.SOP's will reduce system variation and everything goes according to schedule.<sup>[1]</sup>
- 6.Employees can help and train each other.
- 7.If a station is not running because of the absence of an employ, then the SOP can be used by another person.
- 8.Prevent failures in manufacturing.

## III. GENERAL FORMAT OF AN SOP

There is not correct format for a SOP, companies develop their own format. SOP format depends on the requirement of a planted-In an automobile plant all the SOP'S should have a control number which will be different for all the SOP's (helps in tracking).The SOP should not made for any particular person, the processes should be explained in plain English.

All the SOP's have some general requirements like Language[3].Though, pharmaceutical documents are primarily written in English language owing to WHO GMP preferred language <sup>[2]</sup>.But in same condition you can write SOP's in local language also. It depend on the worker, if the worker is more comfortable in his own language then the language can be change accordingly. Most of the time the type of font use is 'Times new roman'. As there is no general format for an SOP, all the organizations have their different format. All type of SOP's have a general format which has three sections.

- 1.Title or header
- 2.Main content
- 3.Pictures
- 4.Footer

In title we have model name, process name, SOP title, control number and last update date. Some of them remain common for all pages.

After that, main content comes which is the most difficult and time consuming process. All the main detail like process steps, part detail, part number, tool key points and many more are there. All the points of a main content are different from each other. When all the data is collected and then only we can start writing the main content.

While collecting all the process information and detail we have to click some important pictures. All the pictures should be focused and labelled if required.

At last, the footer which contain all the detail about SOP maker, issued date, safety instruction, operational head and quality head.

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4. Set-up a system to monitor the SOP regularity. When task of completing the SOP is done, then the correction part comes with more difficulties. The entire SOP should be updated and the task should be change if there is an problem facing by the worker. If all the SOP's are corrected and all the workers are following it then only the task of making SOP will be benefited.

#### VIII. THINKS TO REMEMBER

1. Never use anyone name, use Job title.
2. Use plain English guidelines and a process should have number of steps.
3. Include all the necessary information to complete the task.
4. All the required photos should be clicked, so that any new job person will not face any kind of problem.
5. Recollect all the data and check SOP again.
6. If there is any mistake then it has be noted or marked by different colours.

#### IX. RESULT / EXECUTION OF PROJECT

All the processes are drafted and followed by all the workers in the production line. As the main target of SOP is to increase quality with quantity has achieved.

#### X. ADVANTAGES

1. The SOP's are developing to decrease the variation and to promote the quality of an product.
2. TO minimize the miscommunication and to increase the safety concept.
3. Old data can be extracting for any future use.
4. It can also be used as a checklist for auditing procedure.
5. By using an SOP's may be a new person can complete the task in the absence of the in main worker.
6. Sustained return on investment due to reduced process errors.
7. Performing continual quality improvement.

#### XI. DISADVANTAGES

1. In this process we have note and draft all the procedure and due to this reason it become time consuming.
2. Reduction in workplace individuality

#### XII. CONCLUSION

This project has achieved ~100% accuracy and has proven good efficiency. Applying of this project in any organization will reduce the human workload and provide more accuracy. This system will be very easy to guide and a production line

can be operated with minimal knowledge .The project can be use for guiding new employees in the plant.

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