

THE ASHRAE SINGAPORE TIMES

Newsletter of ASHRAE Singapore Chapter

President's Message

By K.C.Liew



Dear ASC Members,

Region XIII and Region at Large conducted the joint CRC at Bangkok.

I personally thank the Singapore chapter members who volunteered for such regional role and to make commitment for their contribution of time and energy for ASHRAE further on a regional level.

Following members of the Singapore chapter were nominated and appointed for some key posts.

Mr.Cheng Wee Leong, Regional Members Council Representative (2016-2019).

Mr.David Lau , Assistant Regional Chair (2016- 2017)

Mr.Cheng Wee Leong, Regional CRC Chair 2017.

Mr.Rupesh Iyengar, YEA Regional Coordinator (2014- 2017)

K C Liew
President, 2016 - 2017

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CRC REVIEW

By Muthuraman Palaniappan

Combined CRC of Region XIII and Region at Large was held successfully in Bangkok between 30th Sep and 1st Oct' 2016. This is the first time the the ASHRAE BOD and EXCOM committee meeting were held out of USA. Total participants for this CRC was around 550 which was combined with joy and networking.

It started with a 1-day technical seminar and the theme was 'Innovation for a Sustainable Future'. Our Society President, Mr. Timothy G. Wentz was the keynote speaker followed by several oversea speaker sharing their view and knowledge on sustainable future

During the business session and Regional Planning Meeting (RPM), all the chapter delegates and Regional officers discussed the Region XIII matters in a very serious manner. In the evening, they all deserved the banquet dinner organized by the host chapter, Thailand Chapter, with the wonderful performance by students from various chapters.





The Baton for the CRC has been passed on to the Singapore Chapter and the event for 2017 will be held in Singapore. Mr.Cheng Wee Leong has accorded to Chair the CRC with many of the ASC members supporting him.

An interview with ASC Life Member

Editor arranged for an interview with a Life Member of ASHRAE Singapore Chapter Mr.G.S.Tan, Managing Director of Tempcool Engineering (S) Pte Ltd.

Introduction about yourself, Please.

Started Tempcool in 1973 as a contractor dealing with refrigeration and air-conditioning business. My family consists of my wife and 5 Children. My eldest daughter, Debbie is supporting me in the business and my youngest girl is now back in Singapore after completing her study. She too has a job now.

How long have you been associated with ASHRAE and how long have you been associated with ASC?

I joined as ASHRAE as a associate member in 1967 and became a full member few years later. In 1982 along with few other members, we formed the Association of ASHRAE members. The association was later granted a Charter by ASHRAE society to become a full fledged member of ASHRAE and we ASHRAE Singapore chapter as we are known today or ASC for short. (G.S.Tan is one of the founding members of ASC Singapore. Also he supports ASC to work out from the same office address as TEMPCOOL Singapore office).



G.S.Tan & his wife.



What keeps you bound to ASC all these times?

Because of my business I consider my association with ASC very appropriate. Apart from ASC, I was also actively involved in ASME (Association of Small and Medium Enterprise) and served as its President (1994-1997).

Currently I continue to be very active with ASC attending and supporting in ASC events whenever I am available. Also I have many friends in ASC. Since we are all in the same industry, I continue to network with them.

Did you find any challenges as you were engaged in ASC ?

With any organizations, ups and downs are common. Sustaining Membership is one of the key issue. In the early years, due to our limited manpower and resources, we had to struggle to organise events but I see a big difference in ASC today. There are many highly qualified professionals on board as members and there also many student members. With these, ASC has been kept busy organising events and training seminars. We need to continue to build on this momentum to sustain the interest of members to take ASC to the next level of growth. ASC provides a platform for members to network, to exchange views and ideas of common interest and in this way help to keep the members together; it's kind of bonding just like in a big family.

What is the message you want to convey to the younger generation or new members of ASC

Once a young member joins the association, they should participate actively in the association program and contribute to it. Their involvement and engagement with the senior members and the association helps to develop themselves. Only when they participate they learn and pick up many things. PARTICPATE ACTIVELY TO WIDEN knowledge and enlarge the circle of friends.

Online Thermal Comfort Compliance Tool Included in Standard 55 User's Manual

Abstract by Dr.Yuichi Takemasa

The new user's manual for ANSI/ASHRAE Standard 55-2013, *Thermal Environmental Conditions for Human Occupancy*, includes a free online thermal comfort tool that can be used as the official tool for showing compliance with Standard 55-2013 and all of its published addenda. The online tool is available only to those who purchase *Standard 55 User's Manual* and can be accessed from any Internet-connected device. In all, the user's manual provides detailed information on the requirements of the standard. It includes tables, illustrations and examples to aid users in the design, commissioning, and measuring and rating of thermal comfort in buildings.

If you want to purchase *Standard 55 User's Manual*, kindly visit

http://www.techstreet.com/ashrae/standards/standard-55-user-s-manual?product_id=1929022#jumps

or www.ashrae.org.

You can also purchase *Standard 55-2013 and User's Manual Set* at

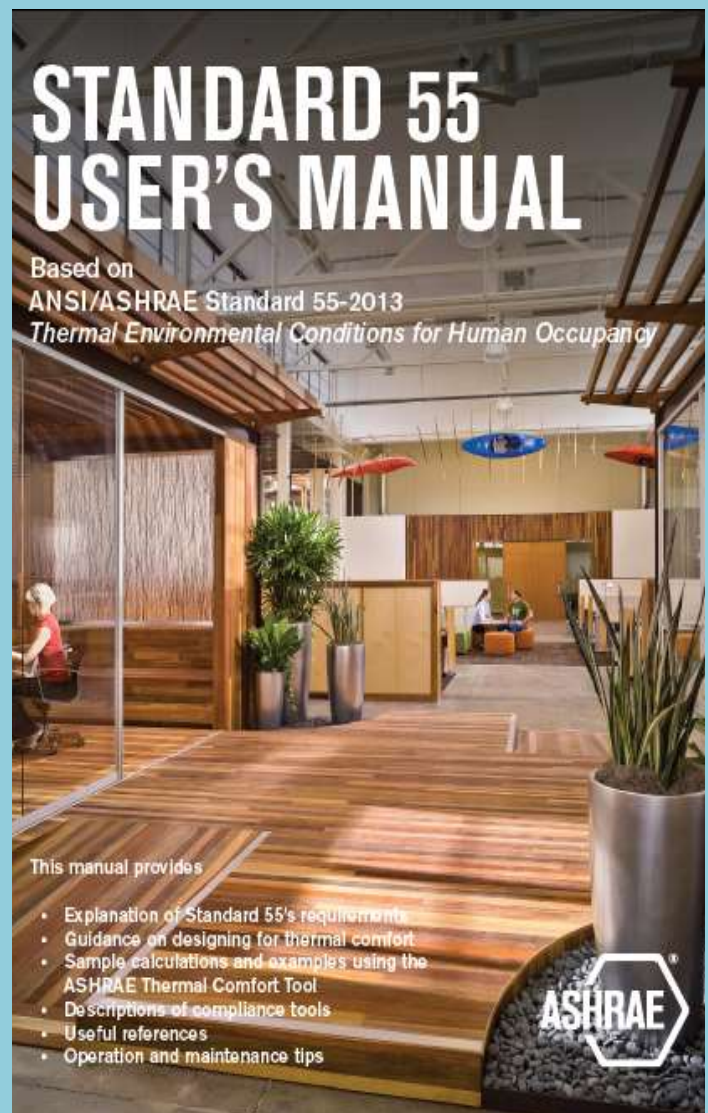
http://www.techstreet.com/ashrae/standards/standard-55-2013-thermal-environmental-conditions-for-human-occupancy-ansi-approved-and-user-s-manual-set?product_id=1929333

This companion guide provides detailed information on the requirements of *Standard 55-2013*, and includes tables, illustrations, and examples to aid users in the design, commissioning, and measuring and rating of thermal comfort in buildings.

Standard 55 User's Manual does not reproduce the requirements of the standard but rather paraphrases and explains them. Intended to be used in conjunction with the standard, this manual provides

- Information on the intent and application of *Standard 55*
- Sample calculations and examples using the *ASHRAE Thermal Comfort Tool*
- Guidance on applying the principles of acceptable thermal comfort and effective thermal control
- Useful reference material to assist designers, owners, and users in efficiently completing a successful and compliant design
- Guidance to building operation and maintenance personnel
- Descriptions of compliance tools

Also included is an exclusive link to the web-based *CBE/ASHRAE Thermal Comfort Tool*, developed by the Center for the Built Environment at the University of California Berkeley.



Ashrae Certification

More than 2500 key professionals have been certified. Are you ready to join them?



ASHRAE, the standard setter for sustainable building performance and system design and operation, validates through certification the critical knowledge, skills and abilities of professionals in six key, built-environment fields.

Value of Certification

ASHRAE certification programs were founded to meet industry need as identified through market research and today provide value to many important stakeholders. Developed by subject matter experts, including those recruited from allied professional organizations, ASHRAE certification programs benchmark with the ANSI/ISO accreditation standards for personnel certification programs to help ensure quality. For the past 100+ years ASHRAE has worked hard to earn and maintain a worldwide reputation for being the leader in HVAC&R design. ASHRAE certification programs serve to reinforce that reputation.

Building Energy Assessment Professional (BEAP)



The growing emphasis on energy consumption reduction and cost savings has highlighted the need for credible specialists who assess energy use in buildings. The BEAP certification validates competency to *audit, assess and analyze residential, commercial and industrial building energy use and develop and implement recommendations.*

The BEAP certification is integral to ASHRAE's Building Energy Quotient (BuildingEQ) program, as is its BEMP certification.

Together, the programs provide a valuable toolkit when it comes to the evaluation and reduction of building energy use. Two separate Workbooks, As Designed and In Operation, are part of the BuildingEQ program. Submitting both of these Workbooks can earn an As Designed and In Operation building rating. Only those certified as BEAPs, or Professional Engineers licensed in the jurisdiction where a BuildingEQ project is located, may submit the In Operation Workbook. Additionally, only BEAPs (and BEMPs whose certification relates to the As Designed Workbook) may display the BuildingEQ Certified Provider logo with descriptions of their services.

Building Commissioning Professional (BCxP)



The BCxP certification validates competency to *lead, plan, coordinate and manage a commissioning team to implement commissioning processes in new and existing buildings.*

Many building owners look for ways to lower energy bills, reduce change orders during construction, avoid premature equipment replacement costs, and create safer and healthier buildings. Building commissioning measures and tunes up performance of existing buildings and ensures that new buildings begin their lifecycle at optimal productivity.

High-Performance Building Design Professional (HBDP)



The HBDP certification, an ANSI accredited certification program, validates competency to *design and integrate sustainable HVAC&R systems into high performing buildings.*

Today's building design market requires use of ground-breaking technologies in new and existing structures to meet the need of building owners.

Building Energy Modeling Professional (BEMP)



The BEMP certification validates competency to *evaluate, select, implement, calibrate and interpret the results of energy modeling software when applied to new and existing building and systems energy performance.*

The BEMP certification complements ASHRAE's Building Energy Quotient (BuildingEQ) program by helping to ensure that only qualified practitioners can submit As Designed Workbooks to receive building ratings from ASHRAE. Only those certified as BEMPs, and Professional Engineers licensed in the jurisdiction where a BuildingEQ project is located, may submit the As Designed Workbooks to ASHRAE. Like BEAPs who may submit In Operation BuildingEQ Workbooks, BEMPs may display the BuildingEQ Certified Provider logo with descriptions of their services.

Value of Earning Your ASHRAE Certification In a recent "Value of Certification" survey, this is what ASHRAE-certified professionals had to say: • ASHRAE Certification validates my level of specialized knowledge and ability (89%). • ASHRAE Certification helps differentiate me from my peers (82%). • In my field, ASHRAE Certification has provided me with greater professional recognition (73%).

Healthcare Facility Design Professional (HFDP)



The HFDP certification validates competency to *incorporate standards, guidelines and regulatory codes as well as unique healthcare facility requirements and design principles in HVAC system design.*

Growing numbers of aging medical facilities, advances in technology, shifting environmental requirements and an increasingly older population have created a critical need for expansion and renovation of healthcare facilities.

Operations & Performance Management Professional (OPMP)



The OPMP certification validates competency to *manage facility operations and maintenance to achieve building performance goals, including those related to indoor environmental quality, health and safety.*

Today's complex buildings can fade from green to gray when building operators don't realize the full potential of the systems they manage. Staying current with the latest facility operation strategies and technologies can reduce energy use in buildings by 10% to 40%.

To learn more or apply please go to

<https://www.ashrae.org/education--certification/certification>

Summary of Events

Bilateral meeting with MASHRAE

Written by Junjing Yang

ASC continued to enhance better working relationship with the MASHRAE. The annual bilateral meeting between MASHRAE and ASC was organized by MASHRAE and was held during 12-13 November 2016 at Cameron Highlands Malaysia.



6 ASC members: President K C Liew, President Elect Patrick Ho, Secretary Florence Chan, RP Chair Junjing Yang, SA Chair Rajesh and CTTC Sub Chair Yuichi Takamasa from BOG had attended the bilateral meeting in a resort at Cameron Highlands. The meeting started at 3pm and lasted for 1.5 hour. It firstly went through the points discussed last year and recognized the good relationship and interaction during last society year. A discussion with the Malaysia Chapter's

President, President elect and other bog members about future possible collaboration and activities were carried out. Some joint seminars were proposed to be held next year under CTTC or SA and some proposal for ASHRAE Opportunity fund was discussed.



Some social activities like dinner, strawberry farm visit and the tea tree farm visit were also carried out during the bilateral meeting. Members form both chapters have greatly enjoyed the social platform.



Chinese New year Celebration & Members Night

Date 8th Feb ' 2017.

Time 6: 30pm to 9:30pm

Venue: Singapore Polytechnic Graduates Guild (SPGG)





Members Enjoying Lohei Diner.



Student outreach @ Temasek Polytechnic

Date 27th Oct ' 2016.

Venue: Singapore Temasek Polytechnic. (TP)

Student activity Chair Mr. Balachander Rajesh did make an effort to promote ASHRAE to the young members @ Temasek Polytechnic.

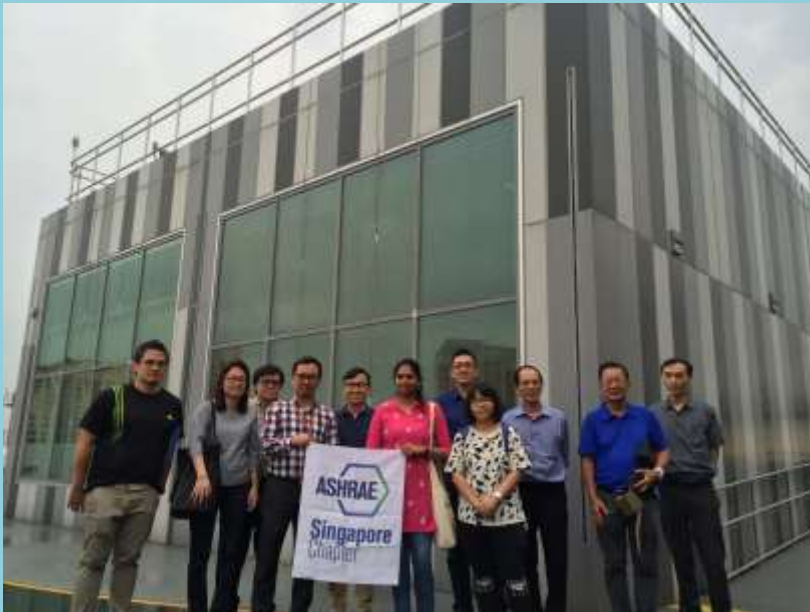


BCA Sky Tour

Date 18th Nov' 2016.

Venue: Visit to BCA Sky Lab

Total of 12 members were taken for a BCA SKY LAB Tour.



World's First High-Rise Rotatable Laboratory for the Tropics

The BCA SkyLab is a state-of-the-art rotatable test facility pivotal to developing innovative energy efficient building technologies. The facility is modeled after the Lawrence Berkeley National Laboratory's FLEXLAB.

In this visit, participants got the opportunity to understand more on the test bed. Covering a floor area of about 132 m², the test facility is capable of testing a wide range of energy efficiency technologies, including ACMV (e.g. chilled beam, UFAD, etc.), lighting etc. It adopts a plug-and-play concept, allowing quantitative assessment.

A unique feature of the test facility is its rotatable platform system. This allows the study of the performance of building systems; building energy use and indoor environmental parameters change in a variety of orientations relative to the sun. Such studies are potentially useful for studies in cooling, lighting and shading strategies.

Workshop on Environmental Modelling & Simulation

Date 20th Sep' 2016.

Venue: Innovis Level 1, Fusionopolis Way

Environmental Modelling & Simulation for the Building Industry

Joint Workshop organised by the Institute of High Performance Computing and Kajima Corporation



In 2008, an Inter-Ministerial Committee on Sustainable Development (IMCSD) set a target for Singapore to have at least 80% of the buildings achieve the Building and Construction Authority (BCA) Green Mark standard by 2030.

The workshop focused on Modelling and Simulation (M&S) for both internal flow in and external flow around residential and non-residential buildings. IHPC discussed environmental simulation perspectives for some research projects in Singapore, while Kajima Corporation shared M&S experience for the building industry in Japan.

The workshop was well attended and included many prominent speakers :-

- Prof Wong Nyuk Hien, Vice Dean (Research), School of Design and Environment, Department of Building, NUS,
- Dr Gao Chun Ping, Director, Green Building Research, BCA,
- Dr LOU Jing, Director, Fluid Dynamics Department, IHPC
- Dr POH Hee Joo, Capability Group Manager (Environmental Modelling),
- Dr Kenji TAKAGI, Senior Manager, Advanced Technology Incubation & Mechatronics Group, Kajima
- Dr Yuichi TAKEMASA, Chief Research Engineer, Kajima Technical Research Institute Singapore

Upcoming Events

Date 5th May 2017.

Venue: Tulip Room, Singapore Polytechnic. (SP)

Topic : Annual General Meeting of ASHRAE Singapore Chapter

Date 17th May 2017.

Venue: Singapore Temasek Polytechnic. (TP)

Topic : ASHRAE DL Seminar on “Advanced Energy Design Guide and Underfloor Air Distribution Systems”

Speaker Profile



DANIEL H. NALL, P.E., FASHRAE, FAIA, BEMP, HBDP

**Vice President
Syska Hennessy Group
New York, NY**

Mr. Nall is a Vice President of Syska Hennessy Group in New York. A graduate of Princeton University and Cornell University, he is a Registered Architect, a Professional Engineer, an ASHRAE Life Fellow, a Fellow of the AIA, a LEED Fellow, a certified Building Energy Modeling Professional and a High Performance Building Design Professional. ASHRAE activities include the ASHRAE Advanced Energy Design Guide Steering Committee, the Building Energy Quotient Ad-Hoc and Oversight Committees, and TC 4.7. He helped author the 30% Advanced Energy Design Guides (AEDG's) for Small Office Buildings, Small Retail Buildings, Roadside Lodging and Small Warehouses, and the 50% AEDG's for Medium Office Buildings, Medium and Big Box Retail Buildings, and Grocery Stores. He is one of the four participants in the "Engineer's Notebook" monthly column in the ASHRAE Journal. He received the ASHRAE New York Chapter Distinguished Service Award in 2011 and the ASHRAE Distinguished Service Award in 2012. He has been a member of the Board of Directors of the USGBC NY Chapter, the vice chairman of the USGBC Energy and Atmosphere Technical Advisory Group and a member of the AIA National Committee on the Environment.

Mr. Nall was named one of the "25 Newsmakers of 2007" by Engineering News Record magazine. He was named "Outstanding Practitioner, 2004", by the US Chapter of the International Building Performance Simulation Association. Notable projects include the BASF U.S. Headquarters, the Newseum in Washington, DC, the Hearst Corporate Headquarters, the U.S. Embassies in Sofia, Bulgaria and Cape Town, South Africa, the Clinton Presidential Library, the New York Times Headquarters and the Alcoa Corporate Headquarters. He is the author of over 40 papers in technical and professional journals. He has been a Visiting Lecturer at the University of Pennsylvania, Cornell University and Princeton University Schools of Architecture and an Adjunct Associate Professor of Architecture at Columbia University.

Date 7th July 2017.

Venue: Raffles Convention Center Singapore

Topic : ASHRAE SINGAPORE CHAPTER 25th Annual Installation Dinner

SEE YOU AGAIN IN THE NEXT NEWSLETTER..... UNTIL THEN BYE.....