Technical Training: Chiller Plant Energy Efficiency

Training Summary

This training provides an opportunity for participants to be exposed to an in-depth energy analysis of chiller plants as well as methods for evaluating the plant's energy performance. This training is designed to give participants a learning experience in carrying out energy audit measurements and to identify possible savings through selected energy conservation measures and the return of investment for chiller plants and cooling towers.

Learning Benefits

- Able to carry out energy audit of chiller plants and cooling towers.
- Able to identify energy saving measures for chiller plants.
- Able to improve energy efficiency of existing chiller plants in building/industry.

Targeted Participants

Energy managers, Facility/maintenance managers or engineers, and Academicians.

Trainer Profile

ASSOC. PROFESSOR IR. DR. HAYATI ABDULLAH

Ir. Dr. Hayati is an Associate Professor at the School of Mechanical Engineering, UTM. She specializes in Thermodynamics, more particularly in the area of Air-Conditioning and Energy Management. She was trained in Energy Management in Sweden and is a Certified Energy Manager (AEMAS). Ir. Dr. Hayati is a Professional Engineer registered with The Board of Engineers Malaysia, Chartered Engineer registered with The Engineering Council United Kingdom and Past Chairman of The Institution of Engineers Malaysia (Southern Branch). She has experience working as an Energy Management consultant for over 25 years & has worked in National Energy Conservation & Auditing projects including with international consultants such as ADEME from France.

Time	Module	Content
0.5 h	Introduction	• Chiller Fundamentals • Thermal Comfort
0.75 h	Basic Refrigeration Cycle	• Vapor Compression Refrigeration Cycle • Common Air-Conditioning Systems in Buildings
1.0 h	Chiller Plant Operations	• Centralized Systems • Chiller Plant's Five Loops of Heat Transfer
1.5 h	Chiller Plant Audit & Performance Assessment	• Chiller efficiency • Measurement Parameters • Measuring Equipment • Chiller Energy Efficiency Rating (MS 1525)
1.0 h	Cooling Tower Performance Assessment	• Cooling Tower Fundamentals • Performance Assessment of Cooling Towers

1.5 h	Energy Efficiency Opportunities	• Energy Efficiency Opportunities
		  ◦ Chillers
		  ◦ Cooling Towers