

ACES-Danfoss Seminar 2023



Green Mark (Platinum Zero Energy) Technology & Solutions

Date: 17 February 2023 (Friday)

Duration: 9.30 am to 2.00 pm

Mode of Delivery: In-person

Venue: Nordic European Centre

3 International Business Park Road

Singapore 609927

CPD: 4 PDU

Fee: ACES Member \$40 nett per person

Non-Member \$80nett per person



Seminar Program

| Time | | Activity |
|----------------------|---------|--|
| 9.00 am to 9.30 am | | Registration |
| 9.30 am to 10.30 am | 60 mins | Topic 1: Hydronic balancing & control design for energy efficient centralized cooling system by Mr. Stanley de Vries |
| 10.30 am to 11.00 am | | Tea Break |
| 11.00 am to 12.00 pm | 60 mins | Topic 1 cont'd |
| 12.00 pm to 1.00 pm | 60 mins | Topic 2: Next Generation Variable Frequency Drives for Energy Efficient buildings of Future by Mr. Vinod Jethani |
| 1.00 pm to 2.00 pm | 60 mins | Topic 3: Overview of SGBC Certification Schemes by Mr. Jidesh Kambil |
| 2.00 pm | | End of Seminar and Lunch |

Topic 1: Hydronic balancing & control design for energy efficient centralized cooling system by Mr. Stanley de Vries Synopsis

This seminar provides a comprehensive knowledge of HVAC hydronic balancing & control design principles to achieve indoor thermal comfort while maintaining the energy efficiency of HVAC system. Participants will understand the differences between Pressure Independent Balancing & Control Valve (PIBCV) and Electronic Pressure Independent Control Valve (EPIV).

Objectives

- Importance of chilled water balancing
- Different methods of chilled water balancing
- Importance of valve authority in chilled water system
- Importance of differential pressure controller
- Key differences between PIBCV and Electronic Pressure Independent Control Valve (EPIV)
- Myth of low Delta T
- Balancing & control for District Cooling network
- Best possible way to optimize hydronic balancing & control together with Variable Speed Drive technology

SPEAKER PROFILE



Stanley de Vries is the Global Application Development Expert of Danfoss. He has more than 20 years' experience in supporting customers from different regions on hydronic balancing & control applications in Non-residential buildings.

Danfoss is always at the forefront of energy efficient solutions and as such has been an important driver of the market switch to pressure Independent technology worldwide. Stanley has supported this conversion of the market and has built up a wide working knowledge of practical applications.

He has also conducted many trainings and seminars for customers and HVAC associations globally. Among others he conducted seminars for ASHRAE (US, India, Middle East, South Africa, Mexico), ISHRAE (India), CIBSE (Sri Lanka), TVVL (Netherlands), AIRAH (Australia) and more.

Topic 2: Next Generation Variable Frequency Drives for Energy Efficient buildings of Future by Mr. Vinod Jethani Synopsis

This seminar provides a comprehensive knowledge of dedicated "HVAC Variable Frequency Drives" for improving the energy efficiency of HVAC system and maintain thermal comfort of occupants, to save energy, meet environmental regulations and reduce costs in modern buildings. The modern HVAC Drives are designed to bring optimized process control to all heating, ventilation, and air conditioning (HVAC) applications.

Objectives

- Basics of VFD, Fan Laws and selection criteria
- Key differences between standard VFD and Dedicated HVAC VFD
- EC+ High Efficiency fan system
- Pump dedicated control features
- Drive as AHU controller
- Kw/Rt measurement as per GM 2021 standards
- EMC and Harmonic in VFD's (standards & mitigation)
- Conditioned based monitoring

SPEAKER PROFILE



Vinod Jethani has been associated with HVAC industry for more than 22 years, currently working with Danfoss as a Regional BDM, Commercial Buildings for Asia Pacific region is based in Singapore. Malaysia and India region have been a part of his work experience before moving to Singapore.

He has been supporting customers on different aspects of HVAC solutions for commercial buildings that includes use of Variable Frequency Drive for AHUs, Pumps, Chillers and Cooling Towers to improve

energy efficiency and reduce carbon footprint.

He has also conducted many trainings and seminars for customers and HVAC associations regionally. Among others he conducted seminars for ISHRAE (India), IEM (Malaysia) IEE (Philippines) and more.

Topic 3: Overview of SGBC Certification Schemes by Mr. Jidesh Kambil

Objective – To share about SGBC's certification programmes and how they help to enable the Sustainability journey in the Built Environment in Singapore.

SPEAKER PROFILE



Jidesh Kambil is a Sustainability specialist with 20 years of experience in the Built environment industry. He is currently leading the Market Development Team at Singapore Green Building Council. He oversees the SGBS and GMAP certification schemes and also works on several work groups and task forces on Embodied Carbon, Super Low Energy Buildings and Environmental Management. He is a registered Singapore based expert for ISO development of Zero Energy Building standards.

REGISTRATION FORM

For enquiry, please call ACES Secretariat at Tel: 6659 5023

Kindly sign and submit your completed registration form to secretariat@aces.org.sg

| Code | Title | Fee per pax | Schedule | Venue |
|------|-----------------------------|-------------------|---|--|
| S55 | Kareen Mark (Platiniim Zero | ACES Member: \$40 | 17 February 2023 (Friday) 9.30 am to 2.00 pm | Nordic European Centre 3 International Business Park Road, Singapore 609927 |

| S/N | Full Nam | е | PE No. | Contact | Email |
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Local Cheque should be crossed and made payable to "Association of Consulting Engineers Singapore".

Mail to ACES address: Association of Consulting Engineers Singapore 18 Sin Ming Lane #06-01 Midview City, Singapore 573960. Please indicate your name and course code 'S55' on the back of the cheque.

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