

Registration Details

Registration Fee:

Members of ASHRAE/SP Staff : S\$80.00
Other participants : S\$100.00
Full Time Students : S\$20.00
Full Time Students (No lunch) : S\$5.00

Payment (Cheque Only)

Fee will cover refreshments and a buffet lunch. Payment is requested with registration. All cheques should be made payable to " **ASHRAE Singapore Chapter** " and mailed with your registration form to"

PDU (Professional Engineers Board)

3 PDUs were awarded for the 8th seminar.
3 CE units for NEBB(USA) were awarded for the 8th seminar.

Singapore Polytechnic
School of Mechanical and
Manufacturing Engineering
500 Dover Road
Singapore 139651

Attention: Mr V. K Pawa

Further Information

Please contact Mr V.K Pawa
Tel: 6772-1567, Fax: 672-1975
E-mail: vinod@sp.edu.sg

Closing Date
14th September 2005

REGISTRATION FORM

NAME: _____ NAME: _____

DESIGNATION: _____ DESIGNATION: _____

ORGANISATION: _____ ORGANISATION: _____

PEB No: _____ PEB No: _____

ADDRESS: _____ ADDRESS: _____

TEL No: _____ TEL No: _____

FAX No: _____ FAX No: _____

E-MAIL: _____ E-MAIL: _____

*Member of ASHRAE/SP staff (S\$80.00) : Membership No: _____

*Other participants (S\$100.00) :

*Full Time Students (S\$5.00 /S20.00)# : (With or without lunch)#

(Student ID card required during registration) * Please as appropriate

Please circle as applicable

PAYMENT MODE: Cheque Only

Payable to " ASHRAE Singapore Chapter " AMOUNT: S\$ _____

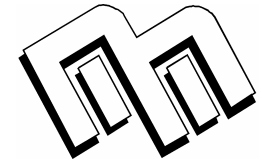
Cheque No: _____ Bank: _____



Singapore Polytechnic



ASHRAE Singapore Chapter



School of Mechanical &
Manufacturing Engineering

SP 9th Cleanroom Seminar 2005: Definition of Cleanroom Technology Scope of Works, Maintenance, Performance Testing and Monitoring of Cleanrooms

Date: 17th September 2005

Time: 9.00 am to 12.30 pm

Venue: Furama Riverfront Singapore

Venus II & III Level 3

405 Havelock Road

Singapore 169633

Programme

09:00 - 09:30	Registration and Morning Refreshments
09:30 - 09:40	Welcome Address Opening Address by Director of School of Mechanical and Manufacturing Engineering
09:40 - 10:15	Paper 1 Definition of Cleanroom Technology Scope of Works in Consideration of The Interfaces Involved. By Mr Josef Oswald CEO Daldrop + Dr.Ing.Huber
10:15 -10:50	Paper 2 Is Cleanroom Cleaning Necessary? By Ms Lynda Tan Executive Director Yargay MCI Pte Ltd
10:50 - 11:10	Recess
11:10 -11:45	Paper 3 Performance Testing and Certification of Semi-conductor and Pharmaceutical Cleanrooms By Mr Ong Yam Chai, NEBB CPT Supervisor, Director Cesstech (S) Pte Ltd.
11:45 -12:20	Paper 4 Monitoring Cleanrooms By Mr Raymond Thomas Director of Sales (Singapore Operations) Lighthouse Worldwide Solutions
12:20 -12:30	Question and Answer Session Presentation of tokens of appreciation
12:30	Lunch

Synopses of Presentations

Definition of Cleanroom Technology Scope of Works in Consideration of The Interfaces Involved.

The profitability and functionality of a cleanroom are dependant upon the following:

- up-to-date technical planning
- execution of the work.

Particularly important for the execution is the way in which individual packages and areas of performance of the chosen companies are combined. The presentation will demonstrate how the scope of works is to be put together and clarify areas of responsibility. A special focus here is the problems surrounding the interfacing of individual packages.

Is Cleanroom Cleaning Necessary?

- * Cleanroom Danger
- * The Human Factor

Particulates are deposited directly onto surfaces such as floors, walls, work surfaces, and machinery. They may not affect products at the time they are deposited, but over time they pose an increasing threat to your products by causing physical disturbance and eventual breakdown. Cross-contamination is the most significant cause of downtime and loss of yield within a cleanroom environment. Pharmaceuticals, Manufacturing Centers Testing Facilities, Semiconductors all require different operation methods and designs.

Performance Testing and Certification of Semi-conductor and Pharmaceutical cleanrooms.

This presentation will cover:

- * Federal Standard 209E
- * ISO 14644-1 and ISO 14644-2 standards
- * Scope/limitations of some of the references
- * Choice of tests
- * Discussion on some tests and analytical methods
- * Certification reports

Monitoring Cleanrooms

The following will be discussed in this paper:

- Why monitoring is important.
- What needs to be monitored:
 - * Particles
 - * ESD
 - * TRH
- Cleanroom differential Pressure
- Where to monitor .
- Standard tools used for monitoring.