TABLE OF CONTENT

	Title	Page No.
CHAPTER 1	INTRODUCTION	
1.1	Introduction of Composites	1
1.2	Classification of Composites	1
1.3	Composite Manufacturing Process	4
1.4	Liquid Compression Molding	5
	Vacuum Assisted Resin Transfer Molding (VARTM)	6
1.6	Structure of Thesis	8
CHAPTER 2	RESEARCH REVIEW	
2.1	History & Introduction	9
	Natural Fibers	10
	Parameters Affecting VARTM Process	12
	VARTM Experimental Setup	18
	Effect of Degassing	25
	Manufacturing	27
	Mechanical Characterization	30
	Findings of Research Review	32
2.9	Identification of Research Gap	35
CHAPTER 3	RESEARCH METHODOLOGY	
	Research Objectives	36
3.2	Research Methodology	37
CHAPTER 4	MATERIALS AND METHODS	
4.1	Materials, Consumables and Accessories	38
4.2	Care and Precautions during Experiments	42
4.3	1	43
	Design of Experiments	46
4.5	Experimental Methodology	49
4.5.1	Preliminary experiment	49
4.5.2	Investigations on effect of number of layers, position of resin supply and location of vacuum supply for VARTM Process	51
4.5.3	Preliminary experiment on developed indigenous experimental setup	52
4.5.4	Investigations on effect of number of layers and degassing for VARTM process	55
4.5.5	Investigations on effect of number of layers, inclination of table and amount of vacuum supply for VARTM process	56
4.5.6	1	57

CHAPTER 5	MEASUREMENT AND TESTING	
5.1	In-process Measurement	60
5.2	Post-process Measurement and Testing	62
CHAPTER 6	RESULTS AND DISCUSSION	
6.1	Investigations on number of layers, position of resin supply and location of vacuum supply for VARTM process	68
6.2	Investigations on number of layers and degassing for VARTM process	71
6.3	Investigations on number of layers, inclination of table and amount of vacuum supply for VARTM process	74
6.4		78
CHAPTER 7	CONCLUSION AND FUTURE SCOPE	
7.1	Conclusion	86
7.2	Future Scope	89
REFERENCES		90
ANNEXURE		

- 1. Check Sheet
- 2. List of Vendors

PUBLICATIONS