

February 2018, Q1

Project Spotlight

Tenaska Westmoreland Generating Station

EvapTech recently completed a 14-cell back-to-back *FM Approved Series ES* Counterflow Cooling Tower under contract with Black & Veatch for the Tenaska Westmoreland Energy Center in Smithton, PA. The 925 MW combined cycle plant is scheduled to begin commercial operation in late 2018. EvapTech continues to the lead the way with FM Approved products in the power market, with the Westmoreland tower being the largest fiberglass framed FM Approved tower in the world! The Series ES tower provided a unique solution for Tenaska , an FM Insured company. The Series ES does not require a fire pro-



tection sprinkler system, thus saving Tenaska infrastructure and life-cycle costs related to sprinkler system maintenance. One of the key features of the Series ES is EvapTech's Fire Stop partitions, which contains the fire to the cell of origin. The tower was also outfitted with special sound suppression features to meet strict



plant boundary noise limits.

EvapTech safely completed the project on time, having ZERO recordable incidents during the 25,000 man-hour tower erection.



In This Issue

- From the Corner Office
- Employee Spotlight: Dan Reith
- Tech Tidbit: Winter Operation and Motor Overamping
- Rep Spotlight: Sys-Kool
- Industry Update: CTI STD-202
- Featured Projects: University of Pennsylvania, Mid-America Louisa

From the Corner Office



The view from the corner this issue comes as the spring rush is in full bloom. EvapTech has been entrusted by our customers with many important projects this spring and we fully

intend to delight them with successful outcomes.

A look through this issue also highlights EvapTech's commitment to Research Powered Solutions. Our Series ES FM Approved product line being economically scaled to offer our power customers the benefits long enjoyed by HVAC users is a rewarding outcome of these efforts. Combined with our exceptional CTI third party test results makes this a one-two punch for our R&D Solutions. Take care, warmer weather will soon be upon us and EvapTech will be there to support your cooling needs.

Don Dobney

President, EvapTech, Inc.

Technical Tidbit

Winter Operation & Motor Overamping

Cooling tower fans are constant volume machines designed to provide consistent air flow, no matter the atmospheric conditions, when operated at full speed. Driving these fans are electric motors which are sized and rated to provide a maximum power output at a given atmospheric condition, typically 40C (104F), and rated at a corresponding nameplate amp draw. These two facts appear to be at odds when the ambient temperature is seasonally reduced, air density naturally increases, the fan is providing additional work, and full speed amp draw increases proportionately.



Fortunately electric motors are heat rated devices. While it is true that a maximum nameplate amp is provided for the motor, this same nameplate also recognizes that the limit is based upon the atmospheric temperature in which the motor operates. In the case of a field erected cooling tower the motor is located outside of the fan cylinder in the open atmosphere which is experiencing the same reduced temperature. The result is that the totally enclosed fan cooled electric motor is fully capable of operating without a reduced anticipated life expectancy up to the typical 15% "overamp" during the most severe winter operation. Bottom line - Electric motors are not "overamping" at all when operating in reduced atmospheric temperatures even when driving the fan at full speed.





both Marley and Kiewit. He grew up on a farm in North Central Kansas near Linn and graduated in 1985 from Kansas State University with a degree in Civil Engineering.

Employee Spotlight

Dan Reith

Engineering Manager

If you have received a recent email from Dan, you have seen that he has a number of Professional Engineering licenses, 16 in the US and 1 in Canada.

Dan, his wife Kim, and their two daughters, Evelyn and Lydia, live in Platte City, MO where they keep busy with the girl's various activities. Dan enjoys following K-State athletics and was also a member of last year's Corporate Challenge Gold Medal Volleyball team.

Sales & Marketing News

Rep Spotlight: Sys-Kool

Sys-Kool was founded in 2002 by Rick and Sue Hollendieck in Omaha, Nebrasaka. They've been an EvapTech representative since 2005 (the 1st EvapTech representative) and part of the EVAPCO family since 2002. Sys-Kool was the top sales office for EvapTech



during the first 5 years of business. Sys-Kool has grown considerably over the past decade and a half and now employ 55 people throughout the Midwest with offices in Denver, Kansas City and their headquarters in Omaha. They represent EvapTech in the HVAC and ethanol markets for all of Colorado, Wyoming, Kansas, Missouri, Iowa and Nebraska as well as the power generation market in Iowa and Nebraska. In addition to their sales staff, a large part of the Sys-Kool team is dedicated to their exemplary EVAPCO Mr. GoodTower services and EvapTech cooling tower erection and repair personnel. Whatever your cooling tower needs, large or small, Sys-Kool is anxious to answer the call. They have been an instrumental part of EvapTech's success and we are delighted to have them as a representative and a labor partner.

Industry Update

CTI STD-202 Thermal Performance Standard—Updated for 2018

Thermal Performance Matters and the latest CTI STD-202 results show just how striking the gap has become between EvapTech and the rest of the industry. CTI recently released its latest CTI STD-202 Thermal Performance Standard and EvapTech continues to have an unblemished record. Since the program's inception in 2013 <u>all EvapTech towers tested</u> <u>under the program have passed at 100% or better</u>! We are obviously very proud of this achievement and it gives our customers extra peace-of-mind when choosing to buy EvapTech.

This year, CTI has added a 4th column to reflect the results from the entire industry. Those results show all towers only passing 62% of the time, with almost 20% of all towers testing at less than 95% capacity. Since the 62% that do pass include EvapTech, SPX and CCS towers, that means that <u>over half of all others' towers are failing tests</u>.

We applaud our co-participants SPX and CCS for their commitment to fully rated cooling towers, and encourage the rest of the cooling tower industry to step up their game and join us. CTI STD-202 clearly shows that there is a real difference

between cooling tower companies. If you want your cooling tower to meet performance, BUY EVAPTECH!

				the previous year
Testing during the Period: 8/21/2013 to	08/16/2016 10/26/20	013 to 10/18/2016	05/20/2015 to 08/30/2016	2015
Percentage of tests N. at or above 100% Capability	A.	100	60	62
Percentage of tests N. at or above 95% Capability	Α.	100	100	82
Average Capability of tests N. below 95% Capability	A.	None	None	89.4
Average Water Flow Rate N.	Α.	74,059	108,282	58,583



Featured Projects

University of Pennsylvania

EvapTech recently completed work on the Module 7 Utility Plant cooling towers at University of Pennsylvania in Philadelphia, PA. Mobilization occurred within two (2) weeks of award and the scope consisted of a complete fill, drift eliminators, and fan deck replacement of eight (8) of the twelve (12) cells in an eight (8) week schedule. The existing tower was on top of a building which was itself within a barrier wall. Despite these obstructions and the discovery of heavily fouled fill, the crew completed the work safely and on-time. The extensive experience of EvapTech's construction management and field personnel allows for uniquely creative solutions to site and schedule obstacles.





Mid-American Louisa Generating Station

EvapTech recently completed a fill repack for the Louisa Generating Station located in Muscatine, Iowa. The Zurn round concrete counterflow tower, installed in 1993, consists of a twelve (12) cell fan arrangement. In addition to a complete fill replacement, work consisted of a drift eliminator replacement, distribution cleaning w/nozzle replacement, circulating screens repairs, and various exterior concrete repairs. The cooling tower was safely completed with an on-time completion schedule. The tower fill replacement comes with a full thermal guarantee with a performance test scheduled for 2018.

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