

美國供暖製冷及空調工程師學會

ASHRAE



AMERICAN SOCIETY OF HEATING, REFRIGERATING AND
AIR-CONDITIONING ENGINEERS, INC. Hong Kong Chapter

P.O. Box 35612, King's Road Post Office, North Point Hong Kong • <http://www.ashrae.org.hk/>

ASHRAE Night 2006

Date: 21 February 2006 (Tuesday)
Time: 6:30pm (reception starts at 6:00pm with refreshment)
Venue: General Purpose Hall, B/F, Chinese Methodist Church,
36 Hennessy Road, Wanchai, Hong Kong

Purpose: **ASHRAE Night** is an annual friendly gathering for both ASHRAE members and non-members. In this event, you can meet the Governors and Officers of Hong Kong Chapter, other ASHRAE members and friends in the industry. You can also know more about the organization of ASHRAE, its future planning, organization structure and members' benefits, etc.

Content: The following functions will be carried out during the ASHRAE Night 2006:

- ✓ Introduction to ASHRAE
- ✓ Nominating Committee Election
- ✓ Certificate Presentation – Life Member and Fifty-year Member
- ✓ Award Presentations (including the Quality Student Project Campaign Award, ASHRAE Technology Award, and other Recognitions)
- ✓ ASHRAE Technology Award Presentation

Fees: **FREE of charge.** To reserve a seat, please complete and return the reply slip by fax or send us the information via email, on or before 14 February 2006.

Membership Drive:

Member-To-Bring-A-Non-member Scheme (Hong Kong Chapter)

To encourage wider participation, an incentive scheme is provided. Any of the current ASHRAE Members (including Associate & Student Members) who will come and bring non-member(s) who are interested in ASHRAE to attend this event will entitle to receive a coupon of HK\$30 that could be used for payment of any event that is held solely by the ASHRAE Hong Kong Chapter. Please indicate this in the registration form if you would like to receive this benefit.

Member-Get-A-Member Program (ASHRAE Headquarters)

Any member may sponsor a new applicant by signing the reference section of his/her application form, and get a US\$10 coupon from the Society. This coupon can be used for purchase of publications or logo merchandise, or for annual dues payment. If you are interested, please remember to include the sponsor information on the membership application form (it can be downloaded from www.ashrae.org.hk/).

We look forward to meeting you and your friends at the ASHRAE Night!

The Hong Kong Chapter has no authority to act for or in the name of the Society.

ASHRAE Technology Award Presentation

Innovative Chiller Control System at Festival Walk

Mr. Cary W.H.Chan and Mr. Paul S.K. Sat

The Abstract:

Decoupler bypass system has been widely used in chiller plants of commercial buildings for over 20 years. This system can reduce pump power and acts as a means for chiller sequencing control. Most of the older designs used the surplus/deficit flow at the bypass pipeline and the return chilled water temperature for chiller sequencing. Such control strategies often lead to inefficient plant operation under certain conditions. Among those, mismatch of cooling load demand with chilled water flow demand is one of the common problems encountered. For new buildings, such problems can be dealt with by more modern designs such as primary variable flow systems. But conversion of existing plants may be costly and often found not possible due to various constraints. The objective of this project is to try using innovative approach to come up with a practical and cost effective method to improve the efficiency of a 6,400TR chiller plant of a commercial complex. The conversion only involves the change in chiller control strategies.

In this study, an action-research approach is used to understand the problem of inefficiency, to create simple and innovative control strategy, to implement the developed control logic and to carry out measurement and verification on the saving. The new approach has achieved a saving of 435,000 kWh per year with virtually zero investment, a year-round operating efficiency improvement of chiller by 1.9%, without sacrificing thermal comfort. This reduces the release of CO₂ by 261,000 kg per year. The same method can be easily applied to numerous existing buildings with similar problems and will reduce environmental impact significantly if such method is widely adopted.

The Speakers:

Mr. Cary W.H. Chan

Mr. Chan is a professional engineer. He is currently the Head of Technical Services of Swire Properties Management Limited who is responsible for overseeing the operation and maintenance of Swire Properties' investment portfolio. His major interests are on energy and environment conservation. Over the years, a lot of energy saving initiatives have been successfully implemented with substantial improvements in energy performance of their buildings. In the past few years, Mr. Chan has been sharing his experience through publications in professional journals and talks at technical seminars.



Mr. Paul S.K. Sat

Mr. Sat graduated with a BEng (Hons) degree in Building Services Engineering at the Hong Kong Polytechnic University in 1994 and started his career as an engineer with Parsons Brinkerhoff (Asia) Ltd until 1999. He worked as a Research Associate in 1997, 2000-2002 and acquired his PhD degree in 2003 at his Alma Mater Department. He joined the Swire Properties Management Ltd in 2003 and is now a Building Engineer at the Technical Services Department. His major interest includes building energy conservation, system optimization and fault diagnosis in air-conditioning system. He is continuing with his part-time MBA study in the City University of Hong Kong.



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Please reply to: ASHRAE Hong Kong Chapter

By e-mail: info@ashrae.org.hk or by fax no.:3019 8334 (Attention: Jacob Yiu)

Name: (Mr. / Mrs. / Ms.*) _____

Company: _____

Telephone Nos.: (Off.) _____ (Mobile) _____ (Fax) _____

E-mail: _____

Are you an ASHRAE member? (Yes / No*) If yes, your membership no. is: _____

If you are an ASHRAE member, will you bring non-member(s) to attend this event? (Yes / No*)

If yes, please provide details of the non-member(s). They need not submit another registration form.

Name

Company

(Use additional sheets if necessary.) (* Delete where applicable.)