



Understanding Pumps: A Systematic Approach

Course Summary

Pumps take up 20 - 30% in a typical split of energy usage of motor driven equipment for an industrial plant. Commercial buildings, with lower demand for processes, it is between 15 to 20%. The large amounts of energy used for pumping makes pump systems a major candidate for energy savings.

Pumping systems is usually less complicated when compared to process or chiller side optimisation

Course Objectives

At the end of the course, participants will be able to:

- Understand the performance characteristics of pumping systems
- Gain an enhanced understanding of a systems versus component approach to optimise the energy efficiency of pumping systems
- Identify performance problems and systems that are most likely to yield energy efficiency savings
- Develop an action plan to achieve energy efficiency improvements
- Integrate continuous energy improvement into the management of pumping systems

14 SCEM PDU points awarded

3 - 4 May 2018

9am - 5pm

Singapore Sustainability Academy

180 Raffles Place Level 6 Sky Park, #06-10

City Square Mall Singapore 208539

Understanding Pumps: A Systematic Approach

Program Outline

Day 1:

- Pump system efficiency improvement using pre-screening and LCC approach
- Understanding pump systems & process demands
- Typical pump types in industries
- Pump system fluid relationships
- Fundamental hydraulics
- Total head
- System curves
- Understanding pump performance characteristics
- Understanding pump system energy use
- Introduction to PSAT

Day 2:

- Sample PSAT exercise
- Assessment introduction
- Organising the assessment
- Conducting the assessment
- How to collect field data collection
- Sample problem - group exercise
- Selecting a pump system optimisation provider

Rates

Normal	Group
SEAS Member: \$ 850.00	3 participants and above \$ 900.00
Non-Member: \$ 950.00	

Fees are inclusive of GST

SEAS may cancel or reschedule a course at its discretion and will use reasonable efforts to notify delegates at least 5 working days in advance. In these circumstances, delegates will be offered an alternative date, an alternative location or a full refund of course fees paid. SEAS is not responsible for airline or accommodation costs incurred by delegate in the event a course is cancelled or re-scheduled.

Substitutions (name changes) are accepted at any time prior to the event without penalty, subject to the replacement delegate satisfying any necessary course pre-requisites.

Mr. Kumarason S. Kandiah



Speaker's Profile

With more than 12 years working experience in system optimisation of chiller, pumps and compressed air systems, Mr. Kumarason S. Kandiah has vast experience in conducting Investment Grade Energy Audits (IGAs), energy efficiency retrofits of chiller plants and feasibility studies at national and international level.

Kumarason has been involved in designing and retrofitting Air Conditioning and Mechanical Ventilation (ACMV), pumps, fans and compressed air systems for commercial and industrial applications. He co-developed a building monitoring system specifically inclined towards improving chiller efficiency that has been operating for more than 10 years at mission critical sites.

Kumarason was a Qualified Energy Services Specialist (QuESS - Singapore) until 2015 and he is also a member of ASHRAE, Board of Engineers Malaysia and Institution of Engineers, Malaysia.

Call us at +65 6338 8578 to enquire

Email: training@seas.org.sg

Registration Form

Yes! I would like to register for this programme

I am unable to attend but please put me on your mailing list

Participant's Details

1	Name (Dr/Mr/Ms/Mrs)	Designation
	Hp	Email
	NRIC	

Participant's Details

2	Name (Dr/Mr/Ms/Mrs)	Designation
	Hp	Email
	NRIC	

Billing Information

Company Name	Contact Name
Company Address	Email
Tel	