



**COMPUTATIONAL FLUID DYNAMIC ANALYSIS OF TRUCK  
TRAILER COMBINATION ON DRAG REDUCTION**

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## **ABSTRACT**

Aerodynamic forces are important aspects that need to be considered in the study of a road vehicle design. The present study focuses on the effect of basic truck trailer, truck trailer with air deflector and truck trailer with air deflector and air frame at different velocity with reference to drag coefficient. The aim of this project is to compare the aerodynamic characteristics of truck trailer between the 3 different conditions. The method of study that was used in this project is simulation using Computational Fluid Dynamic (CFD), STAR-CCM+ software program. Besides that, the truck model is generated using CATIA V5R16 to create the 3-D geometry of the truck trailer. Drag coefficient was obtained from the simulation processes. This thesis represents extensive discussion of numerical solution and the outcomes from the simulations. Comparison of drag coefficient was made for each model with the different velocity.

## TABLE OF CONTENTS

<b>CONTENTS</b>	<b>PAGE</b>
AKNOWLEDGEMENT	i
ABSTRACT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
LIST OF GRAPHS	xii
LIST OF ABBREVIATIONS	xiii
<b>CHAPTER I            INTRODUCTION</b>	
1.0    Background	1
1.1    Project	2
1.2    Objective of study	2
1.3    Significant of the project	3
<b>CHAPTER II          LITERATURE REVIEW</b>	
2.0    Initial studies	4
2.1    Truck wind tunnel testing	4
2.2    Drag	5
2.2.1 Shape effect on drag	5
2.3    Drag reduction	6
2.3.1 Air deflector	6
2.3.2 Air frame	8

2.4	Introduction to CFD	9
<b>CHAPTER III</b>	<b>METHODOLOGY</b>	<b>PAGE</b>
3.0	Aerodynamic testing procedure	12
3.1	Computational Fluid Dynamics	12
3.1.1	Pre-processor	13
3.1.2	Solver	13
3.1.3	Post-processor	13
3.2	Cad model generation	14
3.3	Boundary condition	16
3.3.1	Splitting the boundary	19
3.3.2	Rename the boundary	22
3.4	Mesh generation	23
3.4.1	Selecting the meshing models	23
3.4.2	Setting the global mesh reference values	24
3.4.3	Surface meshing	26
3.4.4	Generating volume mesh	27
3.5	Running the solver	28
3.5.1	Setting up the models	28
3.5.2	Plotting the graph	29