



The Institution of Engineers, Malaysia

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Talk On “Power Generation from Salinity Gradient Solar Pond Using Thermoelectric Generators”

Organized by Engineering Education Technical Division, IEM
BEM Approved CPD/PDP Hours: 2 Ref No: IEM16/HQ/254/T

Date : 13 July 2016 (Wednesday)

Time : 5.30 pm – 7.30 pm (*Refreshments will be served at 5.00 pm*)

Venue : Auditorium Chin Fung Kee, 3rd Floor, Wisma IEM.

Speaker: Dr Baljit Singh

SYNOPSIS

Solar pond is one source of renewable thermal energy. It collects and stores thermal energy at the lower zone of the solar pond. The temperature at the lower zone can reach up to 90 °C as a result of convection current suppression with a salinity gradient. Solar pond is capable storing thermal energy for a long period. The stored thermal energy can be converted into electricity by using thermoelectric generators. Although Organic Rankine Cycles (ORC) engine is currently used to generate electricity from solar pond using low grade heat, it still requires a certain threshold in the temperature difference of the system. The TEGs however works without any temperature difference threshold needed for its operation. These thermoelectric generators can be operated using the cold and hot zones from a solar pond. The main aims of this research are to develop a system for conversion of low grade heat (< 100 °C) to work and effective utilisation of low driving temperature differences from low grade heat for heat to work applications.

BIODATA OF SPEAKER



Baljit Singh received his Bachelor Degree in Mechanical Engineering in 1998 and MSc in Mechanical Engineering in 2005 from Universiti Sains Malaysia. He obtained Ph.D. degree in Mechanical Engineering from RMIT University, Australia in 2014. He is currently a senior lecturer in the Faculty of Mechanical Engineering at Universiti Teknologi MARA, Malaysia. He is a graduate member of BEM and a member of Energy Institute, UK.

Ir Prof Dr Vinesh Thiruchelvam
Chairman
Engineering Education Technical Division, IEM

ANNOUNCEMENTS TO NOTE :

- Preferential admission to talk shall be accorded to IEM members (pre-registration and online registration are NOT required).
- Nonmembers may also attend the talk but will need to pay a registration fee of RM50 and an administrative fee of RM15. GST is inclusive.
- Members of affiliated organizations upon producing their membership cards will be exempted from paying registration fee. Administrative fee is nevertheless applicable.
- Limited seats are available on a "first come first served" basis (maximum 100 participants).
- IEM members are reminded to produce membership cards for confirmation of attendance (CPD purpose) failing which a fee of RM25 will be imposed. GST inclusive.

ADMINISTRATIVE FEE

- Kindly be informed that an administrative fee of RM15 is payable for talks organized by IEM. GST is inclusive.
- The fee would be used to cover overhead costs, building maintenance expenses as well as contribute to Wisma IEM Building Fund.
- All contributions will be deeply appreciated by IEM.
- Student Members are however exempted.

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CPD HOURS CONFIRMATION

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