

FANTASTICS

A Quarterly Industrial Ventilation Newsletter

Third Quarter 2013

Company News

- **UNITED ENERTECH** announces the largest plant expansion in corporate history doubling the size of their louver and damper manufacturing plant. The following outlines new development for many product lines.
 - A) Blast Resistant Weather Louvers.
 - B) Stand Alone Air Measuring Stations.
 - C) Wood Truss Fire Dampers.
 - D) Fire & Smoke Dampers.
 - E) Architectural & Sunshade Louvers.
 - F) ISO-9001 Certification.
 - G) Duct Silencers & Sound Attenuators.
 - H) AMCA Damper Testing.
 - I) Combination Weather Louvers, Blast Dampers, & FEMA Grills all in a singular product.
 - J) Combination Horizontal Front Blade & Vertical Rear Blade for wind driven rain, water penetration, & air performance AMCA testing

Company News

- **BERNER INTERNATIONAL CORPORATION** announces that powered air curtain tests performed by the Air movement & Control Association (AMCA) save more energy than they consume. This testing followed up a comparison between installing air curtains over entry doors instead of constructing expensive vestibules. The International Construction Code (IgCC) now includes air curtains as alternatives to vestibules.
- **HARTZELL AIR MOVEMENT** will be introducing IEC metric, marine axial fans with variable pitch propellers in the next few months.
- **TAMCO** introduces a new salt water design, horizontal, jack shaft for all series 1000, 1500, 1400, & 9000 dampers. Tamco manufacturers high end dampers that provide a very tight closure and a very long life expectancy. Tamco dampers are the only manufacturer approved by the University of Florida for greenhouse isolation for young citrus trees.

Technical Tidbit

A manufacturing plant has an average indoor temperature of 100°F on a day that the outside shade temperature is 85°F. This plant has 3-48"Ø wall propeller fans, each exhausting 25,000 CFM installed in such a fashion that all of the plant air movement is uniform throughout the plant. The heat gain within the plant incorporating the heat load can be calculated by the following formula:

$$\text{CFM} = \frac{\text{BTU/Hr}}{1.085 (\Delta T)}$$

$$75,000 = \frac{\text{BTU/Hr}}{1.085 (15)}$$

$$\text{BTU/Hr} = 1,220,625$$

The same formula can be used to determine the additional airflow needed to bring the indoor to outdoor temperature differential down from 15°F to 7.5°F.

$$\text{CFM} = \frac{1,220,625}{1.085 (7.5)} = 150,000$$

The additional flow required would be 150,000 less 75,000 or 75,000 CFM.

V E N T I L A T I O N S P E C I A L I S T S , I N C .

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