

UNIVERSITI TEKNOLOGI MARA

**DESIGN, ANALYSIS AND
FABRICATION OF FULL-BODY
SANITIZING MACHINE**

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Dissertation submitted in partial fulfillment
of the requirements for the degree of
Diploma
(Mechanical Engineering)

College of Engineering

March 2022

ABSTRACT

A full-Body Sanitizing machine is a machine that has equal length walls made with the welded metal frame as its entrance and exit are both wide enough. This is to permit a person to step into the machine and passes through while being sprayed with a sanitization or disinfection liquid from above by pumping liquid sanitiser through a reticulation pipe system and through a nozzle. Then a ventilation fan will blow air into the machine to introduce fresh air into the system. This will decrease suffocation in the machine as it pushes liquid particles into the floor. The function of this product is to promote a high level of hygiene into the public in order to reduce microbial infections that somehow made their way on your clothes/body surface which will also drastically reduce the rate of possible fomite transmission.

ACKNOWLEDGEMENT

I would like to thank numerous individuals for their unwavering support throughout my journey in completing this project. First and foremost, I would like to express my earnest gratitude towards my supervisor, Sir Hazriel Faizal Bin Pahroraji, for his passion, patience, insightful remarks, guidance, and ideas which have greatly aided me during the planning and writing of this report. His vast knowledge, experience and professional competency in the art of engineering has enabled me to effectively complete my report on time. This project would not have been possible without his help and guidance.

Next, I would like to express my appreciation towards my family members for providing me with ideas during the development of this final year project. They also gave suggestions on ways to improve my report writing skills, which are based on their years of knowledge and experience. They are also one of the reasons I did not encounter any financial problems as they have helped me plan my spending during the progression of the project.

Lastly, I would also like to give special thanks to my friends who encouraged me to complete this project during these hard times and also have brought my hopes up for this semester.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

In late 2019, an unknown acute respiratory tract infection was reported in Wuhan City, Hubei Province, China. The World Health Organization (WHO) announced that the cause of this epidemic outbreak is a novel coronavirus discovered at that time, hence it is named 2019-nCoV, SARS-CoV-2, or most commonly known as COVID-19. SARS-CoV-2 is a type of virus that is transmitted through the oral fluid droplets from an infected individual to a healthy individual, due to the flexibility of its transmission it is known to infect another individual airborne whether it is by sneezing or coughing. Due to its effective transmission, it has spread rapidly to other neighbouring countries such as South Korea, Taiwan, Thailand, Singapore, and Japan in such a short time. Not long since then, the World Health Organization has classified this problem as a pandemic [1].

Although Malaysia has administered at least about 1,766,651 doses of vaccines by 2021, assuming every individual requires 2 doses of vaccine we only have about 883,325 Malaysians to vaccinate in contrast to the current Malaysian population which is estimated to be at 32,776,194 this is just 2.695% of the current population. This figure indicates that a lot of people will yet to receive their vaccines shot anytime soon, and therefore strict guidelines must be adhered to prevent the further spread of coronavirus [3].

One of the preventive measures we were introduced to is the frequent soap washing and sanitization of the hand. This is because soap and hand sanitisers that contain an alcohol concentration of more than 60% are said to be capable of breaking apart the lipid-based bilayer coating of some bacteria and viruses exposing its ribonucleic acid (RNA) therefore making it inactive. When an individual cough or sneezes tiny droplets from the airways can fly up to 10 meters when not covered by hand or mask, these tiny droplets then ends up on surfaces where it was propelled and often dries out. However, the virus remains active on the surface for up to 72 hours and when touched by hands it