

## CHAPTER I

### INTRODUCTION

#### I.1. Background

PT. Solvay Manyar is a surfactant company, part of Solvay Group. The company operates with 152 employees produces 42,500 tons of surfactant products every year. For the years, PT. Solvay Manyar is undergone different names with different owners. Formerly, PT. Solvay Manyar was established in 1989 (named PT. Manyar Kimindo) then started a joint venture program with Albright & Wilson Company from the United Kingdom from 1990 to 2000 and named PT. Albright & Wilson Manyar with the company owns 50% shares, while the remaining shares are owned by local shareholders. The company Albright & Wilson in 2000 was bought by Rhodia with the name of the company become PT. Rhodia Manyar. In 2013, the company changed its name to PT. Solvay Manyar under Solvay Group. Even though the company has undergone different name and different owner, the company remain to produce surfactant with 50 % shares with Solvay Group.

PT. Solvay Manyar manufactured surfactants products for the main constituent of detergent. The surfactant products include Linear Alkyl Benzene Sulphonic Acid (LABSA), Branched Alkyl Benzene Sulphonic Acid (BABSA), Sodium Lauryl Sulphate (SLS), Ammonium Lauryl Sulphate (ALS), Sodium Lauryl Ether Sulphate (SLES), and Ammonium Lauryl Ether Sulphate (ALES). PT. Solvay Manyar has 2 (two) main plants, the first plant (SP1) is used for the production of LABS/BABS with a capacity of 2 tons/hour, while the second plant (SP2) is used for the production of SLS/ALS and

SLES/ALES with a capacity of 2.5 tons/hour. Moreover, both of the plants can be used for manufacturing all the products; Generally, the process is similar and without requiring any additional equipment. The main reason to separate the production is to decrease the downtime for cleaning the reactor and to replace the type of production with one another.

ABS products are used as detergent soap, dish soap, and floor cleaning soap. SLS/ALS products are more used in personal products such as toothpaste, body soap, and shampoo. SLES/ALES are used for shampoo, face wash, and skincare; therefore major clients that bought the intermediate products from PT. Solvay Manyar such as Unilever.

In this internship, the Author was allowed to be placed in the Manufactured Process Division to study the process and control at PT. Solvay Manyar

## **I.2. Vision and mission of the company**

PT. Solvay Manyar has the vision to be the recognized leader in the surfactant industry. Reinforcing that vision, the company have a mission to be committed to providing the best solution for customer satisfaction by delivering the best quality and services consistently. The vision and mission of the company are reflected in the way the company handle the quality of the product and the quality of the management by having a certified ISO 9001:2015, achieving the regulatory standard for equipment longevity and maintenance. Therefore, they are building and setting a high standard for delivering satisfaction for their customer and the well-being of the employee. In addition, PT. Solvay Manyar has a Halal certificate for their personal care product and with that ability to ensure the customer that it can be used for wide markets.

### I.3. Factory Location and Layout

PT. Solvay Manyar is located in Jalan Raya Sembayat KM24, Desa Sukomulyo, Kecamatan Manyar, Gresik, Indonesia. The location of PT Solvay Manyar and the plant layout can be seen in Fig. I.1 and Fig I.2 respectively. The total area that PT. Solvay Manyar manage is about 31.550 m<sup>2</sup>, around 10% of the total area is used for the manufacturing process and the other 90% is used for warehouse, filling, storage, office, and waste treatment.



Fig. I.1. The location PT. Solvay Manyar

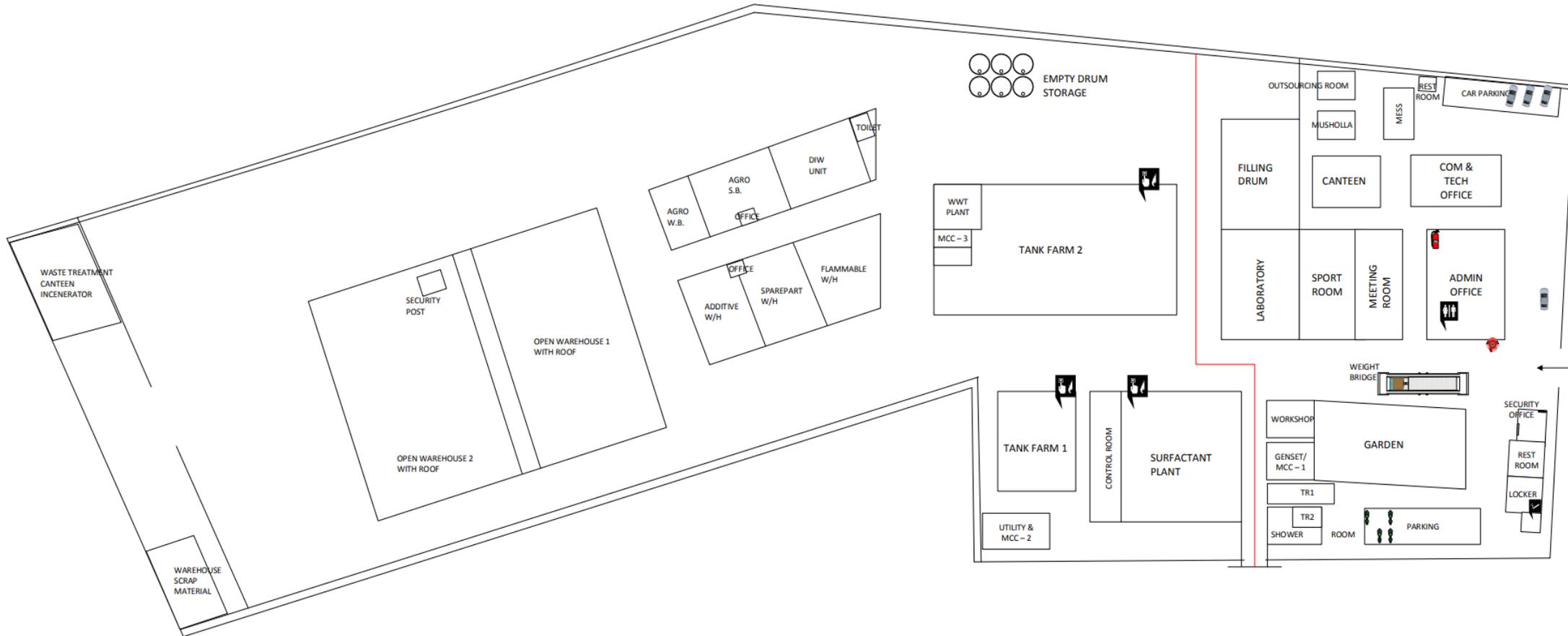


Fig. I.2. Plant layout

There are several considerations for the location selected in current place is based on the following:

1. The location of PT Solvay Manyar is close to PT Liku Telaga as a provider for  $\text{SO}_3$  gas to be used by PT Solvay Manyar, therefore pipelines are built integrated and connected between two companies to transport the gas  $\text{SO}_3$ ;
2. PT. Solvay Manyar is located near the Surabaya-Gresik highway road where it facilitates the transportation of employees from Surabaya as well as the transportation for Import and export from Perak port;
3. PT Solvay Manyar has wide road access and good infrastructures, which facilitates the transportation of materials and products and daily activities of employees with ease;

#### **I.4. Business Activities**

Products manufactured at PT. Solvay Manyar includes intermediate materials as surfactants mainly sulphonate and sulphate for use in other production processes such as Home Care (HC), Personal Care (PC), and Oral Care (OC). Surfactant materials produced at PT. Solvay Manyar such as Alkylbenzene Sulphonic Acid as LABSA/BABSA, Lauryl Sulphate as SLS/ALS, Lauryl ether sulphate as SLES/ALES.

#### **I.5. Marketing**

Surfactant products manufactured by PT. Solvay Manyar will be sold 70% for local and 30% for export (such as Japan, South East Asia, Jamaica). The shipping comes with several methods, using a barrel or directly using the truck, which can be seen in fig I.3, depending on the customer demand. Products sold locally are targeted to factories engaged in HC

(50%), PC (45%), and other (5%) such as Unilever, Syngenta. The product is delivered via ground shipping for local markets, and ocean freight for an international market.



Fig.I.3. Various shipping methods