



# **DESIGN AND PERFORMANCE ANALYSIS OF COOLING TOWER**

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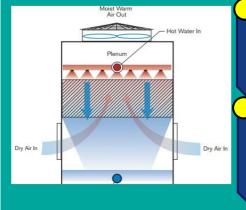
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**MOKHTAR** 









Cooling towers are widely used to dissipate process heat into waste atmosphere.

Based on the direct contact of two of the earth's most common substances: air and water

### **OBJECTIVES**

- To design and fabricate of induced draft counterflow cooling tower using splash type fill.
- To determine the performance of cooling tower by using different inlet water flowrate and temperature.

### **BENEFITS**

Applicable as a educational kit

Easy to operate and maintain

Provide a cheaper and affordable, yet functional and reliable

# **METHOD**



The water was heated at 40°C until it reached steady state. The fan and water pump were started.

The water flowrate was adjusted at 0.1 m<sup>3</sup>/hr.

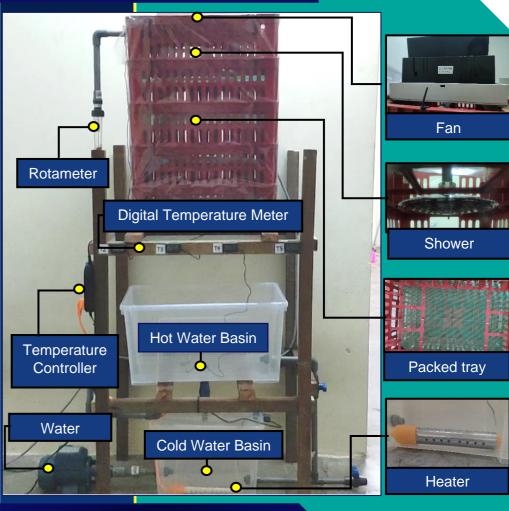
When all temperature reached steady state, inlet and outlet water temperature were observed and recorded.

The relative humidity of air inlet and outlet were taken by hygrometer and recorded.

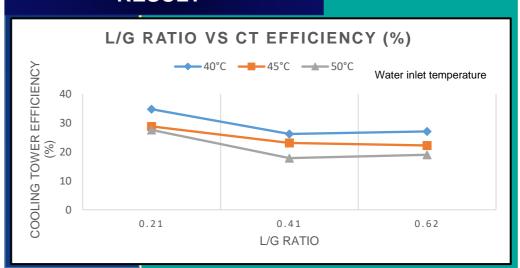
The inlet water temperature was kept constant and step 2-4 was repeated for water flowrate of 0.2 and 0.3 m<sup>3</sup>/hr, at 45 °C and 50 °C

End

# **PRODUCT FEATURES**



## **RESULT**



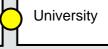
## **MARKETABILITY**

Cooling Towers market is expected to reach \$5.1 Billion by 2026 at a CAGR of 5.6% during the forecast period 2021-2026. (source: www.industryarc.com)

Market Survey

Market **Potential** 





Related training courses

# **ACKNOWLEDGEMENT**

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