



THE HONG KONG
POLYTECHNIC UNIVERSITY



[C P D L E C T U R E]

Fire Resisting Construction: Passive or Active ?

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Science and Engineering
The Hong Kong Polytechnic University

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ORGANIZED BY

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Area of Strength:
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S P E A K E R

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□ I enclose a cheque of HK\$300 for the
registration for the lecture course on 28 April
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Date

28 April 2007 (Saturday)

Time

2.30 – 5.30 pm

Venue

Room FJ 303
The Hong Kong Polytechnic University

ABSTRACT

Fire resisting construction (FRC) elements are required to protect against flashover fires. Such construction elements are designed to provide an adequate fire resistance period under three design criteria, stability, integrity and insulation. FRC elements are classified as passive fire safety provisions and controlled under the FRC code in Hong Kong.

However, there are cases of attempting not to provide FRC elements due to many reasons. Active fire protection engineering systems are proposed to substitute FRC. A common example is to install drencher system in refuge floors, instead of providing FRC walls. Fire engineering approach has to be applied to demonstrate that the active system is of equivalent safety. There are, however, concerns on the calculation methods behind such approaches. Indeed, better understanding on thermal radiation is the key to an accurate calculation method. Updated models on thermal radiation have to be applied for studying post-flashover fires, radiative heat fluxes acting on the FRC element such as a fire shutter, and the radiation attenuation by the water curtain discharged.

In this talk, importance of thermal radiation in flashover fires will be introduced with the concept clarified. Application of a recently developed thermal radiation model in estimating the fire performance of FRC will be discussed. Examples on calculating radiative heat transfer for fire shutters and water curtains will be presented.

PROGRAM SCHEDULE

14.30 – 14.45	Registration
14.45 – 14.50	Welcome (Professor W.K. Chow)
14.50 – 15.45	Part 1 (Professor Walter Yuen)
15.45 – 16.00	Coffee break
16:00 – 17:15	Part 2 (Professor Walter Yuen)
17.15 – 17.30	Questions and answers

SPEAKER

Professor Walter W. Yuen
He is a Professor at the Department of Mechanical and Environmental Engineering at the University of California, Santa Barbara, U.S.A.

COURSE FEE

HK\$ 300 (HK\$ 150 for members of SFPE or IFE). Including all workshop papers and refreshments.