2010 Education Seminar

Wednesday, February 10, 2010

8:00a - 12:00pm

Common Misconceptions About Building Codes as They Relate to Cooling Towers

Dramatic changes have occurred in building codes and how they relate to cooling towers. Those writing cooling tower specifications frequently are behind in updating or specifying to meet current building code requirements. The intent of this presentation is to present the latest building code requirements and reflect on how there is little to no relation to older specifications.

Presented by: Jane Heuser, GEA Power Cooling Inc.

Jane's 30 year cooling tower career began in 1973 at Ecodyne Cooling Towers in Santa Rosa , California. She has both a BA (art, philosophy) and a BS (civil engineering) and is a registered Professional Engineer in California.

Jane currently works for GEA Power Cooling's Aftermarket Services Group, out of their Santa Rosa, CA office as a project engineer. Due to Ecodyne's acquisition by other entities, Jane has worked for Ceramic Cooling Towers, Balcke-Durr and SPX, serving over the years as a structural designer, project engineer, engineering manager, project manager and Qualifying Party for contractors licenses in several states.

Acceptance Criteria for FRP Composites to be Used in Cooling Towers

FRP structural materials arrive at a job site and the owner may require inspection of the materials to confirm their quality. To an untrained individual many FRP sections might be rejected for visual blemishes or a perceived flaw. This presentation will present some of the more common problems with the visual and physical appearance of an FRP structural piece that does not affect the structural performance of the part. In addition methods for repairing visual and structural defects will be presented, including long term storage and maintenance of materials.

Presented by: Thomas S. Wright, Bedford Plastics, Inc.

Mr. Wright is currently a Business Development Manager at Bedford Reinforced Plastics, Inc. (BRP) and is the primary market manager for infrastructure, power and military markets. He is responsible for designing, developing and marketing composite shapes for BRP. Mr. Wright started his employment at BRP on January 7th 1991. Prior to working for BRP, Mr. Wright worked for Creative Pultrusions Inc. in various capacities within the company. He has over 30 years of experience in the manufacturing and sales of composites and is an active member of CTI, ACMA and SAMPE.

Load and Resistance Factor Design (LRFD) or Pultruded Fiber Reinforced Polymer (FRP)

LRFD incorporates state-of-the-art analysis and design methodologies with load and resistance factors based on theknown variability of applied loads and material properties. These load and resistance factors are calibrated from actual FRP statistics to ensure a uniform level of safety. Even though FRP composites are widely accepted in the cooling tower industry no nationally recognized building code lists them as an accepted building component. The purpose of LRFD is to create a nationally recognized code for FRP composites. This presentation will present the methodology for achieving this goal.

Presented by: Dustin L. Troutman, Creative Pultrusions, Inc.

Dustin L. Troutman received his BS in Civil Engineering Technology from the University of Pittsburgh located in Johnstown, Pennsylvania, in 1993. He currently holds the position of Director of Marketing and Product Development for Creative Pultrusions, Inc., (CPI) located in Alum Bank, PA. Dustin also oversees Quality Control and the sales of Utility Products including distribution poles and cross arms. Dustin has been instrumental in the development of major pultrusion products and product lines. He holds four patents related to pultrusion systems. He has been involved in sales, marketing and engineering for fifteen years at CPI. Dustin is a member of ASCE and is currently the President of the Pultrusion Industry Council.

CTI ESG-152 Structural Design of FRP Components

An in depth look at ESG-152 and how it is used. Service factors, temperature reduction factors, live and dead loads and how they are used in cooling tower design. When used properly ESG-152 can be an excellent source for writing specifications as it relates to an FRP cooling tower structure. This paper will explain and show examples of how ESG-152 is used.

Presented by: Thomas G. Toth, P.E., Midwest Towers, Inc.

Tom graduated 1977 with a BS in Architectural Technology from The New York Institute of Technology. He has also received a Masters of Administration Degree in Industrial Management in 1984 from Lynchburg College and is a Licensed Professional Engineer registered in Virginia, New Jersey, Colorado and Nebraska.

He has 18 years experience in Consulting Engineers offices, 4 years as an Engineer for a major Structural Steel Fabricator and 10 years as an Engineer for Cooling Tower companies.

Currently the Senior Structural Engineer for Midwest Towers, Inc.