

BSE Public CPD Lecture – Seminar on Liquid Desiccant

A **Seminar on Liquid Desiccant** delivered by Professor Zhang Xiaosong and Mr. Chang Liang was held on 3 August 2010 (Tuesday). Over 120 participants attended this public CPD lecture co-organized by PolyU Department of Building Services Engineering and The American Society of Heating, Refrigerating and Air-Conditioning Engineers-Hong Kong Chapter (ASHRAE-HKC).



[Powerpoint file of the CPD lecture](#)

Professor Zhang is the Associate Dean of the School of Energy and Environment at Southeast University. He has engaged with the research on liquid desiccant for over 10 years. His research areas include novel dehumidifier, the heat and mass transfer in the liquid desiccant system, solar energy based regenerator, liquid desiccant based novel air conditioning system and the liquid desiccant based ice making.

Mr. Chang is a PhD candidate in Building Energy Research Centre at Tsinghua University. He has been doing consulting work in US, Hong Kong and mainland China for 5 years. His research works are related to new technologies applications including liquid desiccant applications with goals of saving energy and low carbon footprint.



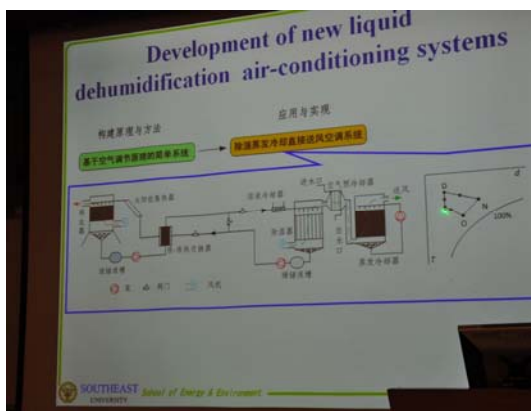
Professor Zhang



Mr. Chang

The liquid desiccant system, as an energy-efficient, environmentally friendly and healthy means of air dehumidification, can be used to achieve the decoupling of the air latent load and sensible load removal. The driving force of moisture removal by the liquid desiccant is the water vapour pressure difference between the desiccant solution and the air. The moisture in air is absorbed by the strong desiccant solution rather than condensed by low temperature coolants. In addition, the sensible load can be removed by relatively high temperature coolants. Therefore, COP of chilling equipment can be improved and considerable energy can be saved.

In the lecture, the two speakers introduced the state-of-the-art research and applications of liquid desiccant. Various kinds of commonly used liquid desiccants were discussed.



Introducing the new liquid dehumidification air-conditioning systems



Presentation by Dr. Xiao

In addition, Dr. F. Xiao of BSE introduced her research project on application of liquid desiccant based air conditioning system in Hong Kong which is supported by Hong Kong Environment and Conservation Fund (ECF).

In the Q&A session, participants interacted with our speakers on their research works and presentations.



Interaction