

**Temperature Reduction of an Active Solar House by Using Chimney and Comparison of Room Temperature with the Conventional One. A Thesis Submitted to the**

**Department of Mechanical Engineering**



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This is to certify that the thesis work entitled “**Temperature Reduction of an Active Solar House System by Using Chimney and Comparison of Room Temperature with the Conventional One**” has been carried out by Md. Toufiqur Rahman, Md. Nahid Hasan, Md. Abid Hasan and Mahmud Arefin in the department of Mechanical Engineering, Sonargaon University. We also declare that either this thesis work or any part of the paper has been submitted elsewhere for any degree.

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## **ABSTRACT**

Solar Temperature reduce is another efficient use of renewable energy technology to help cool our homes and work places. The necessity for air-conditioning for our homes in hot areas around the world and the abundance of the sunshine within these areas has brought about a willingness to combine the two for the benefit of the people who live there. In contrast to other types of solar applications such as solar heating, the biggest demand for cooling occurs when the solar radiation is at its most intense, thereby making the marriage of solar thermal energy and solar cooling all the more attractive. Passive solar design, an idea within the growing trend of green building, is a creative way to use the sun to our advantage, both for heating and cooling, based on the design of buildings. Attempt has been made by engineers by increasing the thickness, changing the geometry of the outer wall and also tried several building materials to reduce temperature fluctuations for indoor environment in both summer and winter. The installation of heating and air conditioning to seek comfort in homes, offices and public places has created high energy consumption and consequently, increased the environmental pollution. One of the pointers of sustainability in architecture is the use of natural energy and fossil energy consumption and minimum natural environmental conditions and climate so solar building designs which is a step towards its achieving. In this paper, has been expressed the important factors in solar buildings design. These factors are included external factors and internal factors.

## TABLE OF CONTENTS

Acknowledgement		1
Abstract		2
Table of contents		3
List of figures		5
CHAPTER 1	INTRODUCTION	
1.1	INTRODUCTION	6
1.2	History of active solar heating and cooling process	7
1.3	Problem statement	8
1.4	Scopes	9
1.5	Advantage of passive solar heating	9
1.6	Limitation of passive solar heating	11
1.7	Objectives with specific aim	12
CHAPTER 2	LITERATURE REVIEW	
2.1	Literature survey	13
2.2	Scope of present work	15
CHAPTER 3	METHODOLOGY	
3.1	Working process of Active solar home system:	16
3.2	Component required	17
3.3	Tools & instruments	18
CHAPTER 4	EXPERIMENTAL DESIGN AND PRINCIPALE	
4.1	Design & principle:	30
4.2	Schematic diagram	31
4.3	Circuit diagram of blower	31
4.4	Digital temperature measurement device:	32
4.5	Room Description & design principal	33
4.6	Soil chamber	35
4.7	Design & description of Chimney:	35
4.8	Passive solar design principles	37

4.9	Working principle	37
4.10	Working procedure	38
CHAPTER 5	ANALYSIS AND DATA COLLECTION	
5.1	Economic analysis	39
CHAPTER 6	CONCLUSION	
Conclusion		43
Further recommendation		43
References		44

## LIST OF FIGURES

Figure 3.1:	Passive solar home	17
Figure 3.2:	Plywood	19
Figure 3.3:	Copper Tube	20
Figure 3.4:	Elbow	22
Figure 3.5:	Sun Protector Glass	23
Figure 3.6:	Blower	23
Figure 3.7:	Duct	24
Figure 3.8:	Electric Cable	24
Figure 3.9:	Transparent Glass	25
Figure 3.10:	Measurement Tap	26
Figure 3.11:	Hacksaw	27
Figure 3.12:	Hand Grinder	27
Figure 3.13:	Electric Glue Gun	28
Figure 3.14:	Cutting player	29
Figure 4.1:	Schematic Diagram	31
Figure 4.2 :	Circuit diagram of blower	31
Figure 4.3:	Digital Temperature Measurement Device	32
Figure 4.4:	Front side	33
Figure 4.5:	Home backside	34
Figure 4.6	Top side	34
Figure: 4.7	Soil Chamber	30
Figure: 4.8	Chimney design	36
Figure: 5.1	Comparison of Power consumption per day between AC & SHS	40
Figure: 5.2	Comparison of power consumption cost day between AC & SHS	40
Figure: 5.3	Comparison of Power consumption per month between AC & SHS	41
Figure: 5.4	Comparison of Power consumption cost per month between AC & SHS	41



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