

**HEAT TRANSFER THEORY REPRESENTLY  
BY HEAT PIPE**

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## TABLE OF CONTENTS

Preface	i
Acknowledgements	ii
Table of contents	iii
Nomenclature	iv
CHAPTER ONE – INTRODUCTION	1
1.1 How heat pipe works	3
CHAPTER TWO – MIXTURES	6
CHAPTER THREE –THEORY OF HEAT TRANSFER	9
3.1 Conduction	9
3.11 Radial steady state conduction	10
3.2 Convection	11
3.21 Free Convection	12
3.22 Empirical relations for pipes and tubes flow	18
3.3 Condensation heat transfer phenomena	19
3.4 Boiling heat transfer	23
3.41 Nucleate boiling in water and organic liquids	25
CHAPTER FOUR –THEORY OF HEAT PIPE	27
4.1 Introduction	27
4.11 Capillary pressure $\Delta P_0$	28
4.12 Pressure difference due to friction forces	29
4.2 Pressure difference in the liquid phase	32
4.21 Homogeneous wicks	32
4.3 Vapour pressure difference $\Delta P_v$	34
4.31 Introduction	34
4.32 Incompressible flow – one dimensional theory	34
4.4 Gravitational head	36
4.5 Heat transfer and temperature difference in heat pipe	37
4.51 Introduction	37

4.52	Heat transfer in the evaporator region	38
4.53	Liquid- vapour interface temperature drop	40
4.6	Heat transfer in the condenser	41
4.7	Total temperature drop	42
4.8	Limits to heat transport	43
4.81	Viscous limit	43
4.82	Sonic limit	44
4.83	Entrainment limit	46
4.84	Capillary limit (Wicking limit)	47
4.85	Burnout	48
CHAPTER FIVE-DESIGN CONSIDERATION		49
5.1	The working fluid	49
5.2	The wick or capillary structure	51
5.21	Homogeneous structure	53
5.3	The container	54
5.4	Filling rig	55
5.5	Heat pipe region	56
CHAPTER SIX- TEST PROCEDURE AND TEST RESULTS		59
6.1	Heat pipe start – up procedure	59
6.2	Heat pipe performance measurements	60
6.21	The test rig	60
6.22	Test procedure	62
6.3	Power input.output	63
6.4	Experimental results	64
6.41	Analysis on experimental results	69
CHAPTER SEVEN- CONCLUSION		73
7.1	Deduction from experiment	73
7.2	Application	74
REFERENCE		78

## PREFACE

The heat pipe has become recognized as an important development in heat transfer technology. There are three mode of heat transfer , i.e conduction, convection, and radiation. Conduction is the simplest from the heat transfer. As the amount of heat to be transferred increased, the device used to conduct the heat away, become conduction limited. In convection heat transfer device, the system is complex and expensive. Then , the heat pipe is one of the alternative for heat transfer problem.

In this project, experiment is carried out on a thermosyphon with Freon-22 as the working fluid. Experiment is conducted with the thermosyphon in the vertical position, 60° inclination to the horizontal, and 30° inclination to the horizontal. The axial heat flux of the thermosyphon is then calculated based on the power output of the thermosyphon . Comparision of the axial heat flux of the copper rod is made to establish its superiority over the rod. Comparision of performance for different position of thermosyphon and different flow rate of cooling water is also carried out.

Comparision is made on the thermosyphon conductivity and the conductivity of copper. From this comparision the thermosyphon and heat pipe is established as a super thermal conductance.