

Dr. Vithalrao Vikhe Patil College of Engineering Ahmednagar DTE College Code: EN-5163



Department of Mechanical Engineering

Visit Report

Date:19/10/2023

Name of the Subject	Heating Ventilation Air Conditioning & Refrigeration	
Class	BE Mechanical Date 14/10/2023	
Title	Visit to the Air Conditioning Plant.	
Visit Site	Kohinoor Cloth Store	
Address	MG Road, Kapad Bazar Ahmednagar, Ahmednagar - 414001	

Summary:

The visit to Kohinoor Cloth Store in Ahmednagar focused on understanding the store's central air conditioning system, which plays a vital role in maintaining a comfortable shopping environment for customers while protecting delicate fabrics from temperature fluctuations. The store uses an advanced air conditioning system to ensure optimal temperature and humidity control throughout the year.

Key Observations:

- 1. Overview of the Central Air Conditioning System:
 - Kohinoor Cloth Store is equipped with a central air conditioning (CAC) system, 0 designed to provide uniform cooling throughout the store. The system uses a central cooling unit, which then distributes cool air via ducts to different areas of the store.
 - The air conditioning system is essential for maintaining a controlled climate in the store, which is especially important for preserving the quality of fabrics and ensuring a pleasant shopping experience for customers.

2. Working Mechanism:

The central AC system works by circulating chilled air throughout the store via a 0 network of ducts and vents. The system consists of a compressor, condenser, evaporator coils, and air handlers.





The air is cooled at a central location (a chiller unit) and distributed to various 0 parts of the store using fans and ductwork. The system can be adjusted to different temperature settings based on the time of day and customer flow.

3. Importance of Temperature Control:

- For a cloth store, maintaining consistent temperature and humidity levels is crucial to preserving the quality of the fabrics. High humidity can cause fabrics to absorb moisture, leading to mold or mildew growth, while temperature fluctuations can damage delicate materials.
- The central air conditioning system helps in maintaining a stable temperature (typically between 20-24°C) and optimal humidity levels (40-60%), ensuring that the clothes remain in pristine condition for a longer period.

4. Energy Efficiency:

- Kohinoor Cloth Store uses energy-efficient air conditioning units to minimize electricity consumption while maintaining an optimal store environment. The system is designed to balance cooling needs with energy usage, reducing the overall environmental impact.
- Features such as programmable thermostats, variable speed fans, and zoning systems allow for precise control over temperature in different sections of the store, preventing over-cooling in less frequented areas.

5. Air Quality and Ventilation:

- The central air conditioning system at Kohinoor Cloth Store also includes air filtration mechanisms to ensure that the air inside the store is clean and free from dust, allergens, and other pollutants. This is important not only for customer comfort but also to protect the textiles from exposure to particulate matter, which could degrade their quality.
- Regular maintenance of filters and the ventilation system ensures that the air inside the store remains fresh and healthy for both customers and staff.

6. Cost and Maintenance:

The store has a regular maintenance schedule for the central air conditioning system, which includes cleaning filters, inspecting ducts, and checking refrigerant





levels. This helps in keeping the system running efficiently and extends its lifespan.

While the initial installation cost of a central AC system can be high, the 0 long-term savings in terms of energy efficiency and better climate control make it a worthwhile investment for the store.

Conclusion:

The visit to Kohinoor Cloth Store highlighted the importance of a well-maintained central air conditioning system in ensuring both customer comfort and the preservation of textile products. The system provides consistent temperature control, humidity regulation, and air quality management, which are essential for maintaining a pleasant shopping environment and protecting the store's inventory. The energy-efficient design and regular maintenance practices further contribute to the sustainability and operational cost savings of the store.

Documents:





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Department of Mechanical Engineering

Notice- BE Mechanical Visit

All the students of BE Mechanical are hereby informed that, the compulsory visit for Heating, Ventilation, Refrigeration & Air Conditioning title "Visit to Plant with Central Air Conditioning" has been organized on 14th October, 2023.

It is instructed that all the students should come in uniform, shoes, identity card & notebook.

Address: Kohinoor Cloths Kapad Bazzar, Ahmednagar. 414003. Time: 9.30 am (Sharp).

Notice Board

Dr. R.R. Navthar

Photograph/Screenshots of event:





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Attendance:

	Department of Mechanical Engin	eering		
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Organized by:

Name of the Incharge Faculty	Prof. B.T Tagad



HOD Dr. R.R. Navthar **Mechanical Engineering**