ASHRAE Hawaii Chapter – September 9, 2010 (Thursday)
Main Program
The Willows Restaurant (starting at 5:30 pm)

Main Topic: Variable Primary Flow Chilled Water Systems

Imagine if you will: you're sitting in a beautiful park enjoying the shade as you scan the bright blue ocean and feeling the cool breeze. Your heart rate is about 65 beats per minute (bpm) as you sip your favorite beverage and doze intermittently, reading an interesting paperback book. Then, you hear something that catches your ear but you're not quite sure what it was. Your heart begins to beat at 80 bpm. You sit upright and look around to see what caught your attention and woke you from your stupor. As you stand up to get a better view, your heart picks up pace and is now 90 bpm. A sharp piercing warning grabs your attention and you spot someone pointing directly above your head. As you quickly look upwards, your heart speeds up to 100 bpm when you spot the hornet nest and the angry hornets just starting to come out! A Frisbee lies next to your chair and tells you the whole story: someone's hit the nest and now the hornets are coming after you! You grab your car keys and bolt for the parking lot hoping to make it to your car before the hornets can start their stinging attack! It's only 40 yards away and your heart rate is now 120 bpm, pumping blood and oxygen needed by your muscles as you race for your car. As you reach your car and fumble for the right key, you feel the first hornet land on the back of your neck as others buzz angrily around your head. Your racing heart is now pumping at 140 beats per minute…any second now you'll feel the first sting that will push venom into your blood stream and begin the painful decomposition of tissue…another fraction of the second, you'll have the key in the lock and can jump in to safety…just another…OWWWW..!

Breathe…it's only a story…

Like your body, a building has a heart and it's called the chilled water pump. During low occupancy loads when there's minimal need for cooling, do your pumps still move maximum chilled water? When the load is at peak, are your pumps pushing enough chilled water? What happens if your heart were constant speed in the story above? Now you know why variable primary pumping makes a lot of sense.

Join us and hear ASHRAE's Distinguished Lecturer, Dr. William Bahnfleth, PE, talk about the benefits of Variable Primary Flow Chilled Water pumping. Dr. Bahnfleth is not only a professor at the Pennsylvania State University's (aka Penn State) Department of Architectural Engineering, he's the Director of Indoor Environment Center. His experience and expertise is wide range and well documented in over 100 publications including 11 books and he has received the ASHRAE Distinguished Service and Exceptional Service Awards. Dr. Bahnfleth currently fills the office of ASHRAE Society Vice President and is an ASHRAE Fellow. He has contributed to ASHRAE as a Student Branch Advisor, Chapter Governor, Technical Committee and Standing Committee Chair Person, and as a Director-at-large. In addition to his service to ASHRAE, he holds membership in several other professional organizations including the American Society of Mechanical Engineers (ASME), Sigma Xi, the American Society for Engineering Education (ASEE), and the Society of Building Science Educators (SBSE).

Mini-Tech Session Topic: Air Flow Control Valve and Accessories

Do's and Don'ts

And don't forget about our mini-tech session that kicks off the meeting. We're happy to host Mr. Rafael Sabia, Western Regional and Pacific Rim Sales Manager, Tek-Air Systems, Inc. His talk on air flow control valves with cover the following topics:

- Low Pressure Drop by Design
- Static Pressure Reset
- Air Flow Measurement

With his many years in the controls industry, his talk will be sure to include useful and helpful insights to make your next project a successful one.

We return to the serene Willows Restaurant in Moiliili (901 Hausten Street) for the September Chapter meeting. **Keep reading our newsletters because our meeting will move from time to time and you don't want to miss a single one of them!**