

ASHRAE Hong Kong Chapter

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ASHRAE Distinguished Lecturer Series

<u>Technical Seminar on Fundamentals of Building Envelopes</u> <u>and Humidity Control in Hot & Humid Climates</u>

Date: 18 March 2019 (Monday)

Time : 2:15pm – 5:15pm (Registration will start at 1:45pm)

Venue: BEC Auditorium, G/F Jockey Club Environmental Building, 77 Tat Chee Avenue, Kowloon

Tong, Hong Kong

Background:

Hong Kong has a humid subtropical climate characteristic of Southern China. Summer is hot and humid, with occasional showers and thunderstorms and warm air from the southwest. With this climate characteristic, building envelopes and humidity control are important issues for many buildings in Hong Kong. It will affect building materials, air quality, comfort, corrosion, hygiene and even virus/bacteria inflections. This technical seminar explains the concepts of humidity control and its relationship with building envelopes. In addition, the speaker will also focus on the sharing of humidity control techniques in buildings and analysis of critical causes to comprise most building failures in hot and humid areas. It will further introduce different ASHRAE standards and publications related to humidity control in buildings in hot and humid climates.

Topic 1:

Fundamentals of Building Envelopes in Hot & Humid Climates

Designing buildings requires the integration of techniques found in the ASHRAE Guide for Buildings in Hot and Humid Climates. The speaker will provide a presentation on the fundamentals of building envelopes in hot and humid climates, vapor barriers and air barriers. These three building systems are the main cause for concern for HVAC Engineers and comprise most building failures in hot and humid areas.

Topic 2:

Humidity Control in Buildings

Designing buildings for humidity control requires the integration of techniques found in the ASHRAE Humidity Control Design Guide. The speaker will provide a presentation on the fundamentals of humidity control including estimating dehumidification loads, control of outdoor ventilation air with the use of dedicated outdoor air systems and building air pressurization.

Speaker:

Raymond E. Patenaude, PE, CMA, CIAQP, CEM, RPIH

Raymond E. Patenaude, PE, CMA, CIAQP, CEM, RPIH, Principal Engineer for the Holmes Engineering Group LLC, is a registered Professional Engineer specializing in HVAC systems, moisture intrusion into buildings, and microbial contamination of building environments. He has been a Consulting Engineer for over thirty-eight years involved with the analysis, design and construction of building HVAC systems. As a recognized expert in his field, Mr. Patenaude, provides professional consultation and investigation in building science including: cause and origin of construction defects; building envelope assessments;



Supporting organizations:







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HVAC failure causation analysis; energy analysis; moisture intrusion; mold growth investigations; and remediation management.

Mr. Patenaude is a former ASHRAE Vice President, DRC for Region XII and Chair of TC 1.12, Moisture Management in Buildings. In addition he was the Chair of the Project Monitoring Sub-Committee for the new "ASHRAE Guide for Buildings in Hot and Humid Climates". Currently Mr. Patenaude serves ASHRAE as a member of Standard 100, "Energy Conservation in Existing Buildings" and TC 1.12, "Moisture Management in Buildings". In addition, Mr. Patenaude is also a member of the National Society of Professional Engineers, the Florida Engineering Society, the National Academy of Forensic Engineers, the National Academy of Building Inspection Engineers, the National Institute of Building Sciences, Association of Professional Industrial Hygienists, the American Conference of Governmental Industrial Hygienists, American Industrial Hygiene Association and Chairman of the Board of the Certified Indoor Air Quality Professionals.

Language: English

Fee: HK\$ 300 [Member of ASHRAE Hong Kong]

HK\$ 350 [Member / Staff of Supporting Organizations]

HK\$ 400 [Standard]

<u>Remark</u>: 3-hour CPD certificate will be provided.

Registration & Enquiry:

Number of participants is limited and prior registration is required. For registration, please complete Registration Form in the following link: https://goo.gl/forms/cxo5XLvooct0WNdx2. The deadline of application is on 12 March 2019.

After online registration, please make a crossed cheque payable to "ASHRAE Hong Kong Chapter" and post to our mail box at "P.O. Box 35612, King's Road Post Office, North Point, Hong Kong". At the back of cheque, please kindly state "ASHRAE DL Series – Raymond E. Patenaude", Name of Participant, Name of Company / Organization and Contact Number.

Successful members will be notified by e-mail on or before 14 March 2019, which has to be presented at the registry of the venue entrance for verification. If the applicants have not received the confirmation e-mail on or before 14 March 2019, their applications will be regarded as not successful.

If typhoon signal no. 8 or black rainstorm signal is in force and still hoisted after 1:00 pm on that date, the workshop would be cancelled without further notification.

For enquiry, please contact Mr. Anson Lee at email to thankyou807@yahoo.com.hk.

Supporting organizations:





