Chapter 1 Introduction 1.1 Selection of the project 1.2 Problem Definition 1.3 Design Objectives 1.4 Axle 1.4.1 Type of Axle Forces Acting On Axle 1.4.2 1.5 Instantaneous Tire Pumping System (ITPS)

Chapter 2

Review of Literature

- 2.1 Loads applied to the rear axle in each load case are as follows
- 2.2 Material Selection
- 2.3 Corrosion fatigue influencing factors
- 2.4 Tyre Pressure Monitoring System
- 2.5 Tire Pressure and Fuel Efficiency
- 2.6 Under Inflated Tires
- 2.7 Tire Inflation Pressure Monthly Loss Rate
- 2.8 Contribution of the tire rolling resistance to fuel consumption
- 2.9 Automatic Tyre Inflation Management
- 2.10 Existing Systems
 - 2.10.1 Central Tire Inflation System
 - 2.10.2 HALO Tire Inflator
 - 2.10.3 Self-Inflating Tires
 - 2.10.4 Automatic Tyre Inflation System

Chapter 3

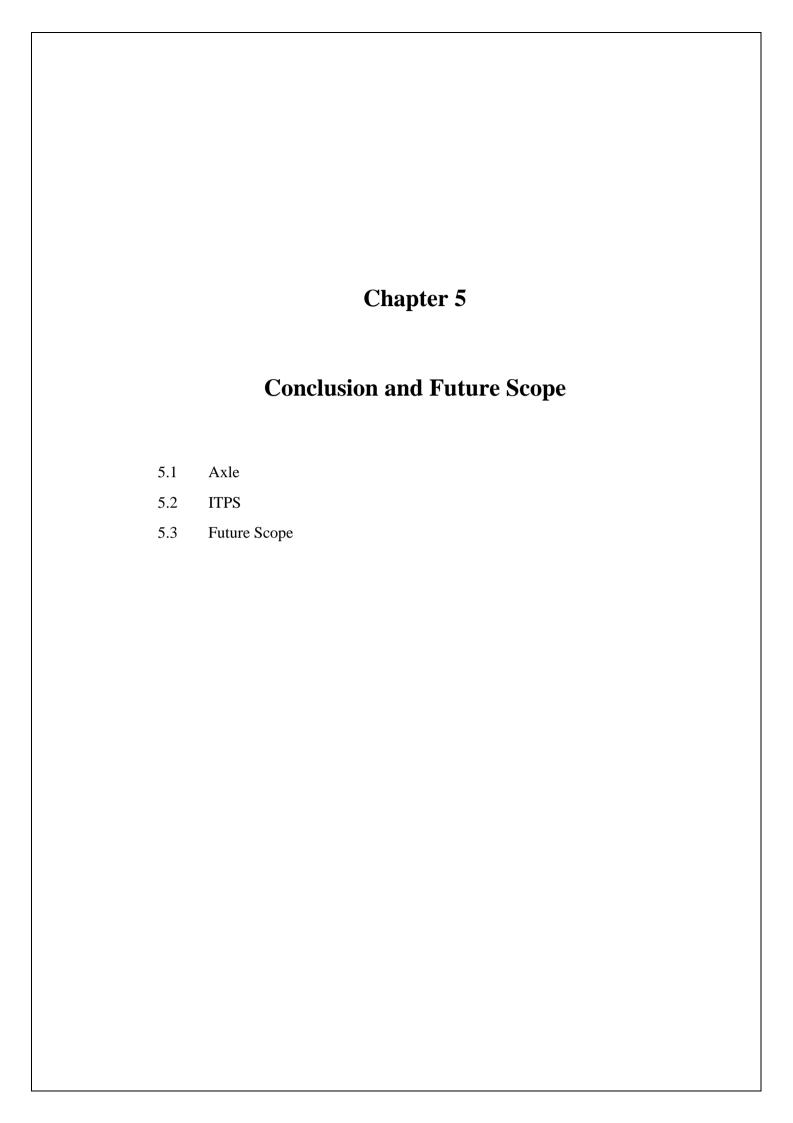
Report on Present Investigation

- 3.1 Design of Rear Axle
 - 3.1.1 Aim
 - 3.1.2 Forces Transmitted onto Axle
 - 3.1.3 Material Selection
 - 3.1.4 Calculations
 - 3.1.5 CAD Modeling
- 3.2 Instantaneous Tire Pumping System
 - 3.2.1 Aim / Objective
 - 3.2.2 Components Used For System
 - 3.2.3 Construction
 - 3.2.4 Working
 - 3.2.5 Circuit Diagram
 - 3.2.6 Working of Circuit

Chapter 4

Results and Discussions

- 4.1 Stress Analysis
 - 4.1.1 Mesh Information
 - 4.1.2 Study Results
 - 4.1.3 Resultant Forces
 - 4.1.4 Stress Analysis on ANSYS Software
- 4.2 Instantaneous Tire Pumping System
 - 4.2.1 Advantages of ITPS are mentioned below
 - 4.2.2 Applications
 - 4.2.3 Cost Comparison



C	hapter 6
Re	eferences