

Talk on

R32: An Alternative Refrigerant Solution to Global Warming"

Organised by the Environmental Engineering Technical Division (ENETD, IEM)

BEM Approved CPD/PDP Hours: 2 Ref No: IEM17/HQ/311/T

Date: 24 August 2017, Thursday
Time: 5.30pm – 7.30pm
Venue: C&S Lecture Room and TUS Lecture Room,
2nd Floor, Wisma EM, PJ
Speaker: Dr Chin Wai Meng

SYNOPSIS

The world is currently facing two serious environmental issues, i.e. ozone layer depletion and global warming. One of the malefactors to this problem is the refrigerant gas used in air-conditioning and refrigeration equipment. With the Montreal Protocol implemented by UNDP, harmful chloro-flouro carbon (CFC) and hydro-chloro-flouro carbon (HCFC) refrigerants are being replaced with new alternatives which are less harmful to the environment. Such refrigerants must have zero ODP (Ozone Depletion Potential) and low GWP (Global Warming Potential) while maintaining high system energy efficiency and which are safe to use. Efforts to restore the ozone layer in the stratosphere has been proven to be effective, but however, more effort is required to curb global warming. The recent Kigali Amendment to the Montreal Protocol has been established to reduce the emission of carbon dioxide into the atmosphere. To this end, there is a diversity of refrigerants which can be used for specific applications. Refrigerant R32 has been shown to be one such viable alternative for air-conditioning applications. It has zero ODP and low GWP of 675 (modified = 473). In this presentation, an overview of the thermodynamic and mild-flammability properties (ASHRAE Class A2L) of this refrigerant is given. Risk assessment studies of the refrigerant have indicated a very small risk of fire with various types of air-conditioning equipment.

BIODATA OF SPEAKER

Dr Chin Wai Meng is the Senior Manager of Daikin Research & Development Malaysia Sdn. Bhd. (DRDM), which is the research and development arm of Daikin Malaysia Sdn Bhd (DAMA), a leading air-conditioning manufacturer in Malaysia under the Daikin Group of companies. Dr Chin has been with the company for the past 27 years where his expertise is in the performance and reliability testing of air-conditioning units. He also has experience in the design and construction of psychrometric test laboratories. Presently, he is in charge of leading the Development Support Division which provides support services to the Product Development activities in the company. He has graduated from Universiti Malaya with a Bachelor's degree in Mechanical Engineering in 1990, and has obtained his PhD doctorate from Universiti Teknologi Petronas in 2011. He was also appointed as the Technical Consultant to the Technical Working Group on APEC-ASEAN Harmonization of Energy Efficiency Standards for Air-conditioners in 2013. He has also contributed in the Working Group to revise Malaysian Standard MS1525: 2012 and MS 5151: 2011. In 2016, he was appointed by SIRIM as a member of the MS 2678:2017 Working Group to develop a standard on flammable refrigerants

ANNOUNCEMENTS TO NOTE:

- Non-members may also attend the talk but will need to pay a registration fee of RM50 and an administrative fee of RM15. GST is inclusive.
- Limited seats are available on a "first come first served" basis (maximum 100 participants).
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