LOYOLA – ICAM
COLLEGE OF ENGINEERING AND TECHNOLOGY (LICET)
Loyola Campus, Nungambakkam, Chennai – 34

Two day workshop on

Refrigeration and Air conditioning systems

FEBRUARY 5th & 6th 2019

Consolidated Report

Convenor

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Organized by

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING & ISTE

in Collaboration with

DAIKIN

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A Two day workshop on
Refrigeration and Air conditioning systems
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OBJECTIVE AND OUTCOME

Students are able to

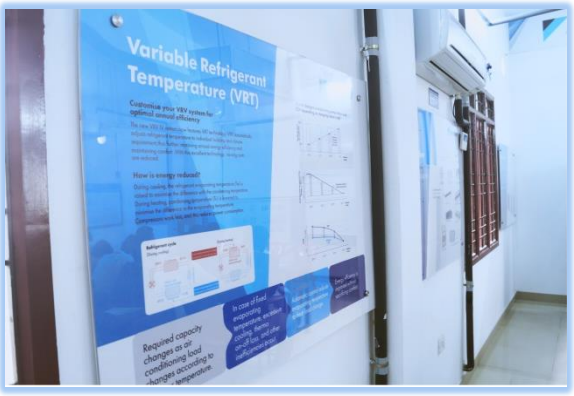
- Understand the working of air conditioning system
- Understand the different types of compressors and its operation
- Interpret the installation process of air conditioning system in different scenarios.
- Exposed to various trouble shooting techniques of air conditioning system.

INTRODUCTION

DAIKIN is a Japanese multinational air conditioner manufacturing company. It is established in the year 1924 in Japan. During 2000, DAIKIN products were introduced in India and within fifteen years it has attained the No.1 position. In 2017, DAIKIN COE was established in LOYOLA – ICAM College of Engineering and Technology, Chennai. The Department of EEE in collaboration with DAIKIN and ISTE, organized a two day workshop in LICET for the EEE students. Around 40 students attended the workshop with a lot of interest and enthusiasm. The sessions were conducted in DAIKIN COE lab with the focus to train the industrial persons as well as engineering students on the working of air conditioning and refrigerant system through practical demonstrations. This training is aimed to provide basic knowledge in the working of Air conditioning system and refrigeration area which includes in depth theoretical knowledge and hands on practices.

On the first day Feb 05th the training began at DAIKIN COE after the registration of the students. The entire course was conducted by Mr. Ashok, Regional training Manager, DAIKIN and the topics covered were the basics of refrigeration and air conditioning, sky air units, Inverter AC and VRV systems. Hands on training accompanied every session of the day.

DAIKIN



AIR CONDITIONER

The important factors like temperature, humidity control, air filtering, cleaning, purification, air movement and air circulation were considered for the operation of air conditioning system. The vital parts of air conditioning system like compressor, condenser, expansion device and evaporator were highlighted with the refrigeration cycle process.

TYPES OF COMPRESSOR

Different types of compressor used for various sized and various types of air-conditioning systems were explored with practical models. Identification of different refrigerators according to their model number, created interest in the students to identify the device used and rating of the device which helped them validate the current consumption by themselves.

INSTALLATION

For different types of air conditioning systems, like Single zone ductless system, Multi zone ductless system, Sky air system and VRV system, the installation process was elaborated. The facts to be known before installing the air conditioner are explained very well to the students which will help them to choose the appropriate air conditioning system. The installation process including piping, wiring and checking should be carried out perfectly so that there will be no trouble shooting after the erection process.

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VRV SYSTEM

VRV stands for variable refrigerant volume. Using this system one or more indoor units can be connected to the one outdoor unit, each unit being controlled separately. As most of the VRV systems are inverter type, the compressor can be controlled according to the load.

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CONCLUSION

After two days of hands on training in air conditioning and refrigeration system, students are confident about the selection process, erection process and also different trouble shooting means. Finally an evaluation test was conducted to assess the knowledge attained and the outcome of the workshop.

CO-ORDINATOR-1 **CO-ORDINATOR-2**

HOD **PRINCIPAL**