

# International Training Program (TechnoBiz)

# Incineration Technology

28-30 April 2009, Impiana Hotel, Kuala Lumpur, Malaysia

This is a three-day course covering the evaluation, selection and design of incineration and associated waste disposal systems and equipment. It covers the wide varieties of thermal treatment systems in use today, on wastes from refuse to waste gases, from sewage sludge to pesticides. This a practical course which is designed for engineers who want to obtain the tools needed for understanding equipment design, as well as for the regulator and non-technical planner or other individual who is interested in the types of equipment available, and the advantages and disadvantages of each. In addition, system calculations will be developed and students will learn these techniques, and will be provided with computer programs for system calculations. Numerous examples of actual systems will be discussed, with illustrations of actual equipment, and videos of operating systems. The participant will see what this equipment looks like, and will be guided through trouble shooting of problems that have occurred in many of these systems.

## Program Outline

### 28 April 2009 (Tuesday)

- Introduction, definitions
- Regulatory overview
- Basic calculations
  - Heat transfer techniques
  - Combustion equations
  - Calculating reaction temperatures
- On-Site solid waste disposal
  - Simple systems
  - Automated equipment
- Pyrolysis/Controlled Air processes
  - The pyrolysis process
  - Starved-air systems
- Rotary kiln technology
  - Conventional systems
  - Other rotary kiln systems
- Central disposal systems
  - Municipal solid waste waterwall systems
  - Other systems
  - RDF facilities
- Mass balance calculations

### 29 April 2009 (Wednesday)

- Heat balance calculations
- Medical waste disposal
- Sludge incineration
  - Multiple hearth furnaces
  - Fluid bed systems
  - Other systems
- Liquid waste disposal
  - Burners
  - Salt-laden wastes disposal
- Gaseous waste disposal
- On-site (soils) incineration
- Other waste destruction processes
- Energy recovery
  - Calculating available energy
  - Municipal waste-to-energy calculations
  - Energy recovery equipment
- Air emissions
  - Particulate
  - Gases
  - Acid gases
  - Organics
  - Other emissions

**30 April 2009 (Thursday)**

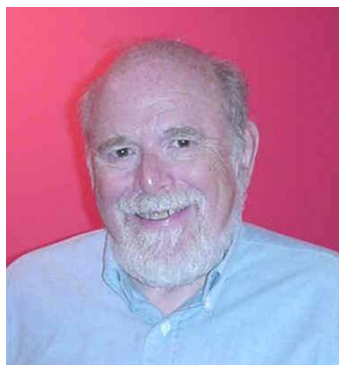
- Air emissions control
  - Inertial systems
  - Wet systems
  - Dust collection
  - Acid gas control
  - Organics control
- Flue gas calculations
- Air dispersion calculations
- Persistent Organic Pollutants (POPs)
  - Characteristics
  - Calculating destruction parameters
- Disposal in existing industrial processes
  - Industrial boilers
  - Cement kilns and other industrial processes
- Plasma arc technology
- Computer calculations of system parameters
  - Simulation of mass and heat balances
  - Comparison to manual calculations
- System and equipment suppliers
- Summary

**FREE BOOK**

## **Incineration System Handbook**

**(for every delegate  
who registers before  
30 March 2009)  
(Limited Copies  
Available)**

**Instructor: Mr. Charles Brunner**



The lecturer, **C. R. “Charles” Brunner** is the Principal Engineer with **INCINERATOR CONSULTANTS INCORPORATED** (<http://IncineratorConsultants.com>) in Ashburn, Virginia, USA, a suburb of Washington, DC.

He has over 40 years experience in the design, selection, evaluation, and operation of incineration systems and associated equipment. He has written 13 textbooks on waste disposal (his latest book has been translated into the Chinese language), and presents lectures on this subject throughout the world.

### **Registration Fee**

- 700 US\$ / Delegate (Before 15 March 2009)
- 850 US\$ / Delegate (After 15 March 2009)

The course fee includes training materials, lunch and refreshments.

**Group Registration:** If 3 or more than 3 delegates from the same organization, 10% discount will be offered on registration fee.

**Remark: Delegates are encouraged to bring along a laptop & calculator for the course**

Course Language: ENGLISH

Program Agenda: 09.00 am – 05.00 pm

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### Registration Form

*Instruction: Please fill all the information in English only*

Organization Name .....

Address .....

.....

Tel ..... Fax ..... Email .....

Contact Person ..... Tel ..... Email .....

#### Participant Names :

Participant 1: ..... Position ..... Email .....

Participant 2: ..... Position ..... Email .....

Participant 3: ..... Position ..... Email .....

Participant 4: ..... Position ..... Email .....

#### Registration Fee per Participant:

700 US\$ (before 15 March 2009)     850 US\$ (after 15 March 2009)

#### Payment Method

Cheque / Draft Payable to "TechnoBiz Communications Co., Ltd." payable on US Bank

Bank Transfer to    Bangkok Bank PCL, Ratchada-Latphrao Road Branch, A/C No: 177-0-70727-9  
A/C Name: TechnoBiz Communications Co., Ltd., Swift Code: BKKBTHBK  
*(Kindly make payment for all bank charges as well)*

Credit Card             Visa             Master Card

Card Number .....

Cardholder Name .....

Last 3 digits on signature panel ..... Card Expiry Date .....

Signature of Cardholder .....

Date .....

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**Please send completed registration form**

**TechnoBiz Communications Co., Ltd.**

No. 300/53, Lardprao Soi 35/1, Lardprao Road, Chandrakasem, Chatuchak, Bangkok 10900 THAILAND

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Website: www.technobiz-asia.com Contact Person: Ms. Saowalak, Coordinator