

“REVIEW PAPER ON MODIFICATION OF AIR COOLER INTO AIR CHILLER”

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Abstract

Air conditioner and refrigerator is electrical device in these days it is frequently used in the world .these device is very costly in terms of electrical consumption and manufacturing. The poor people can't afford. By modification of ordinary air cooler. these problem can be rectified. These modified air cooler gives sufficient amount of cold air as well as cold water. In this project by using of copper tube obtained cold water and cold air at very low cost.

Modified Desert Air-coolers are generally used as a low in cost and suitable approach for cooling It is the Air Conditioner with fridge for that humans who can't manage to pay for equipments like air conditioner, fridge and distinctive such appliances. It has extra cooling impact compare to the Simple cooler. The modified wasteland cooler is diagram by way of the use of copper coil for presenting greater two cooling effect in contrast simple desert cooler. It also offers Chilled water in summer for consuming motive at very low value compared to Refrigerator with the help of modifies by means of using copper coil.

KEY WORDS :- Air-coolers, Refrigerator, air conditioner, copper coil, electrical power consumption.

1.INTRODUCTION

The main objective of developing a combined air conditioning and water cooling system is to produce water coolers and drinks and provide a comfortable environment for the residents. The higher air temperature inside a building is found to reduce the productivity of the occupants and increase the heat stress inside the buildings.. During the warm climate, human desires greater cold water. All these elements require indoor air cooling along with cold water in warm local weather areas. Air cooling can be a way to achieve a warmer indoor climate by lowering the air temperature, especially in the arid region of the planet. The efficiency of water coolers is measured based on efficiency factors and we have tried to increase efficiency. There are many factors that directly or indirectly affect efficiency, such as condenser temperature, steam temperature, insulation, etc. So we continued our project on the effective use of vapour by combining two main sides - air coolers and water coolers - and we tried to use the same steam for purposes and to improve efficiency. Also received.

2.LITERATURE SURVEY

J.Sabari priya.et.al.[1]In this paper the author discuss about The “Modified air cooler cum storage system” provides both air cooling as well as cold storage systems. It provides better cooling effects than a normal air cooler and consumes lesser energy than air 4o-5o conditioners. That is, the temperature of C less than the conventional coolers is obtained

Vignesh Ravi.Et.Al.[2] In this paper the author discuss about Fins are made of aluminum, as it is fitted with copper tube. When the water is flow from reservoir to copper tube through the hose pipe. The water pump is placed at bottom surface in the reservoir with ice bar and cold water. When the motor is switched on, water circulates in the copper tube which is fitted with the aluminum rod.

Naikodi Mallappa.et.al.[3] In this project the author discuss about the modified fan which is twisted by the copper tube. Copper tube is placed in front of fan one end of copper tube is connected with the vinyl tube through this refrigerant is passing through them and another end of tube is connected with pump. Pump is immersed into cooling chamber. Both pump and fan is connected to electricity.

Chandrakant B. Kothare.Et.Al.[4] In this paper author says Air-coolers are generally used as a low in cost and suitable approach for cooling It is the Air Conditioner with fridge for that humans who can't manage to pay for equipments like air conditioner, fridge and distinctive such appliances. It has extra cooling impact compare to the Simple cooler. The modified wasteland cooler is diagram by way of the use of copper coil for presenting greater two cooling effect in contrast simple desert cooler. It also offers Chilled water in summer

3.METHODOLOGY

Modification of air cooler is done by using copper coil in front of cooler. here water is passing through one end of cooler and it leaves through other ends. Due to this repeated process water gets cooled as well as room air also gets cold. One end of copper coil is connected with pvc plastic pipe which is also connected with submersible motor. And another end is also connected with pvc plastic pipe also called drain pipe. Which is dip into the water bottle. The variation of water temperature is measured by electrical thermometer as shown in below figure.



Fig:1-Copper coil.



Fig-2-

Modified Cooler

[3]Naikodi Mallappa “Design AND Fabrication OF Homemade Air Conditioner” ISSN : 2248-9622, Vol. 4, Issue 4(Version 6), April 2014, pp.102-103

[4]CHANDRAKANT B .KOTHARE “Modified Desert Cooler” International Journal of Engineering and Technology Vol.3 (2), 2011, 166-172

4. CONCLUSION

If we compare with both modified desert cooler and normal desert cooler then we found that The modified desert cooler is developed for providing better cooling compare to normal desert cooler. By using modified desert cooler we can also obtain cold water for drinking/

This modified cooler is helpful for poor people because it provide cold air as well as cold water comparatively at low cost than air conditioning and refrigerator.

References

[1]J.Sabari priyan “Design and Development of Modified Air Cooler and Storage System” IRJET Volume: 03 Issue: 04 | Apr-2016

[2]VIGNESH RAVI “DESIGN AND FABRICATION OF MINI AIR COOLER” IRJET, Volume: 03 Issue: 12 | Dec -2016