

(i)

LIST OF TABLES

Chapter -4

<u>Table No.</u>	<u>Description</u>	<u>Page No.</u>
1-4	Effect of Variation of Capillary Coefficient on damping facator.	116-119
5-8	Effect of Variation of Volume, Area, Mass and tank volume on damping facator.	120-121
9	Damping Factor with various combinations .	122
10-16	Effect of Variation of various parameters in the region of low capillary coefficient ,	122-125
17-23	Effect of Variation of auxiliary spring stiffness on the damping factor at various capillary coefficient values.	126-129
24-29	Effect of variations of various parameters on damping factor for pitch mode motion ,	130-132
5.3.1	Capillary coefficient of different tubes	145
5.3.2	Critical capillary coefficients for different tank volumes.	146
5.4.1	Resultss of steady state transmissibility test.	151-154

(ii)

LIST OF FIGURES

<u>Fig. No.</u>	<u>Title</u>	<u>Page No.</u>
2.1	Wheel rate variation	6
2.2	Hysterisis Curve	10
2.3	Load deflection Curve	10
2.4	Natural frequency Vs Pr	12
2.5	Comparison of Springs	13
2.6	Spring Rate	18
2.7	Absolute Transmissibility Curve	25
2.8	Dual frequency curve	28
2.9	Inertia Block Arrangement	29
2.10	Bending areas of Transmissibility	30
2.11	Mathematical Model of Vechicle suspension system	32
2.12	Variation of body Transmissibility with frequency ratio and damping	34
2.13	Line DGM for system	36

<u>Fig. No.</u>	<u>Title</u>	<u>Page No.</u>
2.14	Valve controlled suspension with self damped pneumatic isolator	39
2.15	Symmetric Passive Pneumatic Shock isolator system	44
2.17	Comparision of Response Characteristics	51
4.2.1	Free vibration response	89
4.8.1	Peak Transmissibility variation with capillary coefficient	97
4.8.2	Variation of resonance frequency with capillary coefficient	98
4.9.1 to 4.9.14	Effect of Variation of Capillary coefficient and phase angle of support excitation on the transmissibility for a vehicle model	102-115
5.1.1	Photograph of different airsprings	134
5.1.2	Load -deflection graph	136
5.1.3	for airspring (rubber).	137
5.1.4	Load deflection graph for a metal bellow spring.	139
5.1.5	Static load-deflection set up	140
5.1.6	for rubber spring and metal bellow.(photo).	
5.3.1	Free vibration test set up(photo).	144

<u>Fig.No.</u>	<u>Title</u>	<u>Page No.</u>
5.4.1	Steady State transmissibility test set up (photo).	148
5.4.2 to 5.4.10	Results of Steady State Transmissibility Tests.	155-163
5.1.1	Photograph of Vehicle model.	165
5.5.2 to 5.5.5	Results of Vehicle Model Tests.	167-170
5.5.6 to 5.5.9	Theoretical Results for the Vehicle Model.	172-175