



**WORKPLACE IMPROVEMENT BY  
KAIZEN (5S) IMPLEMENTATION IN  
SEASONING PRODUCTION AREA OF  
PT. MANE INDONESIA,  
CIKARANG, JAWA BARAT**

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**An Internship Report submitted to the  
Faculty of Engineering President University in partial  
fulfillment of the requirements of Bachelor Degree in  
Engineering Major in Industrial Engineering**

**2014**

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**RECOMMENDATION LETTER**

This internship report is prepared and submitted by **Feberyca Angela** in partial fulfillment of the requirements for the degree of Bachelor Degree in the Faculty of Engineering has been reviewed and found to have satisfied the requirements for a report fit to be examined.

**Cikarang, Indonesia, August 28<sup>th</sup>, 2014**



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**Feberyca Angela** has performed and completed an internship in **PT. Mane Indonesia**, in partial fulfillment of the requirements for the degree of Bachelor Degree in the Faculty of Engineering. I therefore recommend this report to be examined.

**Cikarang, Indonesia, August 28<sup>th</sup>, 2014**

  **PT. MANE INDONESIA**  
Fragrances and Flavours

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**INTERNSHIP REPORT IN PT. MANE INDONESIA,  
CIKARANG, INDONESIA**

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## ABSTRACT

PT. Mane Indonesia, a big developing company which produces flavor and fragrance products has the commitment of maintaining its products' quality based on FSSC 22000, ISO 9001, GMP, and Halal Certification. In supporting this commitment, this company tries to adapt and implement Kaizen concept (5S methodology), in which Kaizen concept and methodology is a scientific discipline which is used to improve the workplace situation and productivity by managing and keeping the workplace clean and safe. In order to improve the condition and the productivity of its production, PT. Mane Indonesia try to adapt and implement Kaizen concept into its production floor which is started from its seasoning production area, which then become the place where this study took place.

In order to complete this study, several steps must be followed. The steps begin with direct observations and discussions with the workers and the leader of 5S implementation project. After that, the problems which were obtained are analyzed by comparing the current condition with the theoretical condition and using fishbone diagram. And after the analysis process was done, it is obtained that they are two main problems which suspend the implementation of 5S methodology; physical changes and mental changes. As the conclusion it is obtained to successfully implement 5S methodology in PT. Mane Indonesia required some plots which could be done such as the company could complete the marking and identification process, completing the required equipments, do some re-arrangements on the materials, do some trainings regularly, and making standardizations with the purpose of building and increasing the awareness, understanding, knowledge, and commitment of the workers about 5S implementation and its benefits..

*Keywords: Kaizen concept and methodology, 5S, Fishbone Diagram, FSSC 22000, ISO 9001, GMP, Halal Certification.*

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## LIST OF TERMINOLOGIES

- 5S : *Seiri, Seiton, Seiketsu, and Shitsuke* or Sort, Straighten, Shine, Standardize, and Sustain; which is a scientific discipline that is used to improve the workplace situation and productivity by managing and keeping the workplace clean and safe.
- FSSC 22000 : FSSC 22000 is Food Safety Management System which provides a framework for effectively managing the organization's food safety responsibilities. FSSC 22000 is fully recognized by the Global Food Safety Initiative (GFSI) and is based on existing ISO Standards.
- ISO 9001 : ISO 9001 is one of International Standardize Organization that concern about quality management systems standards which is designed to help organizations ensure that they meet the needs of customers and other stakeholders while meeting statutory and regulatory requirements related to a product; it deals with the requirements that organizations wishing to meet the standard must fulfill.
- PTMI : PTMI stands for PT. Mane Indonesia. PT. Mane Indonesia is a company which produces flavor and fragrance as its main product. This company acts as the head office for Mane Inc. for the Asia region, currently in Indonesia Mane Inc. itself has two office building, one is located Jakarta which is devoted as sales office and the second one is located in Jababeka which is devoted for sales, manufacture, and innovation or research and development office.

- GMP** : GMP or Good Manufacturing Practices are the practices required in order to conform to guidelines recommended by agencies that control authorization and licensing for manufacture and sale of food, drug products, and active pharmaceutical products. These guidelines provide minimum requirements that a pharmaceutical or a food product manufacturer must meet to assure that the products are of high quality and do not pose any risk to the consumer or public.
- SAD** : Sales Administration Department is a department which takes care of the order of the customer in PT. Mane Indonesia. This department's task is recording the order from customer, preparing the ICO and COSP.
- PPIC** : Production Planning and Inventory Control Department is a department in PT. Mane Indonesia which take care of scheduling the production, managing the inventory level, and forecasting the demand with the purpose of minimizing the gap between the order from customer and forecasted demand of the company with the purpose of minimizing the cost for the production.
- CSD** : Central Storage Department is a department in PT. Mane Indonesia which take care of receiving goods, checking the goods quantity, transferring the materials, and filling the raw materials into the production area.
- PUD** : Purchasing Department is a department in PT. Mane Indonesia which takes care of buying goods for PT. Mane Indonesia. The goods which is bought by this department are goods which are used for the company operational, start from raw materials until the stationery which are used in the office.

- PRD : Production Department is a department in PT. Mane Indonesia which take care of preparing and assigning the person in charge of producing a product, transferring the order, making the products and packaging the product based on the customer's request.
- QCD : Quality Control Department is a department in PT. Mane Indonesia which takes care of managing the quality of PT. Mane Indonesia's products. So, every product of PT. Mane Indonesia will be tested and decided if it is qualified and testified or not. If a product is confirm with the QC standard then the product can be used or being delivered to the customer and otherwise if the product does not confirm the QC standard, the product will be eliminated or being reworked.
- SHD : Shipping Department is a department in PT. Mane Indonesia which takes care of verifying the product before the product is being shipped.
- QAD : Quality Assurance Department is a department in PT. Mane Indonesia which take care of assuring the products' quality in accordance with GMP, Halal qualification, FSSC 22000, and ISO 9001. In assuring the products' quality, QAD member in charge of managing the products' qualifications to meets its category regulations, managing its Halal certification (based on customers' request), managing the food safety, and handling and verifying the customers' complaints.
- MTD : Maintenance Department is a department in PT. Mane Indonesia which take care of supporting the production process of PT. Mane

Indonesia by maintaining and repairing the machines and other utilities.

- FIFO : First In First Out is a method of using raw materials, producing products, and sending products which is used by PT. Mane Indonesia. In this method, the law which is used is the first incoming raw material or order will be proceed or used first.
- SN : SN stands for Serial Number which shows the identity of a product or a raw material.
- ICO : ICO stands for Internal Compound Order which is an internal procedure which consists of the raw materials used and the special treatments or procedures in producing or compounding a product.
- DOS : DOS is an internal system which consists of customers list in one shipping.
- COSP : COSP is an internal system which purpose is to prepare the goods that supposed to be placed in the loading dock to be shipped.

# CHAPTER I

## INTRODUCTION

### 1.1. Problem Background

Kaizen Concept and methodology is a scientific discipline which is used to improve the workplace situation and productivity by managing and keeping the workplace clean and safe. Kaizen concept has five steps which in brief usually called as 5S that stands for Seiri, Seiton, Seiso, Seiketsu, Shitsuke or in English is translated as Sort, Straighten or Streamline, Shine, Standardize, and Sustain. In applying this concept it is mandatory to have the commitment and willingness of all elements of the company to change their old habit which is not suitable or justify with the concept and the way of 5S. The commitment and the willingness to change the way of working should come from the top management down to the operator and even the cleaning service of the company.

This study took place in PT. Mane Indonesia which located in Cikarang, West Java. PT. Mane Indonesia is a manufacturing company which produces flavor and fragrance. Usually in a manufacturing company, the operator or the worker of the production floor only concern of their work not their workplace. This way of thinking sometimes drive people to unawareness of their workplace cleanliness and safety which automatically can drive them into unsafe situation and might decrease their productivity.

With current design and situation of workplace in the seasoning area of PT. Mane Indonesia there are several things which are not properly put in its place, not set in order, and not properly follow the safety procedure. By applying Kaizen concept and methodology especially the 5S concept, the safety and awareness of the workers and management about their workplace can be improved. So, by improving the workplace the safety and the productivity also will be improved.

## **1.2. Problem Statement**

The problem background escorts the purpose below:

- Does the implementation of 5S methodology in PT. Mane Indonesia, especially in seasoning production area is suitable?
- How to successfully implement the 5S methodology?

## **1.3. Objective**

The main process of this study is to standardize seasoning production area by applying 5S concept and methodology to improve the safety, awareness, and hygiene of the production area.

## **1.4. Scope**

With the aim of obtaining the objective of this study, some limitations are applied in this study;

- The observation takes place in seasoning production area of PT. Mane Indonesia.
- Data which are used in the research is the current situation of seasoning production area of PT. Mane Indonesia.
- The observation and implementation is held from June 10<sup>th</sup> 2014 until August 28<sup>th</sup> 2014.

## **1.5. Assumptions**

In order to implement 5S concept and methodology smoothly some assumptions needed to be made:

- There is no changes in room design is applicable during the implementation of 5S concept.
- In the implementation of 5S methodology, the production process will not be stopped. In the other word, the changes which require the production process to be stopped will be done if the production is not running.



- The marking application of 5S methodology only can be done by Maintenance Department. While Production Department will clean, identify, and maintain the items.
- The implementation of 5S methodology will more focused on the awareness building of the workers by doing the standardization on the working area. Then followed by the implementation of 5S in the working area.

## **1.6. Research Outline**

### **Chapter I Introduction**

This chapter consists of the background of the study, the purpose of the study, the scope of the study, and the assumption used in the study.

### **Chapter II Study Literature**

This chapter informs the theories of Kaizen methodology and 5S concept that support this study.

### **Chapter III Research Methodology**

The flow and the instrument which is used in the research will be explained in this chapter. The research's flow and instrument explanation will be give information of the way which the research and the problem is solved.

### **Chapter IV Company Profile and Project**

This chapter provides the information of the company which include the company's history and profile, company's production system, and project perform during the internship period in PT. Mane Indonesia.

### **Chapter V Data Collection and Analysis**

Observation is done to acquire the current information about the situation and condition of seasoning production area of PT. Mane Indonesia. Then the analysis and improvement which is done to the production floor area is done based on Kaizen methodology, especially the implementation of 5S concept.

## **Chapter VI Conclusion and Recommendations**

This chapter provides the result of the study with the purpose of answering the problem statement. Finally, recommendations will be given to the company based on the conclusions of this study.

## **CHAPTER II**

### **STUDY LITERATURE**

#### **2.1. Kaizen Methodology**

Kaizen (改善), Japanese for "improvement" or "self-changing for the best of all", refers to philosophy or practices that focus upon continuous improvement of processes in manufacturing, engineering, business management or any process. It has been applied in healthcare, psychotherapy, life-coaching, government, banking, and other industries. When used in the business sense and applied to the workplace, kaizen refers to activities that continually improve all functions, and involves all employees from the CEO to the assembly line workers. By improving standardized activities and processes, kaizen aims to eliminate waste (see lean manufacturing). Kaizen was first implemented in several Japanese businesses after the Second World War, influenced in part by American business and quality management teachers who visited the country. It has since spread throughout the world and is now being implemented in environments outside of business and productivity.

The Sino-Japanese word "kaizen" simply means "good change", with no inherent meaning of either "continuous" or "philosophy" in Japanese dictionaries or in everyday use. The word refers to any improvement, one-time or continuous, large or small, in the same sense as the English word "improvement". However, given the common practice in Japan of labeling industrial or business improvement techniques with the word "kaizen" (for lack of a specific Japanese word meaning "continuous improvement" or "philosophy of improvement"), especially in the case of oft-emulated practices spearheaded by Toyota, the word Kaizen in English is typically applied to measures for implementing continuous improvement, or even taken to mean a "Japanese philosophy" thereof. The discussion below

focuses on such interpretations of the word, as frequently used in the context of modern management discussions.

Kaizen is a daily process, the purpose of which goes beyond simple productivity improvement. It is also a process that, when done correctly, humanizes the workplace, eliminates overly hard work ("muri"), and teaches people how to perform experiments on their work using the scientific method and how to learn to spot and eliminate waste in business processes. In all, the process suggests a humanized approach to workers and to increasing productivity: "The idea is to nurture the company's human resources as much as it is to praise and encourage participation in kaizen activities." Successful implementation requires "the participation of workers in the improvement." People at all levels of an organization participate in kaizen, from the CEO down to janitorial staff, as well as external stakeholders when applicable. The format for kaizen can be individual, suggestion system, small group, or large group. Kaizen on a broad, cross-departmental scale in companies, generates total quality management, and frees human efforts through improving productivity using machines and computing power. Kaizen methodology includes making changes and monitoring results, then adjusting. Large-scale pre-planning and extensive project scheduling are replaced by smaller experiments, which can be rapidly adapted as new improvements are suggested.

The foundation of the Kaizen Method consists of five founding elements:

- Teamwork,
- Personal discipline,
- Improved morale,
- Quality circles, and
- Suggestions for improvements.

Out of this foundation there are three key factors in Kaizen Method:

- Elimination of waste ("muda") and inefficiency.

- The Kaizen Five-S (5S) Framework for good housekeeping.
  1. Seiri – Sort/Tidiness.
  2. Seiton – Straighten/Orderliness.
  3. Seiso – Shine/Cleanliness.
  4. Seiketsu – Standardized clean-up.
  5. Shitsuke – Sustain/Discipline.
- Standardization.

The cycle of kaizen activity can be defined as:

- Standardize an operation and activities,
- Measure the operation (find cycle time and amount of in-process inventory).
- Gauge measurements against requirements.
- Innovate to meet requirements and increase productivity.
- Standardize the new, improved operations.
- Continue cycle *ad infinitum*.

This is also known as the Shewhart cycle, Deming cycle, or PDCA.

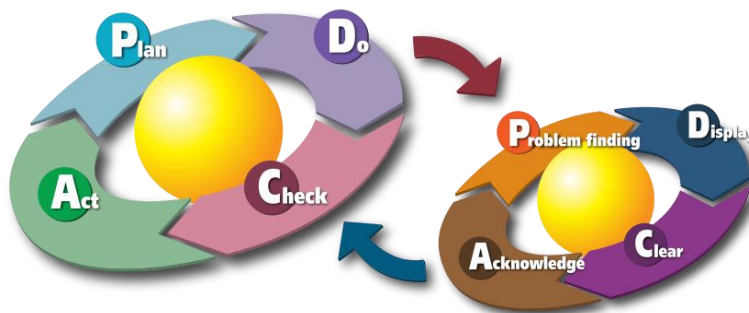


Figure 2.1 PDCA Cycle

## 2.2. 5S Methodology

5S is the name of a workplace organization method that uses a list of five Japanese words: *seiri*, *seiton*, *seiso*, *seiketsu*, and *shitsuke*. Transliterated or translated into English, they all start with the letter "S".

5S was developed in Japan and was identified as one of the techniques that enabled Just in Time manufacturing. Two major frameworks for understanding and applying 5S to business environments have arisen, one proposed by Osada, the other by Hirano. Hirano provided a structure for improvement programs with a series of identifiable steps, each building on its predecessor. Although the origins of the 5S methodology are in manufacturing, it can also be applied to knowledge-economy work, with information, software, or media in the place of physical product.

5S is a system to reduce waste and optimize productivity through maintaining an orderly workplace and using visual cues to achieve more consistent operational results. Implementation of this method "cleans up" and organizes the workplace basically in its existing configuration, and it is typically the first lean method which organizations implement.

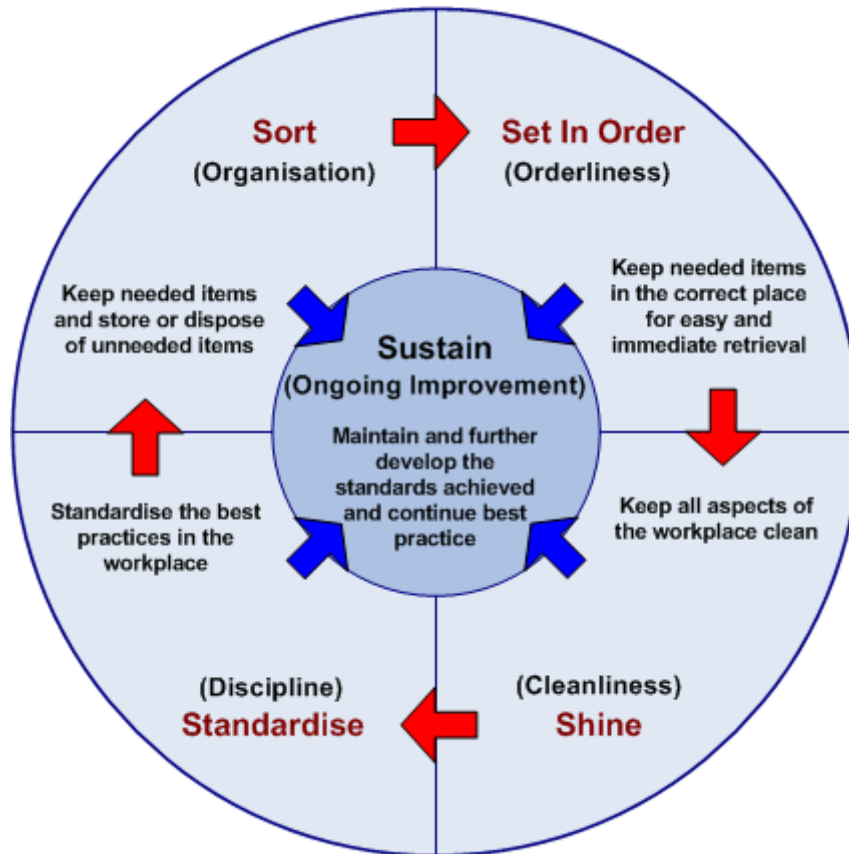
The 5S pillars, Sort (*Seiri*), Set in Order (*Seiton*), Shine (*Seiso*), Standardize (*Seiketsu*), and Sustain (*Shitsuke*), provide a methodology for organizing, cleaning, developing, and sustaining a productive work environment. In the daily work of a company, routines that maintain organization and orderliness are essential to a smooth and efficient flow of activities. This lean method encourages workers to improve their working conditions and helps them to learn to reduce waste, unplanned downtime, and in-process inventory.

A typical 5S implementation would result in significant reductions in the square footage of space needed for existing operations. It also would result in the organization of tools and materials into labeled and color coded storage locations, as well as "kits" that contain just what is needed to perform a task. 5S provides the foundation on which other lean methods, such as Total Productive Maintenance (TPM), cellular manufacturing, just-in-time production, and six-sigma can be introduced.

There are five primary 5S phases: They can be translated from the Japanese as Sort, Systematize, Shine, Standardize and Self-Discipline.

1. Seiri (整理, Sort)
  - Remove unnecessary items and dispose of them properly
  - Make work easier by eliminating obstacles
  - Reduce chance of being disturbed with unnecessary items
  - Prevent accumulation of unnecessary items
  - Evaluate necessary items with regard to dept/cost/other factors.
2. Seiton (整頓, Straighten or Streamline)
  - Arrange all necessary items in order so they can be easily picked for use
  - Prevent loss and waste of time
  - Make it easy to find and pick up necessary items
  - Ensure first-come-first-serve basis
  - Make work flow smooth and easy
  - Can also be translated as "set in order"
3. Seiso (清掃, Shine)
  - Clean your workplace completely
  - Use cleaning as inspection
  - Prevent machinery and equipment deterioration
  - Keep workplace safe and easy to work
  - Can also be translated as "sweep"
4. Seiketsu (清潔, Standardize)
  - Maintain high standards of housekeeping and workplace organization at all times
  - Maintain cleanliness and orderliness
  - Maintain everything in order and according to its standard.
5. Shitsuke (躰, sustain)
  - To keep in working order
  - Also translates to "Self-Discipline" meaning to do without being told.

5S is a cyclical methodology: sort, set in order, shine, standardize, and sustain the cycle. This results in continuous improvement.



Picture 2.2 5S Cycle

### 1. *Sort.*

Sort, the first S, focuses on eliminating unnecessary items from the workplace that are not needed for current production operations. An effective visual method to identify these unneeded items is called "red tagging", which involves evaluating the necessity of each item in a work area and dealing with it appropriately. A red tag is placed on all items that are not important for operations or that are not in the proper location or quantity. Once the red tag items are identified, these items are then moved to a central holding area for subsequent disposal, recycling, or reassignment. Organizations often find that sorting enables them to reclaim valuable floor space and eliminate such things as broken tools, scrap, and excess raw material.



**2. *Set In Order.***

Set In Order focuses on creating efficient and effective storage methods to arrange items so that they are easy to use and to label them so that they are easy to find and put away. Set in Order can only be implemented once the first pillar, Sort, has cleared the work area of unneeded items. Strategies for effective Set In Order include painting floors, affixing labels and placards to designate proper storage locations and methods, outlining work areas and locations, and installing modular shelving and cabinets.

**3. *Shine.***

Once the clutter that has been clogging the work areas is eliminated and remaining items are organized, the next step is to thoroughly clean the work area. Daily follow-up cleaning is necessary to sustain this improvement. Working in a clean environment enables workers to notice malfunctions in equipment such as leaks, vibrations, breakages, and misalignments. These changes, if left unattended, could lead to equipment failure and loss of production. Organizations often establish Shine targets, assignments, methods, and tools before beginning the shine pillar.

**4. *Standardize.***

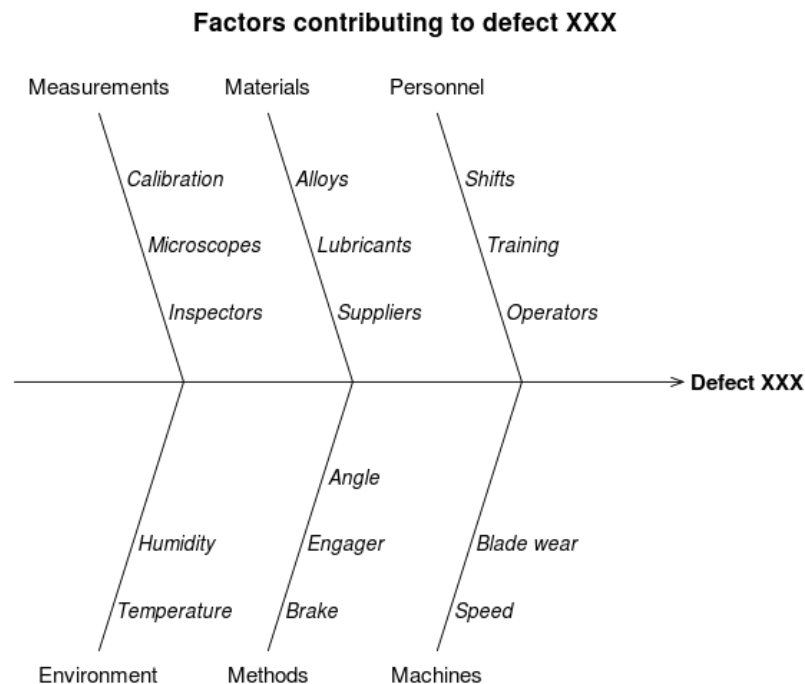
Once the first three 5S's have been implemented, the next pillar is to standardize the best practices in the work area. Standardize, the method to maintain the first three pillars, creates a consistent approach with which tasks and procedures are done. The three steps in this process are assigning 5S (Sort, Set in Order, Shine) job responsibilities, integrating 5S duties into regular work duties, and checking on the maintenance of 5S. Some of the tools used in standardizing the 5S procedures are: job cycle charts, visual cues (e.g., signs, placards, display scoreboards), scheduling of "five-minute" 5S periods, and check lists. The second part of Standardize is prevention – preventing accumulation of unneeded items, preventing

procedures from breaking down, and preventing equipment and materials from getting dirty.

**5. Sustain.**

Sustain, making a habit of properly maintaining correct procedures, is often the most difficult S to implement and achieve. Changing entrenched behaviors can be difficult, and the tendency is often to return to the status quo and the comfort zone of the "old way" of doing things. Sustain focuses on defining a new status quo and standard of work place organization. Without the Sustain pillar the achievements of the other pillars will not last long. Tools for sustaining 5S include signs and posters, newsletters, pocket manuals, team and management check-ins, performance reviews, and department tours. Organizations typically seek to reinforce 5S messages in multiple formats until it becomes "the way things are done."

**2.3. Fishbone Diagram**



Picture 2.3 Fishbone Diagram

Ishikawa diagrams (also called fishbone diagrams, herringbone diagrams, cause-and effect diagrams, or Fishikawa) are causal diagrams created by Kaoru Ishikawa (1968) that show the causes of a specific event. Common uses of the Ishikawa diagram are product design and quality defect prevention, to identify potential factors causing an overall effect. Each cause or reason for imperfection is a source of variation. Causes are usually grouped into major categories to identify these sources of variation. The categories typically include:

- People: Anyone involved with the process
- Methods: How the process is performed and the specific requirements for doing it, such as policies, procedures, rules, regulations and laws
- Machines: Any equipment, computers, tools, etc. required to accomplish the job
- Materials: Raw materials, parts, pens, paper, etc. used to produce the final product
- Measurements: Data generated from the process that are used to evaluate its quality
- Environment: The conditions, such as location, time, temperature, and culture in which the process operates

When to Use a Fishbone Diagram ?

- When identifying possible causes for a problem.
- Especially when a team's thinking tends to fall into ruts.

Fishbone Diagram Procedure

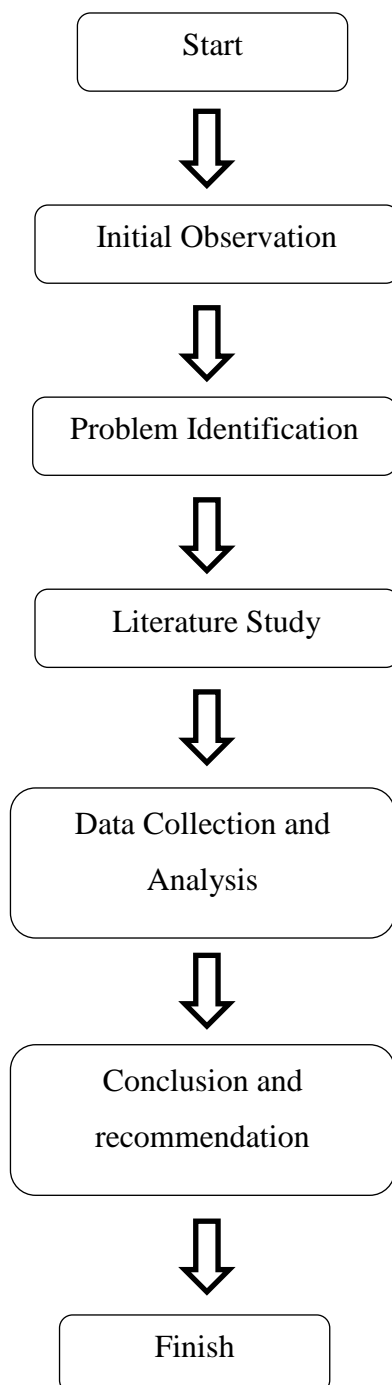
1. Agree on a problem statement (effect). Write it at the center right of the flipchart or whiteboard. Draw a box around it and draw a horizontal arrow running to it.
2. Brainstorm the major categories of causes of the problem. If this is difficult use generic headings:
  - Methods
  - Machines (equipment)

- People (manpower)
  - Materials
  - Measurement
  - Environment
3. Write the categories of causes as branches from the main arrow.
  4. Brainstorm all the possible causes of the problem. Ask: “Why does this happen?” As each idea is given, the facilitator writes it as a branch from the appropriate category. Causes can be written in several places if they relate to several categories.
  5. Again ask “why does this happen?” about each cause. Write sub-causes branching off the causes. Continue to ask “Why?” and generate deeper levels of causes. Layers of branches indicate causal relationships.
  6. When the group runs out of ideas, focus attention to places on the chart where ideas are few.

# CHAPTER III

## RESEARCH METHODOLOGY

The sequence of this research of study is made through:



### **Initial Observation:**

- Direct observation on the seasoning production area.
- Discussion with the worker and leader of the seasoning production area.

### **Problem Identification:**

- Identifying the problem in applying the 5S Methodology in seasoning production area.
- Define the objective, scope, and assumptions of the objective.

### **Literature Study:**

- Kaizen.
- 5S Concept.

### **Data Collection and Analysis:**

#### **Data Collection**

- Pictures of current condition and situation of seasoning production area.

#### **Data Analysis**

- Analyze current situation and condition and improving current situation with the application of 5S concept in the workplace.

### **Conclusion and Recommendation:**

- Conclusion and recommendation for the future research.

Figure 3.1 Research Framework

### **3.1. Initial Observation**

The first step of this study is the initial observation with the main goal is obtaining the required data. In the initial observation, the methods which are used in order to gain the data are direct observation and interview. The data which will be obtained after the initial observation is the current condition and situation of the production area especially the seasoning production area. By doing direct observation in the production area, the data which purposely to be acquired is the condition and situation of the workers' working environment. While discussion or interview is done in order to obtain the regular activities which are done by the workers of the seasoning production floor.

### **3.2. Problem Identification**

The second step of this study is problem identification. In this step, the problem which is faced by the company which has been obtained from the initial observation is identified. Besides defining the problem, the objective, scope, limitation, and assumption are made in order to solve the problem. After the direct observation is done, it is conserved that one of the problem on the seasoning production area are the untidiness of the workplace and lack awareness of the worker about their workplace. After the direct observation is done, the interview with the leader of the seasoning production department is done. From the interview, the clarification of the regular condition is obtained.

After the problem is identified, the next step is defining the objective of the research, in which is improving the workplace of seasoning production area by the implementation of 5S concept. In order to make the research is applicable in the real condition some limitations, assumptions, and scopes are decided for this study in which has been stated in the first chapter (Chapter I).

### **3.3. Literature Study**

The next step is finding the literature study or the theories that support the research. In this research which has big correlation with the tidiness, safety, and quality of the workplace and the product, the applicable theory that will support the research is the Kaizen concept and methodology, especially the implementation of 5S concept.

Kaizen concept and methodology is a philosophy or practices that focus upon continuous improvement of process manufacturing, engineering, business management or any processes. In the business sense and applied to the workplace, Kaizen refers to activities that continually improve all functions, and involves all employees from CEO to the assembly line works. By improving and standardized activities and processes, Kaizen aims to eliminate waste by implementing Kaizen as a daily process which goes beyond simple productivity improvement. It is also a process that, when done correctly, humanizes the workplace, eliminates overly hard work, and teaches people how to perform experiments on their work using the scientific method and how to learn to spot and eliminate waste in business processes.

While 5S is the name of a workplace organization method that uses a list of five Japanese words: seiri, seiton, seiso, seiketsu, and shitsuke or in English is described as sort, straighten or set in order, shine, standardize, and sustain. This concept describes how to organize a work space for efficiency and effectiveness by identifying and storing the items used, maintaining the areas and items, and sustaining them.

### **3.4. Data Collection and Analysis**

The next step is collecting data from the company and workers to be studied and analyzed. The data which are needed to be collected are the situation and condition of the workplace, specifically the situation and condition of the

seasoning production area. In collecting the data, direct observation and interview is done, as stated in the research framework. The data obtained from direct observation is in the form of pictures of the situation in the seasoning production area of PT. Mane Indonesia.

After the data is obtained, the next step is analysis using Kaizen and 5S concept. In analyzing the data acquired, the comparison between the current situation and the expected situation is done. From the differentiations between current situation and expected situation, the intended situation and condition will be proposed. In analyzing the situation, discussion with

### **3.5. Conclusion and Recommendation**

Finally, after the analysis of the research is done the next step is making the conclusion and recommendation. The conclusion of the research must answer the objective of the research in which is to standardize seasoning production area by applying 5S concept and methodology to improve the safety, awareness, and hygiene of the production area. Besides it is also recommended for completely applying the 5S concept in the future and the other researcher to produce better improvement in the production area especially in seasoning production area.



## **CHAPTER IV**

### **COMPANY PROFILE AND PROJECT**

#### **4.1. Company Profile**

##### **4.1.1. Company History**

PT. Mane is one of the worldwide leaders in fragrance and flavour design industry which produce fragrances, flavours, and ingredients with the philosophy of “ensuring the success of its customers’ products by devoting the maximum know-how and the top quality resources” and the belief of fragrances and flavours have to promote dream and pleasure, and make it possible. With the tagline of “We Capture What Moves” PT. Mane consistently grows along with its customer.

PT. Mane was established in 1871 by Victor MANE in France. In that period, the company started to produce fragrant materials from regional flowers and plants. Since then, the small distillery which grew successfully to become one of the leading Flavours and Fragrances companies worldwide has continually been run by the MANE family. In 1916, his sons Eugene and Gabriel modernized and developed the business internationally. In 1959, PT. Mane was taken over by Maurice MANE from his father, Eugene. Under the leadership of Maurice MANE, the company increased its production capacity, set up research and analytical laboratories, diversified into flavouring for food industry and developed its international network of subsidiaries. In 1995, Maurice MANE’s eldest son Jean was appointed President of Mane Group and his other son Michel was appointed President of the Americas Region, while Maurice MANE retired to become Chairman of the Supervisory Board.

As a company, PT. Mane has its own vision and values, which makes them different from the other flavour and fragrance house. The vision and values of PT. Mane are Passionate, True, and Inspired.

Passionate, established in 1871, MANE has continually been run by the MANE family. An unchallenged legitimacy, based upon experience and transmission of heritage and values. True people, since the company is rooted in the emblematic local of Provence, they are naturally sensitive to local cultures. Inspired, as the company is independent, they have developed a sincere entrepreneurial spirit, thus a freedom to think out of the box.

As a global company whose headquarters in Bar Sup Loup, France, PT. Mane employs 3900 people in 32 countries, which divided 22 manufacturing sites and 40 research and development centres. Besides that, PT. Mane also has 37 affiliates and 35 agents, which spread across 70 countries, include Indonesia, which become PT. Mane Indonesia.

PT. Mane Indonesia was established in 1995, began with the urge of PT. Mane to set up a regional centre in South East Asia and as the major existing and potential market in this part of the world, Jakarta has been chosen as the place to locate the regional Head Quarters. In January 1996, PT. Mane Indonesia was officially created, while the production process and activity began in the early 1998.

Nowadays, PT. Mane Indonesia is located in two places. The first building is located in *Adhi Graha Building, 18<sup>th</sup> floor, Suite 1803. Jl. Gatot Subroto Kav. 56, 12950 Jakarta-Indonesia*. The second office is located in *Jl. Jababeka XVI Block V-66, Cikarang Industrial Estate, 17350 Cikarang-Bekasi, Indonesia*. While the first office is dedicated for the sales activity of PT. Mane Indonesia, the second office is dedicated not only for sales activity, but also for manufacturing and innovation or research and development activity of PT. Mane Indonesia.

With 420 employees working in one office for the process of manufacturing, selling products, and doing the research and development process, PT. Mane Indonesia, which located in Cikarang Industrial Estate is sited on a land of 21,680 square meters and operates in a building with a covered surface of 10,000 square meters. In 2014, the total capacity of PT.

Mane Indonesia reach the number of 14,160 tons per year which divided into 4,000 tons per year for liquid products, 2,300 tons per year for spray dry powder products, 2,000 tons per year for blended powder products, 1,000 tons per year for emulsion products, 1,200 tons per year for extruded products, 3,500 tons per year for fragrance products, and 160 tons per year for seasoning products.

As a manufacturing company, the products of PT. Mane Indonesia are sold to clients in Indonesia and also exported to several countries such as Thailand, China, Philippines, Singapore, Malaysia, India, and Pakistan. Being a big, well known company, it is a must for PT. Mane Indonesia to keep its quality stick to the standard. In order to maintain the products' standard, PT. Mane Indonesia obtains ISO 9001:2000 certification in 2000 and renew the certification to ISO 9001:2008 in 2010. The ISO 9001 certification is a certification for Quality Management, which means that the quality of the company who already gain the certificate of ISO 9001 has fulfil the requirement of International Standardize Organization. Besides ISO 9001 PT. Mane Indonesia also has obtain some certificate such as Halal (gained on 2011), which assure that the products of PT. Mane Indonesia are safe to be consumed by Muslim. The other certificate which has been acquired by PT. Mane Indonesia is FSSC 22000: 2010 (in 2012) and renewed into FSSC 22000:2013 (in 2014) which concern about the Food Safety.

#### **4.1.2 Organizational Structure**

The organizational structure in PT. Mane Indonesia is categorized into four; Research and Development Division, Manufacturing Division, Support Division, and Sales and Marketing Division which are led by a Country Managing Director. The Country Managing Director directly control the Technical Director of Flavour and Fragrance, Project and Process Specialist, Plant Manager, Quality Assurance Department Manager, Quality Control Department Manager, Sales Administration

Department Manager, Central Analysis and Research Manager, Sales Director, Sensory Analysis Manager, Flavour Marketing Analysis Manager, Fragrance Marketing Manager, and Customer Insight Manager. Every section manager has their own team member which has been shown below.

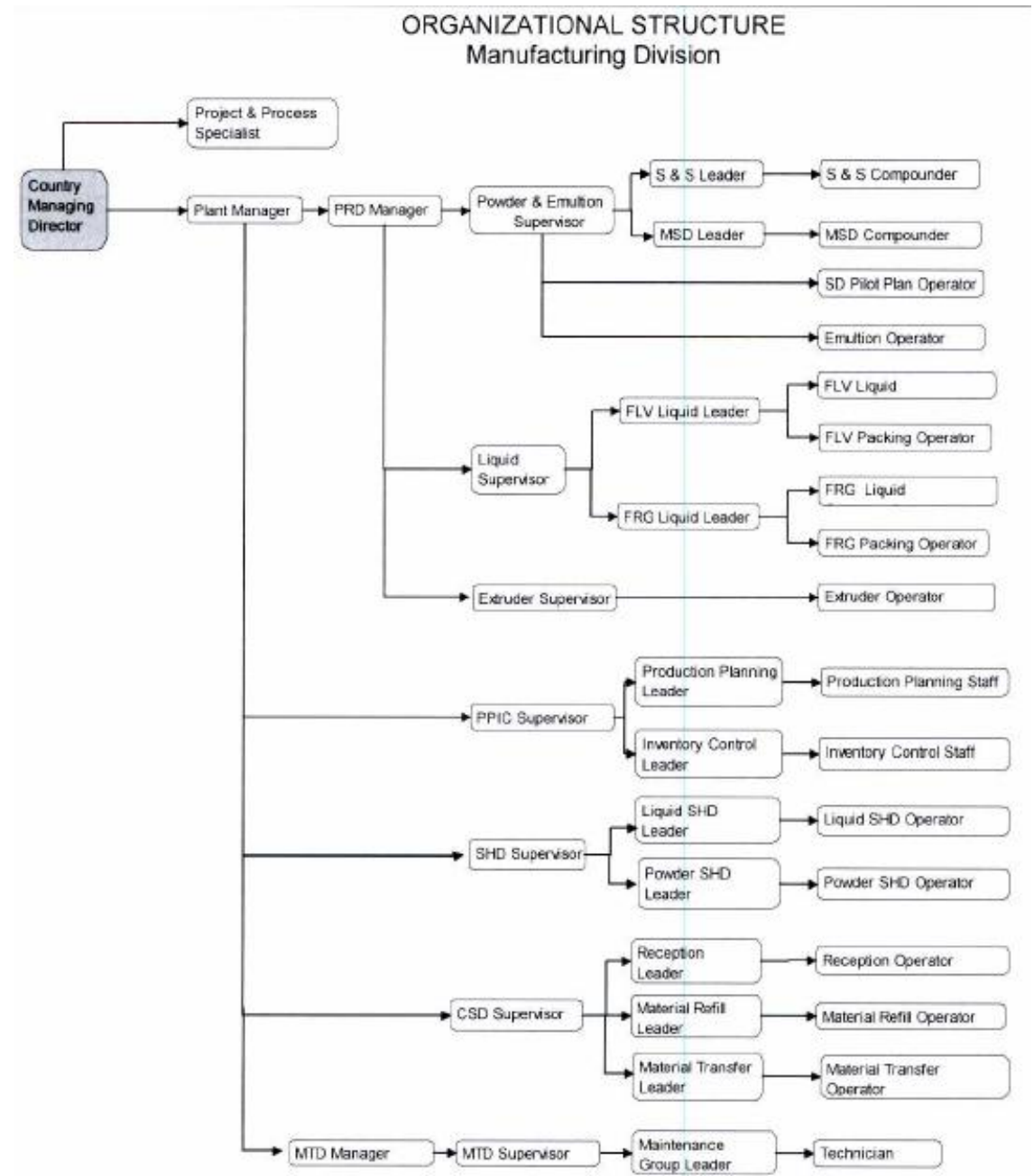


Figure 4.1 Organizational Structure (Manufacturing Division)

In figure 4.1 it is shown that the Country Managing Director directly in charge of Project and Process Specialist and Plant Manager. Then the Plant Manager will monitor the whole process which takes place in the production area, start from Production Planning and Inventory Control up to the Shipping Department, or in the other way, the Plant Manager is responsible from the beginning activity of the production, which is forecasting the demand of the product and controlling the inventory of the products and raw materials, production processes, maintenance of the production area include the maintenance of the tools and equipments for the production, and the shipment of the operator.

To make sure that all the processes run smoothly, The Plant Manager is supported by some teams such as production teams which is led by a Production Manager, Production Planning and Inventory Control Supervisor, Shipping Department Supervisor, Central Storage Department Supervisor, and Maintenance Department Supervisor. Every division which is led by a supervisor or a manager has its own function but has one purpose which is supporting the production and business process of PT. Mane Indonesia.

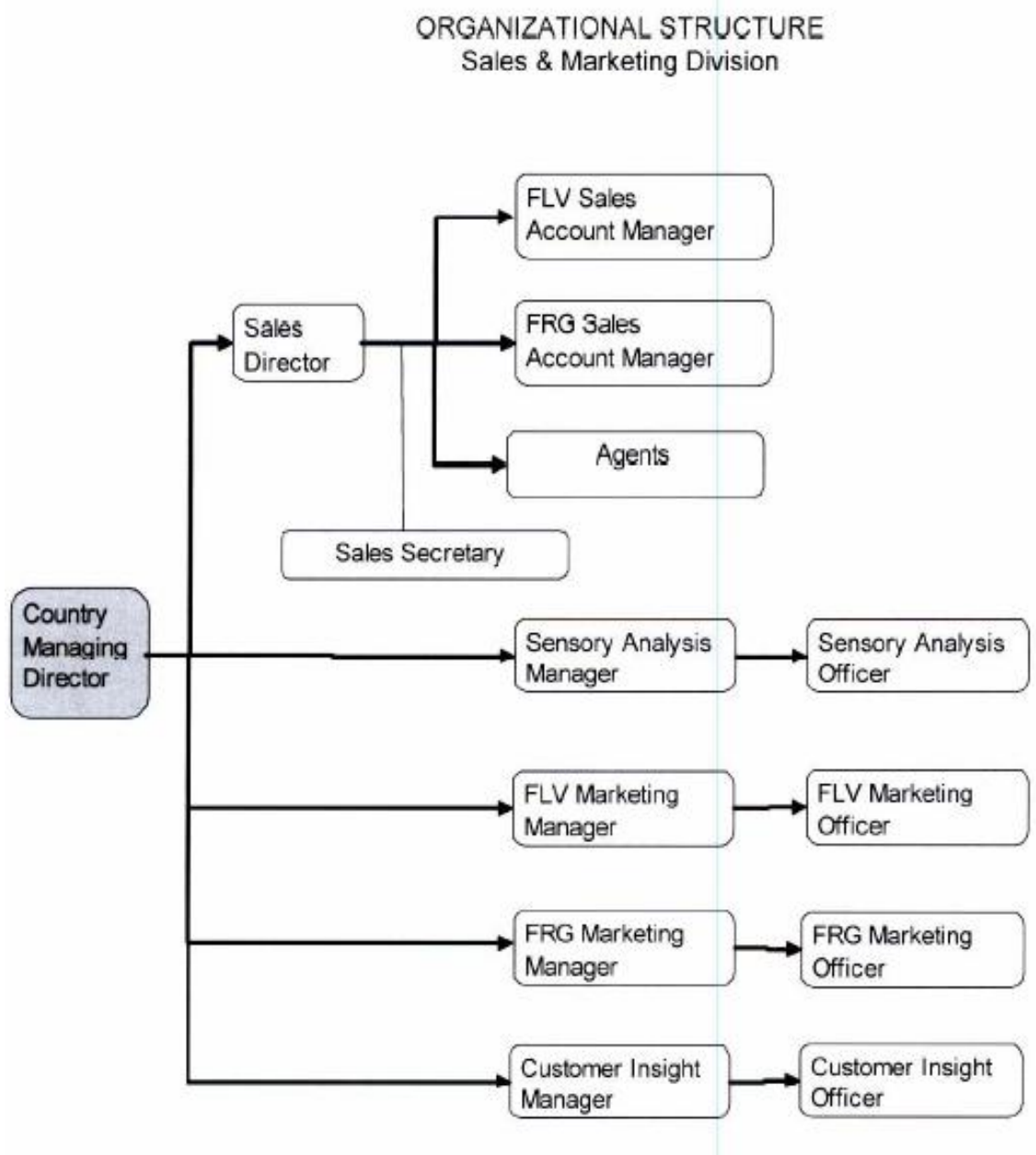


Figure 4.2 Organizational Structure (Sales and Marketing Division)

From the perspective of Sales and Marketing Division (shown in figure 4.2), the Country Managing Director is in charge of the Sales Director, Sensory Analysis Manager, Flavour Marketing Manager, Fragrance Marketing Manager, and Customer Insight Manager, in which each manager is helped by their own officers or staffs.

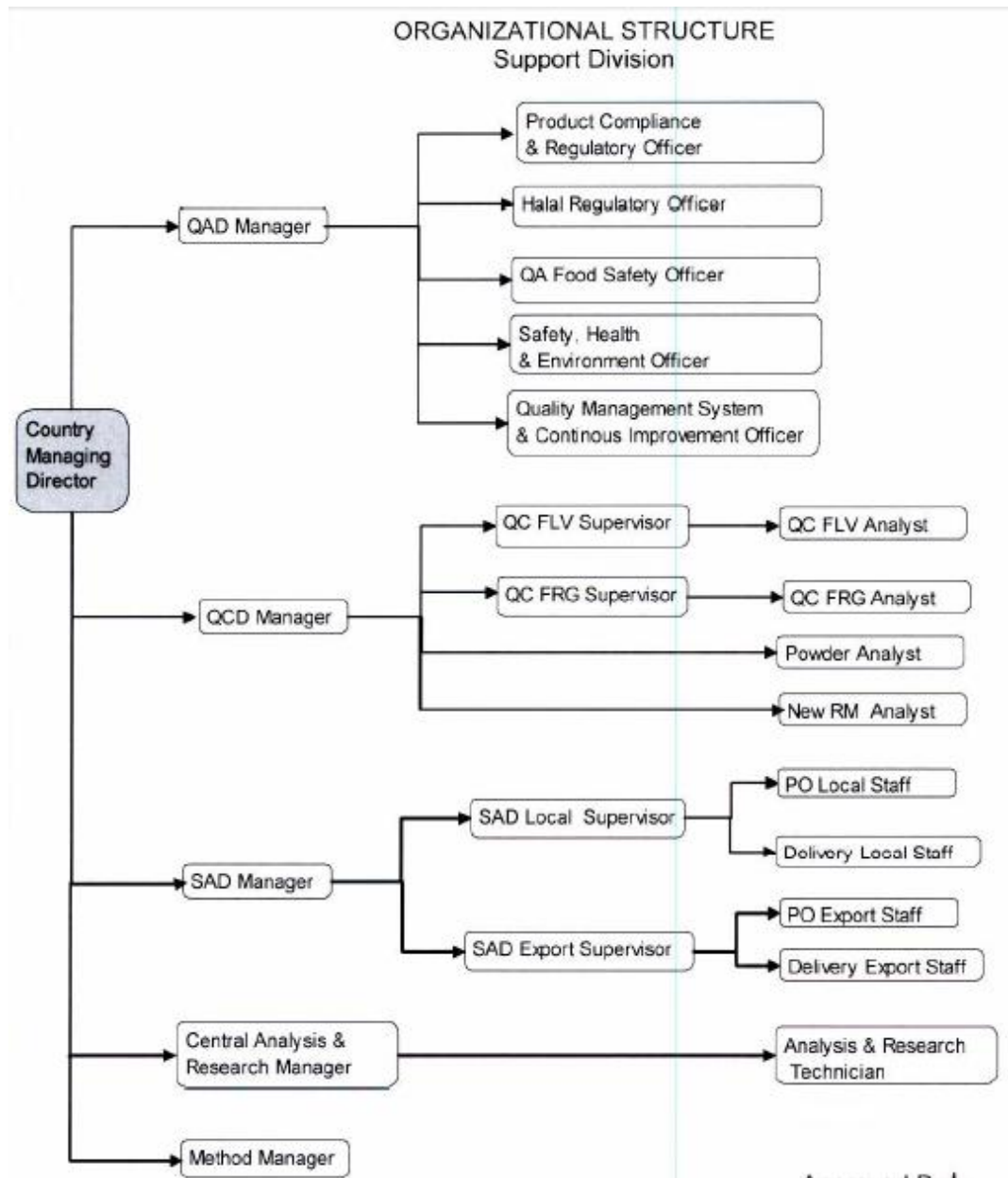


Figure 4.3 Organizational Structure (Support Division)

Based on the Support Division Category in the Organizational Structure, the Country Managing Director is supported by Quality Assurance Department (QAD) Manager, Quality Control Department (QCD) Manager, Sales Administration Department (SAD) Manager, Central Analysis and Research Manager, and Method Manager.

The support division has job of supporting the main business of PT. Mane Indonesia which is selling fragrance and flavour by handling and managing the complaints of the customer, assuring the quality of the products and the processes of production in order to keep the quality meet the standard requirements and customer requirements. Besides keeping the quality based on the initial requirements, support division (Method Department) also in charge of changing or finding the alternative way of producing a product if there are changes in the specification or requirements.

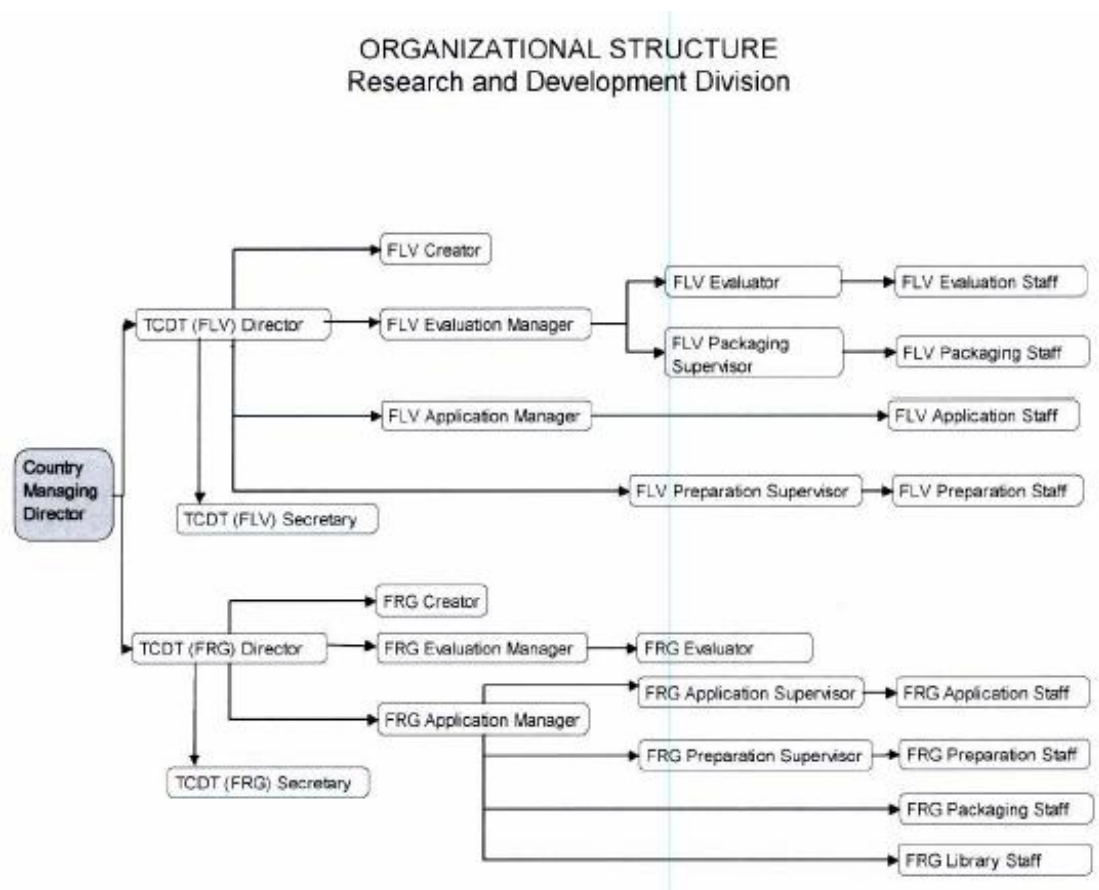


Figure 4.4 Organizational Structure (Research and Development Division)

The Research and Development Division is divided into two main sections. The first section is the Flavour section which is led by a Technical Director (TCDT). This section is in charge of developing



flavour products of PT. Mane Indonesia. The other section is the Fragrance section. Similar to Flavour section, Fragrance section also led by a Technical Director (TCDT) which is helped by their team members which consists of Flavour or Fragrance Creator, Flavour or Fragrance Evaluation Manager and Staffs, Flavour or Fragrance Application Manager and Staffs, and Flavour or Fragrance Technical Director Secretary.

Although the Research and Development Division is divided into two section, both of them have the same main job which is developing and making the new flavour and fragrance. The new flavour and fragrance which are made by the Research and Development Division could be come from the improvement of the old or existing product or come from a brand new product ( product which never been existed before).

In 2014, PT. Mane Indonesia has employed around 420 employees which consist of 290 men and 130 women, or can be said that 69% workers of PT. Mane Indonesia are men, while 31% workers of PT. Mane Indonesia are women.

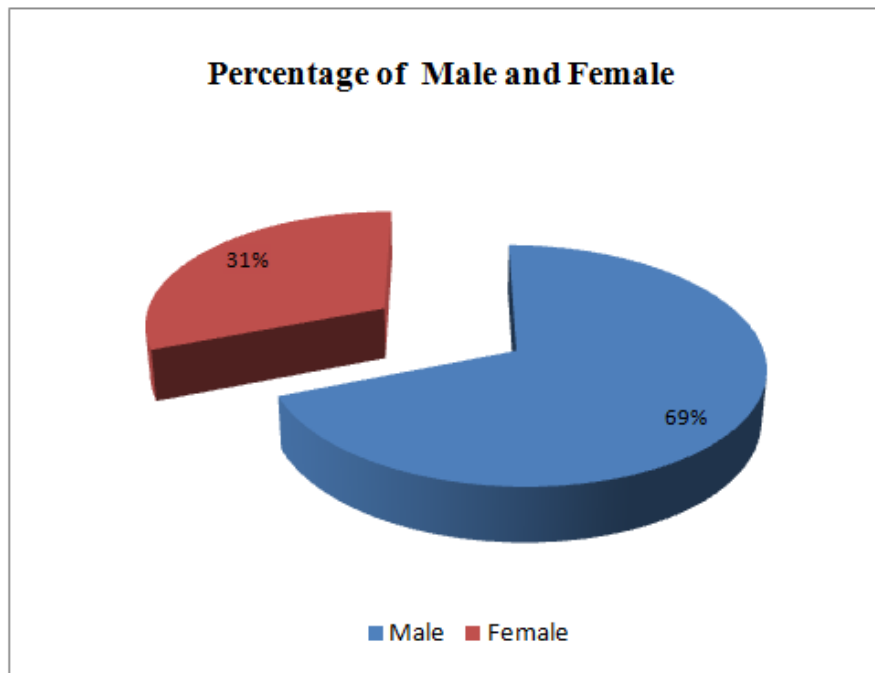


Figure 4.5 Percentage Worker of PT. Mane Indonesia based on Gender

Based on the employee status, the workers in PT. Mane Indonesia can be divided into two types. The first type is called as the employee, and the second type is called the non-employee. The employee group is consist of workers who are permanent workers in PT. Mane Indonesia, while the non-employee group is consist of the temporary workers who work for PT. Mane Indonesia based on their contract with PT. Mane Indonesia.

<b>Employee Population</b>				
	Production (Plant)	Sales & Distribution (SAD)	Other ( Office, R&D)	Total
Male	100	19	99	218
Female	2	23	96	121
	102	42	195	339

Figure 4.6 Table of Employee Population

<b>Non-Employee Population</b>				
	Production (Plant)	Sales & Distribution (SAD)	Other ( Office, R&D)	
Male	59	7	6	72
Female		2	7	9
	59	9	13	81

Figure 4.7 Table of Non-Employee Population

<b>Distribution of Workers</b>				
	Production (Plant)	Sales & Distribution (SAD)	Other ( Office, R&D)	Total
Male	159	26	105	290
Female	2	25	103	130
Total	161	51	208	420
Percentage	0,38	0,12	0,50	1,00

Figure 4.8 Workers' Distribution

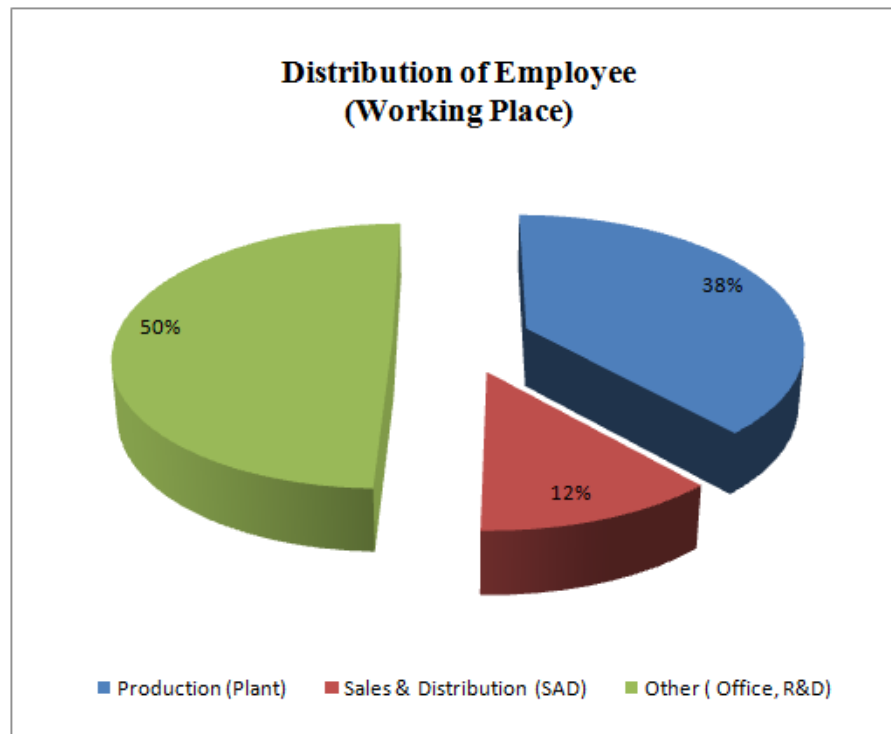


Figure 4.9 Chart of Workers; Distribution based on Working Place

From the tables above it can be seen that from 420 workers in PT. Mane Indonesia, 339 workers are permanent employee of PT. Mane Indonesia, and 81 workers are temporary workers of PT. Mane Indonesia. And the distribution of the workers are 161 person work in the Production Area, 51 person work in the Sales and Distribution Area, 208 person work in the office as Research and Development, and other supporting department member; such as Information Technology Department member, Quality Assurance Department member, Accounting Department member, Maintenance Department member, and Human Resource Department member. In which each department has its own function.

#### **4.1.3 Company Policy**

PT. Mane Indonesia as a big multinational company has the main policy and concern in the quality of its product as the heart of the company policy. In which the quality policy of PT. Mane Indonesia is; PT. Mane Indonesia is fully committed to achieve customer satisfaction in the safe

and health work environment through the implementation of Quality Management System, Food Safety Management System, Halal Assurance System, and Occupational Health & Safety System consistently and continuous improvement to produce a qualified halal, and safe product for consumption comply with customer requirements, statutory and regulations.

In order to ensure that the policies are achieved, PT. Mane Indonesia must certain that:

1. Communicate its policies, objectives, and information regarding development, implementation, updating Quality Management System, Occupational Health & Safety System, and Food Safety to the whole organization, to required level organization in order to ensure food safety which required by International Standard ISO 9001:2008, FSSC 22000, and Halal Assurance System.
2. Availability of Business Process Map and alignment between processes within the organization.
3. Increase capability and technical expertise, awareness of all organization members through training and socialization.
4. Increase ability to produce qualified, safe for consumption and halal product according to Syariat Islam which is recommended by MUI's fatwa commission, to avoid the haram and filth/najis of materials through risk control and prevention of contamination.
5. Periodically review the policies, objectives, implementation of management systems, risk control related to changes in raw materials, processes, products and technologies.
6. Criteria and method are established to assure the effectiveness of the operation and process control.
7. Availability of resources and information necessary to support the operation and monitoring.

8. Implementation of measurement, monitoring and analysis of process performance related to Quality Management System, Occupational Health & Safety Systems, and Food Safety.
9. Implementation of actions which is required to achieve results and continuous improvement.
10. Development, document and maintain of effectiveness of Quality Management System, food safety, and halal assurance system and if necessary update it to comply with the requirements of ISO 9001:2008, FSSC 22000 and Halal Assurance System.
11. Food safety hazards that may occur in products within the scope of the system are identified, evaluated, and controlled in order that products do not harm consumers, either directly or indirectly.
12. Communicated the information related to food safety to food production chain.

The quality objectives of PT Mane Indonesia are established and reviewed yearly. The quality objectives are stated in PTMI Company Dashboard and should review in management meeting. This PTMI Company Dashboard is detail defined to Department Objective to simplify operational efficiency review.

## 4.2. Production System and Product

### 4.2.1 Production System

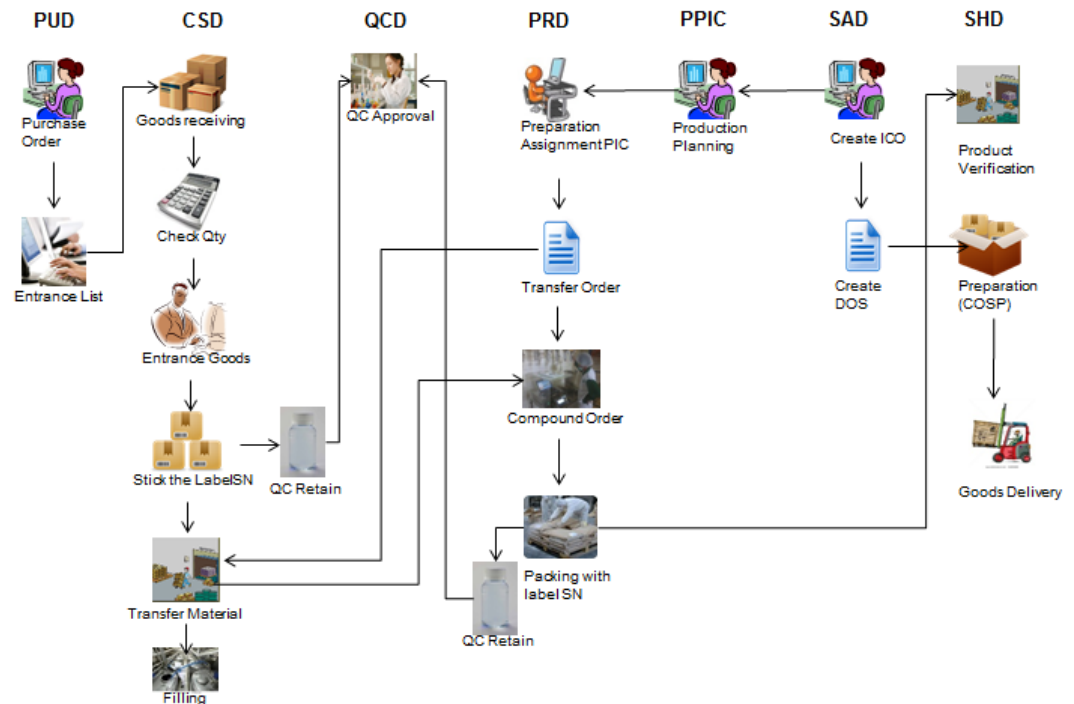


Figure 4.10 Overall Production Flow

The production flow of PT. Mane Indonesia starts from the demand of the customer. As soon as the Sales Administration Department (SAD) of PT. Mane Indonesia receives the order from the customer, the order is given to the Production Planning and Inventory Control (PPIC) Department. Then, the PPIC Department check the material required in the Central Storage. If the materials required are available, the Central Storage Department will transfer the material with FIFO (First In, First Out) concept but, if the materials required for the production are no available, then the materials are requested by Central Storage Department (CSD) to the Purchasing Department (PUD). After the materials which are bought by Purchasing Department arrives at PT. Mane Indonesia, the quantity and the quality of the materials are checked and being labelled with serial numbers (SN). After the quality of the materials is confirmed and fulfils

the standard, the materials are either transferred to the central storage or being placed in the raw materials drums in the production floor.

The next process is production process which is maintained by Production Department (PRD). After all materials are obtained and ready to be used, PPIC Department transfer the production schedule to Production Department in the form of compound order. The compound order itself is a list of products which are needed to be made in certain period of time, in this case is in one day. After the production process is done, some samples of the product is taken and given to the Quality Control (QC) Department to be checked, at the same time the product is packed and attached with serial number (SN).

If the process of quality checking is done, the accepted product is transferred to the Shipping Department (SHD). After the product is ready to be shipped, the Shipping Department will ship the product based on the schedule which is made by Sales Administration Department (SAD).

#### **4.2.2 Products**

PT. Mane Indonesia as one of the biggest flavour house in Indonesia has two products which are Flavour and Fragrance. In PTMI these products are produced in several forms, according to the customer's demand. For each product's form, it requires certain kind of machine which is different for one type of form with another.

Type or Form	Production Process
Liquid Flavour and Fragrance	1. Mixing
Fine Powder (Sweet)	1. Drying 2. Simple Blending
Fine Powder (Savoury)	1. Mixing
Emulsi	1. Mixing
Paste, Flavour Liquid	1. Heating

Extruded (Granule) Sweet and Savoury	1. Extrusion
-----------------------------------------	--------------

Figure 4.11 Table of Products

Basically, the products of PT. Mane Indonesia have three main forms which are liquid, powder, and granule. Powder products in PT. Mane Indonesia are in the form of fine powder (able to go through certain size of mesh). While granule products are powder in bigger size that are not able to go through mesh. For the liquid form, it divided into oil soluble, water soluble, and paste. Oil soluble is the category of liquid whose base is oil and able to be dissolved in oil, while water soluble is the category of liquid with the base of water and able to be dissolved in water. The paste category consists of liquid products which has high density with appearance almost similar to solid.

### 4.3. Project

My internship took place at PT. Mane Indonesia which is located in Jababeka, Cikarang Industrial Estate which was started on May 12<sup>th</sup> 2014 until August 28<sup>th</sup> 2014. During my internship period in PT. Mane Indonesia I was placed in Quality Assurance Department, where I learned many things such as the ISO, GMP, Halal, and Safety rules and regulations.

During my internship period in the Quality Assurance Department I obtained two main jobs which are in charge of 5S implementation project in the Seasoning Production area in the production floor and assisting my supervisor in the project of Continuous Improvement Competition. In the 5S implementation project in the Seasoning Production area which is supposed to be the model of 5S implementation in the production area, my duties are observing the daily situation in the Seasoning production area and then improving the current situation with accordance to 5S concept and methodology. After making the improvement concepts, it is



mandatory for me to consult and do the report to my supervisor. After the improvement ideas is known and accepted by my supervisor I had to make the summary of the findings and the supposed situation and announce it on the company's network system so all the concerned departments know, aware, and concern about the 5S implementation progress. After that I also have to make the standardization of 5S implementation in the Seasoning Production area. The standardization is made in order to keep the condition of seasoning production area stay the same as it should be. Besides concerning about the physical appearance of 5S implementation, it is also important to build the awareness of the workers who works around and in the seasoning production area. In order to build the awareness training about 5S must be done. To accomplish the goal of building the workers' awareness I also make a presentation about the introduction to 5S and how to implement 5S concept and methodology in the workplace.

In assisting my supervisor in the Continuous Improvement Competition, I am in charge of designing the award announcement for the competition, documenting the competition process, documenting the awarding process, assisting in the verification process, and announcing the results and the winners of the competition. Besides that, I also help my supervisor in the execution of the Continuous Improvement Competition documents by classifying the improvement ideas based on the department where the contestant belongs to, with the purpose of making the verification process easier, more effective and efficient.

Besides those two main jobs, during my internship period in PT. Mane Indonesia I also have the responsibility of helping the Quality Assurance Department members in their daily jobs. The daily jobs which I had done during my internship in PT. Mane Indonesia are updating documents, attending trainings, participating in internal audits, updating database, managing some documents, merging key performance indicator, translating some documents, making questionnaire, making presentation, making record of documents destruction, learning the business process and

also the production process. The documents that I update when I do my internship are Halal Raw Material Database for 2013 and 2014, and Quality Manual documents. Those documents are mandatory to be managed and updated. Halal Raw Material Database will be updated monthly or yearly by the Halal Assurance System staff, while Quality Manual documents should be checked and maintained twice a year since those documents are essential for Quality Assurance Certifications such as Halal and ISO Certifications. Since PT. Mane Indonesia already got the Halal and ISO Certifications, regularly there will be an audit for each certificate in which required documents (example; Halal raw material database for Halal certification, Quality Manual documents for ISO certification) will be checked by the auditors, if the company fails to manage and shows the required documents although the implementation of the certification's is completely implemented, but there is no supporting documentation, the audit and certification process can be hampered and disturbed.

Moreover I also manage and update quality assurance department documents and make the record of document destruction. In managing these documents the expired and out of dated documents must be destroyed and renewed. In renewing the documents there are several rules and steps that must be followed. In order of being able to do some changes or renewal to the documents, a proposal or report must be made and being accepted. This report must consists of the changes being made, when the changes made, what is being changed, who propose the changes and who accepted the changes. After the old documents being changed by the new one, it will be destroyed or being recycled. The destroying method of a document is based on its confidentiality. If the document is highly confidential and the document is wanted to be thrown away, the document must be shredded. If a document if wanted to be recycled but the document is not too confidential and can be reuse, then the document will be reused if not then the document will directly be thrown away. Despite of

managing quality assurance department documents I also have the responsible to merge the key performance indicator of PT. Mane Indonesia. The Key Performance Indicator is a benchmark whether the target of a company has been achieved or not. Key performance indicator can become a benchmark in a company because key performance indicator consists of goals and objectives of a department or an institute. Then, during my internship I also do some document translations. The documents which I translated are Working Instructions documents and Safety Handbook. The working instruction document consists of the instructions and information of how to accomplish a certain job. Whereas the safety handbook that I translated contains instructions and information for PT. Mane Indonesia's visitors the way of keeping themselves in a safe way in visiting PT. Mane Indonesia.

Then my duties in my internship period also consist of making standardization of fragrance lab area and making questionnaire for the worker in the production area. The standardization in the lab of fragrance area is almost the same as in the production floor area. The differentiation between the standardization in the production area and in the lab area is the placement of the machines and materials used in the process. While in the production process the materials are stored in the central storage, for lab application, the materials are stored in the same location as the process took place. The questionnaire that I made in my internship period contains questions about safety health and environment, food safety, halal assurance system, and quality management system. This questionnaire is made with purpose of knowing the understanding level of the workers in the supervisor and leader level about safety health and environment, food safety, halal assurance system, and quality management system. The understanding level of a worker about safety health and environment, food safety, halal assurance system, and quality management system are so important because, in order to maintain the quality of the company all segments of workers must understand the requirements, rules, and

regulations of safety health and environment, food safety, halal assurance system, and quality management system.

Despite of doing some jobs, from PT. Mane Indonesia I also gain some knowledge such as the business process and production process of PT. Mane Indonesia, skills training from internal and external parties of PT. Mane Indonesia, and auditing skill. In learning the business process of PT. Mane Indonesia I obtain the knowledge through explanations of process, functions, and job desks of most departments in PT. Mane Indonesia. Whereas the knowledge of the production process of this company is acknowledge through observation, especially the seasoning and spray dry production process. The auditing skill that I obtain is the internal audit, in the internal audit process a department is observed and reviewed and the findings during the auditing process will be informed and clarified to the head of the department. The auditing process will take place during the working activity or working hour, in the other word the auditor will observe and investigate the activity of the one which is audited while they are working then, their activity will be examined in correspondence with the rules and regulations. For the training from internal parties, I joined halal induction training and presentation training in which I learn a lot about halal which is one of an important segment in Indonesia food regulations, from the presentation training I learn a lot about how to present a good presentation from making the beginning, the core, the closing of a presentation and also the manners while conducting the presentation. The other training activity that I joined was safety and health training which was conducted by external parties of the company with the theme of first aid, in which I learn how to proceed an emergency aid if there is an accident or unwanted situation.

## **CHAPTER V**

### **DATA COLLECTION AND ANALYSIS**

#### **5.1. Data Collection and Analysis**

The research started with initial direct observation in the seasoning production area; which from this observation the current conditions and situations of the seasoning production area are obtained. Furthermore discussion with the operators and leader of the seasoning area is conducted. From the discussion with the operators and the leader of the seasoning area, the routine of the workers during the working hour can be predicted and literally known.

The initial observation is done in the early of June 2014, while the observations and controls of 5S methodology implementation are conducted from June 2014 until August 2014. From the initial observation in the seasoning production area, it is known that several applications of the 5S methodology has been implemented on the seasoning area, as the example, in the seasoning area, some places already being marked in order to give identification to the area (for instance the staging area) and labeling on the storage or placement of the utensils, this labeling purposes is to give identification on the storage in order to make it easier for the workers to find and store the utensils that they are intended to use, although the marking and the identification processes which have been made are not completed yet (in the comparison with 5S methodology and concept).

After the initial observation is conducted, it is a must to consult with the management and find out the limitations, rules and regulations on applying the 5S concepts and methodology in the seasoning area, since despite of only applying and copying the theory and methodology of 5S in the production floor, PTMI also concern in maintaining PTMI customs and values. After consulting and finding out the limitations of the implementation of 5S, several observations, reviews, and controls in accordance to implement 5S concepts are done. Through observations in the seasoning production floor, the situation, custom and daily routine of the

workers are obtained. While through discussion with management (leader of the 5S Project), the progress of 5S implementation is being controlled.



Figure 5.1 Initial Condition of Seasoning Production Area

In the initial condition of seasoning production area can be seen that some areas and utensils (tools) has been marked and identified, but then the marking and identification process has not been completed yet this supported by the evidence that not all areas and utensils (tools) are marked and identified. Despite of marking and identifying areas and utensils, in order to be successfully applying 5S concept and methodology, the workers' awareness also must be built because if there is no awareness of the workers to maintain and concern about their workplace, the result of the 5S implementation will not last long and the implementation of 5S cannot be said success.

<b>Place</b>	<b>Initial Condition</b>	<b>Theoretical Condition</b>	<b>Changes</b>	<b>Progress</b>
Staging Area	Marked poorly	Marked well	Re-marked	Done
	Materials are identified, cleaned but poorly arranged	Materials well arranged, identified and cleaned	Rearrange the materials	Not Yet
	The area is clean	The area is clean	-	
Compounding Workbench	Not marked yet	Marked well	Mark the area	Not Yet
	Utensils on the workbench only for compounding process	Utensils on the workbench only for compounding process	-	
	Clean from dust, rust, and materials' spill	Clean from dust, rust, and materials' spill	-	
	No raw materials' spill	No raw materials' spill	-	
Workbench Dust Collector	Dirty (dust) and started to rust	Clean from dust and rust	Clean and maintain the cleanness	Done
	No identification	Well identified	Put identification	Not Yet
Dust Collector	No identification	Well identified	Put identification	Not Yet
	Dirty	Clean from dust	Clean and maintain the cleanness	Done
Machines	Marked well	Marked well	-	
	Clean from dust and rust	Clean from dust and rust	-	
	No raw materials' spill	No raw materials' spill	-	
	Painted well	Painted well	-	

Figure 5.2 Table of 5S Identification

<b>Place</b>	<b>Initial Condition</b>	<b>Theoretical Condition</b>	<b>Changes</b>	<b>Progress</b>
Workbench	Marked well	Marked well	-	
	Utensils on the workbench only for working	Utensils on the workbench only for working	-	
	No raw materials' spill	No raw materials' spill	-	
	Clean from dust	Clean from dust	-	
Switches and Outlet	No identification	Well identified	Put identification	Done
	Poorly painted	Well painted	Re-paint	Done
	Clean from dust and materials' spill	Clean from dust and materials' spill	-	
Dustbins	Poorly marked	Marked well	Re-marked	Done
	No identification	Well identified	Put identification	Done
	Clean from dust and materials' spill	Clean from dust and materials' spill	-	
	Always closed and in a good condition	Always closed and in a good condition	-	
Tools Drawers and Closet	Tools and utensils which are stored are clean and well organized	Tools and utensils which are stored are clean and well organized	-	
	Tools and utensils which are stored are not comply with the drawer's or closet's identification	Tools and utensils which are stored are comply with the drawer's or closet's identification	Re-arrange the utensils into its proper place and maintain the condition	Done
	Drawers and closet are poorly identified	Drawers and closet are well identified	Change the identification	Done
	Poorly marked	Marked well	Re-marked	Done
	Drawers and closet are clean from dust, rust, and materials' spill	Drawers and closet are clean from dust, rust, and materials' spill	-	

Figure 5.3 Table of 5S Identification (contd.)



<b>Place</b>	<b>Initial Condition</b>	<b>Theoretical Condition</b>	<b>Changes</b>	<b>Progress</b>
Mesh Storage (Holder)	Clean from dust, rust, and materials' spill	Clean from dust, rust, and materials' spill	-	
	Meshes which are stored are clean and well organized	Meshes which are stored are clean and well organized	-	
	Well marked	Well marked	-	
	Well identified	Well identified	-	
Scoop Storage (Holder)	Clean from dust, rust, and materials' spill	Clean from dust, rust, and materials' spill	-	
	Scoopes which are stored are clean and well organized	Scoopes which are stored are clean and well organized	-	
	Not marked yet	Well marked	Mark the area	Done
	Poorly identified	Well identified	Change the identification	Done
Sanitation Area	Well marked	Well marked	-	
	Clean from dust, rust, and materials' spill	Clean from dust, rust, and materials' spill	-	
	Sanitation equipments are not complete and identified	Sanitation equipments are complete and identified	Complete the sanitation equipments and identification and maintain the condition	Done
	Sanitation equipments clean from dust, rust, and materials' spill	Sanitation equipments clean from dust, rust, and materials' spill	-	
Utensils Cleaning Area	Not marked yet	Well marked	Mark the area	Not Yet
	Not identified yet	Well identified	Put identification	Done
	All hose categorization has the same colour	Every hose which is used for certain function has different colour	Change the hose	
	Hoses are put and organized in a certain holder	Hoses are put and organized in a certain holder	-	
	Hose holder and hoses are clean from dust, rust, and materials' spill	Hose holder and hoses are clean from dust, rust, and materials' spill	-	

Figure 5.4 Table of 5S Identification (contd.)

<b>Place</b>	<b>Initial Condition</b>	<b>Theoretical Condition</b>	<b>Changes</b>	<b>Progress</b>
Visual Signs	Clean from dust, rust, and materials' spill	Clean from dust, rust, and materials' spill	-	
	Visual signs are in a good condition	Visual signs are in a good condition	-	
	Visual signs are tidy and properly put	Visual signs are tidy and properly put	-	
Scales Area	Not marked yet	Well marked	Mark the area	
	Clean from dust, rust, and materials' spill	Clean from dust, rust, and materials' spill	-	
	No identification	Well identified	Put identification	
Small Compound Raw Material Shelf	Marked well	Marked well	-	
	Materials are in their proper containers and identified	Materials are in their proper containers and identified	-	
	Shelves are not properly identified	Every shelf are properly identified	Change the identification	Done
	No raw materials' spill	No raw materials' spill	-	
	Clean from dust and rust	Clean from dust and rust	-	
Raw Material Storage	Marked well	Marked well	-	
	Not properly identified	Properly identified	Put identification	Done
	Clean from dust	Clean from dust	-	

Figure 5.5 Table of 5S Identification (contd.)

From the table of 5S identification which comes from the initial situation in the seasoning production area and then compare it with the theoretical condition or supposed to be condition in accordance with 5S theory and methodology can be seen that some applications of 5S methodology has been applied, but then from the data shown in the table, we also can see that there are some black points or slackness and unfinished implementation of 5S methodology.

From data which is shown in the table of 5S identification above, it can be concluded that the problem which was causing the tardiness of 5S implementation is come from tools or method which is used in implementing 5S methodology and the man itself as it is shown in Figure 5.6 below.

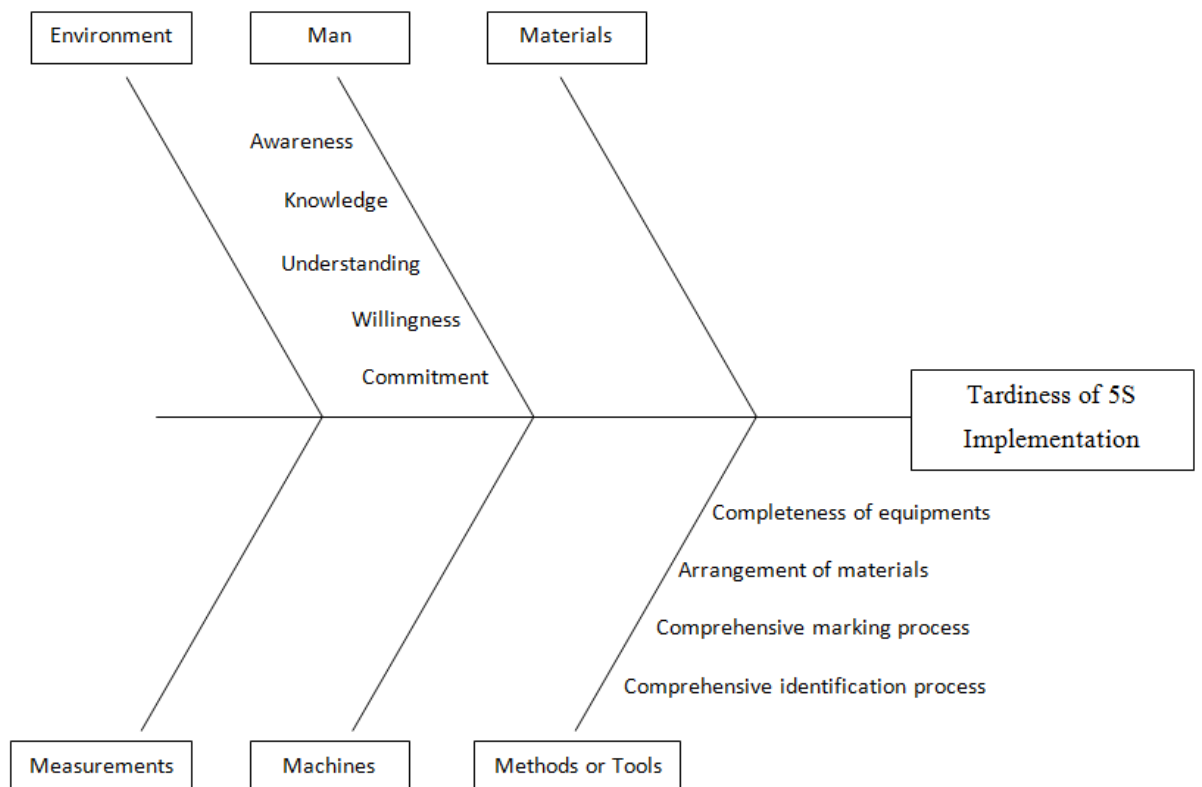


Figure 5.6 Fishbone Diagram of 5S

Thus based on the analysis result which is shown by the fishbone diagram and 5S identification table above, to be able to successfully

implement 5S methodology in the seasoning production area, they are two main problems which are supposed to be solved. The first one is the tools problems and the second one is the man problem. The tools problem in this problem concern about the physical application of 5S methodology such as completeness of equipments, arrangement of materials, comprehensive of marking and identification process, while the man problem concern about the mental changes of the workers such as the awareness, knowledge, understanding, willingness, and the commitment of the workers as the main subject of the 5S implementation process. In accomplishing the physical implementation of 5S methodology in the seasoning production area, some changes must be done. The changes which must be done are marking or remarking process, putting or changing the identification into the standard one, completing some missing equipments, and also building the awareness of the workers. Within these three months where the study is conducted, some of the physical changes in accordance with meeting the standard requirements of 5S situation are done although there were some limitations and obstacles in standardizing the situation in order to meet 5S standard such as; limitation of time, manpower, and cost. The changes which are able to be done are remarking process, identification processes, rearranging process, repainting, and cleaning process.

Remarking processes which are done are located in the staging area, dustbin area, and tools' drawers and closet area. Though the identification processes are done in the small compound raw material shelf, raw material storage, switches and outlets, dustbin, tools' drawer and closet, scoop storage, sanitation area, and utensils cleaning area. While the rearranging process only take place in the tools' drawers and utensils which was caused by the carelessness of the worker in that area. Repainting process only been done to the switches and outlets surrounding since it was found that the surrounding area of the switches and outlets were not properly painted. And the cleaning processes were done on the outer side of the workbench dust collector and the dust collector. While the other changes which are supposed

to be done could not be completed yet due to some limitations in the process, such as time and cost limitations. After the changes during this study take place are done, a last picture of the final condition of the seasoning area is taken, which is shown in Figure 5.7 below.



Figure 5.7 Final Condition of Seasoning Production Area

Despite of concerning about the physical implementation of 5S, it is also important to build the workers' awareness, so they can implement and maintaining the implementation of 5S without being regularly told and monitored and the result of 5S implementation will be better if the implementation is based on the workers' awareness. In order to build the awareness of the workers, there are two steps which are done. The first one is by presenting and introducing the 5S methodology or in the other word is

doing some training in accordance to 5S methodology to all segments of the company. While, the second step is making standardizations of condition and tools which are supposed to be applied and maintained in the seasoning area. By making standardizations information it is expected that the workers in the seasoning area to always follow the standardization guidance and always maintaining the rule and methodology of 5S, so the findings or evidence of actions which does not comply with the implementation of 5S methodology can be eliminated and as the result of applying 5S concept, the safety level of the workers in their workplace will also be automatically increased. The standardizations example itself is shown in Figure 5.7. below, which the standardization itself consists of placement standard and hygiene standard.



Figure 5.8 Standardization Examples

## **CHAPTER VI**

### **CONCLUSIONS AND RECOMMENDATIONS**

From the analysis which was done in this study, some conclusions and recommendation could be put forth;

- In applying the concept of 5S methodology, it is mandatory to have the commitment and willingness of all elements of the company to change their old habit which is not suitable or justify with the concept and the way of 5S. The commitment and the willingness to change the way of working should come from the top management down to the operator and even the cleaning service of the company.
- In order to successfully implement 5S concept in PT. Mane Indonesia, there are two main problems which must be overcome by this company such as physical changes and mental changes of the workspace and the workers. The physical changes concern about the completeness of equipments, arrangement of materials, comprehensive of marking, and comprehensive of identification process, while the mental changes concern about the awareness, knowledge, understanding, willingness, and the commitment of the workers as the main subject of the 5S implementation process.
- In order to conquer the problem faced by the company to successfully implement 5S methodology, there are some plots which could be done which are in order to conquer the physical changes, the company could complete the marking and identification process, completing the required equipments, and do some re-arrangements on the materials. Whereas to conquer the mental changes, the company could do some trainings regularly and making standardizations with the purpose of building and increasing the

awareness, understanding, knowledge, and commitment of the workers about 5S implementation and its benefits.

- In applying the 5S methodology during the time of study, the implementation of 5S could not completely done due to some limitations in the process, which are time, manpower and cost. So in order to produce a better result of this study it is advised to conduct further study due to the limitations which took place in this study.



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