

**MINUTES**  
**TC 9-12 TALL BUILDINGS**  
**Tuesday, June 25th, 2013**  
**Denver**  
**Directors row (F), Sheraton Plaza Lobby**  
**3:30 PM to 6:00 PM**

- Call to order – 1:30 PM by chair Peter Simmonds
- Introductions
- Approval of Minutes – Dallas 2013(6,0, 0,CV)
- Chair's comments
- Membership – Mark Fly
  - Voting Members present for this meeting –
    - Peter Simmonds
    - Luke Leung
    - Dennis Wessel
    - Bill Webb
    - Ray Sinclair
    - Lyn Werman
    - Mark Fly
  - Voting Members not present
    - Dennis Alejandro (non Quorum), Oliver Baumann,
  - Guests: John Klote, Al Gold
- Research – Simmonds
  - RP-1659 taken off list
  - RTAR written by Len Damiano co-sponsorship of research on building pressurization control - We approved Co Sponsorship in Las Vegas. Peter to review with Mike Vaughn
  - RP-1478 under TC - 4.3 in progress but regarding pressure testing in tall commercial buildings including wind effects. Using blower door test. Funding was less than expected from Oakridge National Labs. Testing complete on 16 buildings, with the tallest 11 stories. Results were presented to TC4.3. Some buildings were LEED certified some were not. Preliminary results did not correlate with LEED, which may be due to loading docks, etc. Papers are scheduled.
  - ASHRAE has been requested to fund research proposed by IIT. The URP was discussed and the committee did not approve the proposal.

- TRP 1673, the revision of the HVAC Design Guide for Tall Buildings was discussed and representatives of CIBSE were present and offered to assist in areas outside of ASHRAE. CIBSE will co-sponsor and provide Plumbing and Electrical input. The committee discussed CTUBH providing input for climate data (wind and temperature), geographically and at varying heights.
- Webmaster – Mark Fly <http://tc912.ashraetcs.org/index.html>
- Program –
  - Wednesday, January 30, 11:00 AM-12:30 PM  
SEMINAR 69 (INTERMEDIATE)  
Recent Developments in High Rise Building Design  
Track: Large Building Design  
Room: Lone Star A4  
Sponsor: 09.12 Tall Buildings, 05.06 Control of Fire and Smoke  
Chair: John J. Carter, Member, CPP, Inc., Fort Collins, CO  
Tall buildings are getting taller. This seminar highlights emerging techniques that can be used to deal with HVAC and fire issues in tall, and taller, buildings. Topics range from basic principles to using elevators for egress and the mis-use and mis-understanding of stack effect pressures. The godfather of smoke control summarizes the contents of the new Handbook of Smoke Control engineering.  
Learning Objectives: 1. Understand at an overview level the contents of the new ASHRAE smoke control which book provides a comprehensive treatment of smoke control technology based on the latest research and advances in engineering practice. 2. Recognize the commonly held myths about stack effect. 3. Understand the potential advantages stairwell ventilation has over stairwell pressurization for tall buildings. 4. Realize that stack effect is not the only factor that will impact air flow in elevator shafts. 5. Recognize that the magnitude of forces other than stack effect can be dominating factors in creating problems in elevator operation. 6. Understand that elevators can be used for egress and be aware of the special features needed for such elevator use.
  - 1. Tall Buildings and the New ASHRAE Smoke Control Book  
John H. Klote, Ph.D., P.E., Fellow ASHRAE, Fire and Smoke Consulting, Leesburg, VA  
The new ASHRAE publication, Handbook of Smoke Control Engineering, provides a comprehensive treatment of smoke control technology and addresses fundamental concepts, smoke control systems and methods of analysis. This book has new material about controls, full-scale fire testing, and special inspection. Common myths about stack effect are discussed. Stairwell ventilation is a new concept that relies on dilution to maintain tenable conditions in stairwells during building fires. As an alternative to pressurized stairwells, stairwell ventilation has features that are beneficial for tall to buildings.
  - 2. It's Not Just Stack Effect – Latest Advances in Elevator Shaft Pressure Measurements  
Luke Leung, P.E., Member, Skidmore, Owings and Merrill LLP, Chicago, IL  
Often times stack effect is blamed for air movement in elevator shaft. In reality, elevator movement, elevator door sequencing, wind pressure, HVAC system pressure can all impact the pressure in an elevator shaft in high rise buildings to the point that elevator doors have problems closing. This presentation will provide actual measurements of the above in a super tall building to understand more regarding different magnitude of the forces and potential mitigation measures.
  - 3. Total Evacuation with Elevators?  
William A. Webb, P.E., Fellow ASHRAE, WEBB FIRE Protection Consulting, LLC,  
Brooksville, FL

Exiting in tall (>300 ft) buildings is a significant design challenge. Total evacuation of high-rise buildings (>75 ft) is generally to be discouraged; total evacuation in tall buildings has been unthinkable. The continued escalation of the tall building height and concern for extreme events has caused a re-evaluation of the need to provide systems that allow total evacuation safely of tall buildings. Designers logically turned to developing means for elevators to fill this role. This presentation will describe some of the systems that have been used for total evacuation by elevator and the factors to consider in such future cases

- New York – Tall Buildings Track that collates sessions relating to tall buildings.
  - Seminar 30: Current Trends in Tall Building Designs,
  - Seminar 39: Specific Engineering Solutions for Tall Buildings,
  - Seminar 40: ASHRAE and Tall Buildings,
  - Seminar 45: Life Safety Issues with Tall Buildings,
  - Seminar 46: Natural Ventilation for Tall Buildings,
  - Workshop 5: Is ASHRAE Tall Enough for Tall Buildings?
  
- Handbook
  - Handbook needs to be voted on next meeting.
  
- Old Business - None
  
- New Business
  - TC-5.6 funded a research project to link the program CONTAM to others to provide a better means of dealing with fire and smoke in tall buildings. NRC Canada is reviewing methods for pushing this forward.
  
  - What do we need to do to attract new members especially outside US?
    - Email local ASHRAE committees Re Tall Buildings
    - Invite YEA members
    - Liaison with CTBUH – Luke Leung
  - SFPE Design Guide for Tall Buildings – first draft completed
  - CTBUH Sustainable Guide for Tall Buildings

Adjournment – 5:00 PM.  
Submitted;

Peter Simmonds  
Chair  
TC-9.12