GULF COAST SECTION

TAPPI people resources solutions™ & TAPPI SE SOUTHEASTERN

WELCOME YOU TO ATTEND & PARTICIPATE IN:

"KILNCON 2017"

The preeminent event:
Gathering experience and skill combined into workshops, technical sessions and social opportunities for anyone & everyone involved with Lime Kilns

Wednesday & Thursday
AUGUST 30 & 31, 2017
GEORGIA TECH
SAVANNAH CAMPUS
210 Technology Circle, Savannah, GA

CONTACT GLENN HANSON FOR MORE INFO
ghanson@industrialkiln.com
Cell 502/338-5487

SEE ATTACHED FOR AGENDA & DETAILS

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WORKSHOP SESSIONS

WEDNESDAY, AUGUST 30, 2017

WORKSHOP #1 - 9:00AM -12:00PM
LIME KILN – PROCESS & OPERATIONS/"Keepin' it 'tween the ditches"

WORKSHOP FACILITATOR:

- *GLENN HANSON, Technical Sales, Industrial Kiln & Dryer Group, Louisville, KY*

Present and facilitate discussions on lime kiln process & operations

Preliminary Agenda

- ***The Lime Kiln Process***
- ***Types of Kilns***
- ***Combustion & Heat Transfer in the Lime Kiln***
- ***Different Fuels & the effects on Lime Kiln Operations***
- ***Lime Kiln Chain Systems; purpose, design & concerns with operations***
- ***Basics of Lime Kiln Refractory; selection, performance & effects on operations***
- ***Improving Lime Kiln Efficiency; basic optimization & major projects***
- ***Lime Kiln Quality Considerations & Related Process Concerns***
- ***General Guidelines for Lime Kiln Operation***

12:00 – 1:00 PM - LUNCH (Provided by Southeastern TAPPI)

WORKSHOP #2 – 1:00PM – 4:00PM
LIME KILN MAINTENANCE "As the kiln turns & keeps turning"

WORKSHOP FACILITATORS:

- *JP ASPINWALL, Sales Manager, A-C Equipment Services Corporation, Milwaukee, WI*
- *GLENN HANSON, Technical Sales, Industrial Kiln & Dryer Group, Louisville, KY*

Two gentlemen from distinguished & experienced kiln service companies will share their knowledge & discuss maintenance concepts to maintain the lime kiln.

Preliminary Agenda

- ***Basic Lime Kiln Mechanical Design***
- ***Tires/Riding Rings, Carrying/Support/Trunnion Rollers, Bearings***
- ***General Lime Kiln Inspections; Daily, Monthly, Annually***
- ***The Importance of Kiln Alignment***
- ***Ovality; what is it & why is it critical to monitor***
- ***Lime Kiln Drive Systems***
- ***Lubrication***
- ***Other General Lime Kiln Maintenance Concerns; Chain Systems & Refractory***

6:00 - 7:00 PM – Reception & Social Hour (Location to be announced)
7:00 - 9:00 PM – Dinner/Business Meeting (Location to be announced)
(All paid attendees, paid guests, and speakers are welcome at the dinner – Location TBD)

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TECHNICAL SESSIONS

THURSDAY, AUGUST 31st, 2017

8:00 – 9:45 AM TECHNICAL SESSION 1

Overview of Recausticizing Operations

JOHN JOHNSON – Product Manager, Valmet, Norcross, GA

Any experienced chef will tell you, the best quality ingredients are necessary to make the recipe work. To make good white liquor & have the least problems in recausticizing, it is essential to have clean green liquor, high quality reburned lime & good causticizing control. This presentation will cover these topics and relate the importance of each step & the equipment involved in the recausticizing process. John Johnson with +25 years in this process area, a true "Recaust Ranger" will discuss green & white liquor handling in both sedimentation & filtration based systems, lime mud & dregs filtration. Included will be functional descriptions, current sizing standards and troubleshooting problems in recausticizing operations.

"Mill Study on Increasing Lime Kiln Efficiency"

JOHN DEJARNETTE – R&D Sr. Researcher, WestRock Corporation, Richmond, VA

Optimization of the lime kiln requires a review of the entire lime cycle. To increase the energy efficiency of the kiln, all auxiliary unit operations must function properly. It is also imperative that the lime & liquor in the system is of acceptable quality. We detail a kiln energy efficiency study performed at the WestRock Covington, VA mill. From a recausticizing standpoint, lime quality is much easier to control than liquor quality because liquor passes through many operations that are not under the lime kiln operator's control. Recausticizing is a fairly closed cyclical process where lime is concerned, so saturation of impurities to the point of operational issues must be considered. Specific cycle performance indicators (e.g.; lime mud solids entering the kiln) must be viewed from a perspective that does not exclude their potential impact. To get a true picture of the cost of operating the lime cycle, all inputs must be considered. The four main inputs are; power, (electrical & fuel), fresh lime, caustic & water. Process engineers can use this detailed troubleshooting approach to help optimize various parts of a mill.

9:45 – 10:15 AM - BREAK

10:15 – 12:00 PM TECHNICAL SESSION 2

"High Efficiency Cyclone System – A Mill Case Study"

TODD LEWICK – Project Manager, Andritz, Roswell, GA

This presentation will present a mill case study describing a project where a high efficiency cyclone system was installed on a kiln. This case study is a follow up to a paper presented at the 2016 TAPPI Peers meeting where the theoretical basis was presented for increasing kiln efficiency and capacity by installation of a properly designed high efficiency cyclone system to encourage kiln internal dust recycle. Mill operating data and operational experience is presented showing the "real world" benefits that can be obtained when a properly designed cyclone system is installed.

"Coosa Pines Lime Kiln Vertical Discharge and Dust Collector Retrofits"

GREG ANDRIJESKI, Operations Coordinator, Utilities, Resolute Forest Products, Coosa Pines, AL

Presented by: GLENN HANSON – Industrial Kiln & Dryer Group (IKD), Fort Payne, AL

Coosa Pines developed and implemented this project due to the inability to operate the kiln a minimum of twelve continuous weeks. During the very short lead time of the project implementation, the team developed a total solution to eliminate the need of six week outages to clean the Kiln duct work. This presentation will cover how we choose the solution, the solution and results.

"Increasing Lime Production while Decreasing Kiln Pluggage through the Installation of the First LimeFlash^{TM} Lime Kiln Feed System in North America"

PETER HART - Director: Fiber Technology and Innovation, WestRock Corporation, Richmond, VA

Presented by: KIMMO PELTONEN - Product Manager, Andritz, Roswell, GA,

The Evadale, TX mill recently engaged in a major lime kiln and recausticizing upgrade. The centerpiece of the project was to upgrade the existing lime kiln feed system to a new LimeFlash^{TM} feed system supplied by Andritz. The feed system in Evadale, is the first installation in North America and the second installation in the world. The feed system increased the capacity of the LMD fed kiln from 350 TPD of lime product to 480 TPD of kiln product with less than 3% carbonate. The system mixes hot flue gasses with the lime mud before the gas enters the feed end housing, which allows the kiln to operate with a higher feed end temperature without plugging and lime splitting. At start-up and low capacity situations lime mud is fed directly into the kiln rotating part which eliminates potential plugging problems. Start-up and operational experience, along with selected environmental performance is reviewed.

12:00 – 1:00 PM - LUNCH (Provided by Southeastern TAPPI)

1:00 – 2:30 PM TECHNICAL SESSION 3

"Design and Performance of Chain Systems in Rotary Kilns Used to Regenerate Lime in the Pulp and Paper Industry"

PETER GORAG – Principle, Houghton Cascade Holdings, LLC., Auburn, WA

As with any heat exchanger, it is the heat transfer surface area that is the most important aspect of chain system design. Increasing the chain surface area always lowers the heat rate while at the same time increasing the gas temperature at the hot end of the chain section. In addition, increasing the density of the chains lowers the gas temperature at the hot end of the chain section. In the end, it is a combination of the area, chain density and economics that determine the amount of chain that can be effectively hung in the kiln. This presentation will discuss how the fuel type, mud moisture, excess air, shell heat losses, and other operating parameters impact the optimum design of the chain system for a given kiln.

"**Pokin', Chokin', Shootin' & Shutdowns – REVISITED – Where Are They Now?**

GREG PARTEN, P/R/U Day Forman, WestRock Demopolis, AL

This presentation will review common causes and contributing factors to kiln build-up. Often kiln internal buildup must be removed as it limits production &/or the excessive loading effects the kiln mechanical operation. Several mills with chronic issues have recently looked at more unusual areas &/or have pushed for trials to demonstrate primary causes, data & information on the areas looked at and trials will be presented. Initial information was presented at the GCT Meetings in Demopolis in February & June of 2013. Mill personnel will return with updates on their work to reduce kiln build-up issues and the associated operational problems & costs.

"**Lime Kiln Ring Mitigation Utilizing Non-Detonating CO_2 System**"

TOM SPAITS - Vice President, ATD Power Gas Systems, Charleston, SC

Ring formation occurs in the rotary kilns used by the pulp and paper industry to regenerate the lime. The presence of rings can restrict the movement of material through the kiln. Even if the root cause of ring formation is known, from a practical standpoint, it can be difficult to eliminate rings. In mills where ring formation is a recurring problem, mechanical ring removal systems should be considered. This paper describes the use of ring removal systems as a cost-effective way to mitigate the problems associated with ring formation.

2:30 – 2:45 PM - BREAK

2:45 – 4:15 PM TECHNICAL SESSION 4

"Modelling Techniques Used to Examine Fuel-Air Mixing in the Kiln – Effects on Lime Kiln Operations"

GLENN HANSON, Sr. Kiln Specialist, Kiln Flame Systems (KFS), High Wycombe, U.K.

The majority of combustion processes are controlled by fuel-air mixing. Rotary lime kilns, unlike power boilers, rely on the design of the burner momentum to control and optimize the fuel-air mixing and hence heating profile within the kiln. There are however a number of air flow factors which can impact on the combustion process in rotary kilns detracting from optimized performance and potentially leading to refractory damage and ring formation. This presentation describes the two modelling techniques and how they have been practically used to resolve aerodynamic issues to optimize rotary kiln operations.

"Selection & installation of Lime Kiln Refractories"

MILES MOHNKERN, VP Technical Sales & JASON PHILLIPS, Technical Account Manager,
Thorpe Plant Services, Inc. Hueytown, AL

Types of material, availability, strength & insulation factors, performance experiences & installation time all play an important role in the selection of lime kiln refractories. Proper installation is critical to overall performance & lifespan of refractories. This presentation from a supplier/installer perspective will cover these key topics

"Selection of Lime Kiln Refractories to Balance Cost and Efficiency"

PETER GORAG & RAY LEARY – Principles, Houghton Cascade Holdings, LLC., Auburn, WA

Kilns used to regenerate lime in the Kraft process are highly energy intensive. Due to the dramatic decline in the price of natural gas over the last decade, in combination with mounting pressures to increase production of existing assets, many mills are currently focusing more on increasing uptime and capacity as opposed to energy savings. This paper presents provides recommendations to aid mill personnel in the design of optimized refractory linings for specific situations.

MEETING OFFICERS

Meeting and Session Chair: Glenn Hanson, Industrial Kiln & Dryer Group, (502) 338-5487, ghanson@industrialkiln.com

Local Arrangements:

HOTEL INFORMATION:

Primary Hotel:
Residence Inn by Marriott
Savannah Airport
900 Towne Center Blvd, Pooler, GA
(912) 988-1433

Mention **Southeastern TAPPI,**
Ask for **TAPPI KILNCON ROOMS &**
reference **"Carl Fisher/Jedson Rate", $110 + Taxes & Fees**
Hotel reservations should be made directly by calling Residence Inn ASAP

Other Area Hotels;

Fairfield Inn
10 Stephen S Green Dr, Savannah, GA 31408
(912) 965-9777

Hampton Inn & Suites
70 Stephen S Green Dr, Savannah, GA 31408
(912) 966-1240

Hyatt Place
4 Stephen S Green Dr, Savannah, GA 31408
(912) 966-0020

SUPPLIERS / VENDORS Note:

CONTACT Southeastern TAPPI* For *SPONSORSHIP & TABLETOP DETAILS

TappiSoutheast@Gmail.Com
Carl F. Fisher, SE Local Section Chair

MEETING PARTICIPATION FEE:

Registration (TAPPI Member-mill)*	$80
Registration (Non-Member-mill)	$90
Registration (TAPPI Member-vendor)*	$100
Registration (Non-Member - vendor)	$110
Guest (Dinner)	$25
Supplier Speaker	$50
Student	$10
Retired	$30
Mill Speaker	No Fee

* **rate applies to members of national TAPPI**
***** three (3) or more attendees from the same plant site will receive a $20 discount from the listed fee**

Professional Engineers: PDH Certificates will be available on request

SUPPLIER SPONSORSHIP RATES:

Gold Level Sponsorship**	$400
Silver Level Sponsorship**	$250
Bronze Level Sponsorship	$100

**** Includes option for tabletop; requires one member from the Supplier to also register for technical program**

PayPal will be used for registration in advance or at the conference door. Details to be provided in next update.

TAPPI'S ANTITRUST POLICY STATEMENT

The Technical Association of the Pulp and Paper Industry, Inc. is a professional and scientific association organized to further the application of the sciences in the pulp and paper industry. Its aim is to promote research and education in the practice of pulp and paper manufacture. TAPPI is not intended to, and may not, play any role in the competitive decisions of its members or in any way restrict competition in the pulp and paper industry.

Please note that TAPPI policy prevents the scheduling of business or social activities between and among participants during times of scheduled functions.

SOUTHEASTERN TAPPI 2017 TECHNICAL PROGRAM

"KILNCON 2017"

Operations, Maintenance & Repair of Lime Kilns

ON-SITE REGISTRATION/APPLICATION FORM

Please Print or Type

Name:	**Title:**	**Name for Badge:**
Company:		
Address:		
City:	**State:**	**Zip**
Work Phone:	**Cell:**	**Email:**
National TAPPI Member? Yes / No	**Category:** Mill / Supplier / Consultant / Educator / Retired / Student	

Plan to attend ***Wednesday, August 30th Work Shops (no charge):*** ***( )no ( )yes***

Payments ***for Thursday, August 31st Technical Session:***

___Technical Session, Mill & Educator *	8:00 AM-5:00 PM			$80***
___ non-TAPPI Mill Person, Educator	8:00 AM-5:00 PM			$90***
___Technical Session, Students	8:00 AM-5:00 PM			$10
___Technical Session, Retired	8:00 AM-5:00 PM			$30
___Technical Session, Supplier & Consultant *	8:00 AM-5:00 PM			$100
___ non-TAPPI Supplier, Consultant	8:00 AM-5:00 PM			$110
___ Speaker (mill representative)	8:00 AM-5:00 PM			$0
___ Speaker	8:00 AM-5:00 PM			$50
___ Gold Level Supplier Sponsorship**	Tabletop: yes	no	(circle)	$400
___ Silver Level Supplier Sponsorship**	Tabletop: yes	no	(circle)	$250
___ Bronze Level Supplier Sponsorship				$100
___Guest Dinner	Wednesday Evening			$25

* **rate applies to members of national TAPPI**
**** tabletop requires one member from the Supplier to also register for technical program**
***** three (3) or more attendees from the same plant site will receive a $20 discount from the listed fee**

TOTAL FEES PAID **$**_____

If bringing a guest please provide name for a badge:	

Will you attend the Wednesday evening dinner/business meeting? _____No _____Yes (need count in advance)

Payment Options:

Check___ Credit Card___

With our new credit card processor, it is not necessary that you provide this information in advance. Major credit cards will be accepted on site.

PLEASE NOTE: completing this form and submitting in advance will ensure that you are in the database and facilitate a speedy registration on site. It also *significantly* helps our planning (lunches, room accommodations, etc.) greatly. There is no penalty if you need to cancel at the last minute.

PLEASE fax to Carl Fisher at (912) 748-0052 or scan/e-mail this page at any time to:

TappiSoutheast@gmail.com

to expedite your registration & assist us with the overall meeting planning. You only need make payment on site & may cancel at any time without penalty. PayPal information will be provided for advanced payment in next update.