AC drives-. C. DRIVES



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| Newsletter of the Baton Rouge Section of the Institute of Electrical and Electronics Engineers, Inc. March, 2016 |

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**Branch Counselors**

LSU- Dr. Choi

SU – Dr.Henton

# Chairman’s Message

At the February meeting there were thirty-eight people in attendance, twenty-one were IEEE members, five were IAS members, and twelve were quest. The presentation was given by Mr. Todd Thompson with YASKAWA on Low Voltage-Harmonic Distortion Attenuation. A. C. drives can cause issues due to harmonic distortion of input power. As a result on non linear current draw will cause over heating of motors and cables and which can results in inaccuracy in your metering of the loads being served at your site. A large amount of non linear loads will result in these problems. However, there are solutions to reduce these problems. There are three methods which can be used to reduce harmonic distortion problems. The least expensive solution is the D. C. link reactor. This is followed by the harmonic filter which in the mid range price. The most efficient and has the highest cost is the matrix converter. You will need to evaluate the solution that would best serve your particular problem.

Your RSVP for the meeting is important, please RSVP. We appreciate if, when signing up, you mark if you are an IEEE member including if you are an IAS member or not a member. A lot of you are doing so and we appreciate your help. This makes it easier for my book keeping which I have to report on each year. If you are not a member, that is not a problem. We will not be forcing you to join, and we can show you some benefits that will help you in your professional career. Anyway, we appreciate everyone who attends the meetings.

**Our Next Meeting Will Be At**

**Ralph &Kacoo’s**

**6110 Bluebonnet Blvd. Date Second Thur. Each Month**

Just South of I-10, across from the Mall of Louisiana.

**UPCOMING AGENDA**

* Mar 10, 2016 Piller Rotary UPS
* Apr 14, 2016 Medium and High Voltage Cable Restraints
* May 12, 2016 Arc Fault Mitigation Technologies

**Other Sections Meetings and PDH opportunities**.

Visit the Louisiana Engineering Society (LES) web page for additional chances for PDH’s at the website listed: [www.LES-STATE.org](http://www.LES-STATE.org)

LES Training: Life Safety Code Seminar - March 18, 2016 - Baton Rouge, LA

A Tulane Engineering Forum on Friday, April 15, 2016 from 8:15 a.m.- 5:00 p.m.

at the New Orleans Convention Center.8 PDH Credits, including 1 Ethics Credit

use link to register. Tulane Engineering Forum teforum=tulane.edu@mail64.suw11.mcdlv.net or contact me for email copy.

Thanks,

**O. J.**

Section Chair

### MEETING NOTICE

Date: **Thursday, March 10, 2016** Time: Social……….......…...6:00 P.M.

Place: **Ralph &Kacoo’s** Dinner ($20.00 members/

**6110 Bluebonnet Blvd.**  $30.00 non-members)

Speaker Presentation .......…6:30 P.M.

**CONTINUING PROFESSIONAL DEVELOPMENT**

##### Joint meeting IAS & IEEE Professional Presentation

**Stabilized Co-Generation**

**An exercise in “How To”**

# ABSTRACT of PRESENTATION

Recent technological advances in natural gas production have reduced the price of natural gas dramatically, and along with coming EPA regulations, and growing grid instability, is likely to spur an increase in demand for natural gas fired co-generation systems. These systems have been around for some time now, but have been limited to applications where they can remain connected to the grid, even in times of instability on the grid, and only provide a constant level of power known as the “Base Load”. Among the reasons for focusing on the Base Load is the fact that the transient response of these generators to step and block loads is poor, and in order to get the greatest efficiency out of the plant, it needs to be running at or near its top capacity. It is becoming more and more important to expand the application of these systems beyond the Base Load and start servicing the total load. In order to do that, there first must be a practical means of compensating for the poor transient response of these systems. The effective application of Newton’s First Law of Motion to highly reliable Rotary Uninterruptible Power Systems promises to provide the stability and power quality required to overcome this challenge. By utilizing bidirectional inertial energy storage systems in concert with highly reliable synchronous machines, a high degree of stability can be achieved in both frequency, and voltage, harmonic mitigation and power factor correction, even in the presence of significant reactive step loads. This program will explore how these systems function, and how to deploy them into either a grid connected or island environment.

# BIOGRAPHICAL DATA of PRESENTER

Mr. K.A. “Bud” Leavell originally trained in Electronics Engineering (BEET World College), Bud enjoyed a successful career in the Electronics, Computer and Telecommunications Industries serving in such capacities as Systems Engineer, Software Engineer, Applications Engineer, and in various executive sales positions. In 2003, Bud made a career transition to the mechanical field as Sales and Service Manager for a large mechanical contractor, then moved to the position of Territory Manager for Carrier North Texas. From April of 2008 until May of 2013, as a Sales Engineer for Yazaki Energy Systems Inc., Bud was heavily involved in the application of thermally driven chillers to the renewable energy market and has developed expertise in the nuances of applying non-traditional energy sources to those chillers. This includes developing expertise in the application of Combined Cooling, Heat and Power. Since May of 2013, Bud has been combining what he learned from the CCHP applications with his previous knowledge of electronics and electrical power systems to expanding the practical scope of Co-Generation plants into more heavily industrial applications with large step loads.

**Ramblings and etc.**

* Please continue to RSVP to Don Couvillion using the website: [Meeting RSVP via Web](https://meetings.vtools.ieee.org/m/37815).

This is now the preferred method but if necessary you can email at [dcouvill@ieee.org](mailto:dcouvill@ieee.org) or call (225)-362-2846 or use the section web site. Thanks.

The meeting this month is at **Ralph &Kacoo’s.**

The dinner for student members is half price.

If the **LSU** Branch Officers has changed, please let us know. If the **Southern** Branch Officers has changed, please let us know.

# VISIT THE BR SECTION WEBSITE

[**http://sites.ieee.org/baton-rouge/**](http://sites.ieee.org/baton-rouge/)

**The 2015-2016 Officers of the IEEE LSU Branch**

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**Advisor:** Dr. Jin-Woo Choi

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**Counselor:** Dr. Raynaud Henton – [rhenton@cox.net](mailto:rhenton@cox.net)

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| **RSVP to Don (225) 362-2846 by 3:00 PM. Meeting day or email by Wednesday, March 9, 2016 Thanks.**  [dcouvill@ieee.org](mailto:dcouvill@ieee.org) |