

Design and Development of Cooling Tower Using Pizza Type of Fills

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Abstract: This project focuses on the design and development of a cooling tower utilizing pizza-type fills, a novel approach to enhance the cooling efficiency of the system. Cooling towers play a vital role in industrial and HVAC applications by dissipating heat from water-cooled systems to the atmosphere. Traditional cooling towers often face challenges such as uneven water distribution and inefficient heat exchange. The implementation of pizza-type fills named for their radial, segmented design resembling pizza slices aims to improve air-water interaction, maximize surface area, and promote uniform water distribution, ultimately leading to more efficient cooling. This report outlines the research, design methodology, material selection, and performance evaluation of the cooling tower equipped with these fills. Through theoretical analysis and experimental testing, the project demonstrates the potential of pizza type of fills to reduce operational costs, optimize energy usage, and improve the overall performance of cooling towers in various industrial environments. The findings indicate that this innovative design could be a sustainable and cost-effective solution for future cooling technologies.

Keywords: pizza type fills, uniform water distribution

