



# THE INSPECTIONEER POST

*Fueling the Minds of Electricity*

INSIDE THIS ISSUE:

- Coal vs Natural Gas, Can they Co-exist?
- What you can do in this transitional time.

## HRSG Inspection

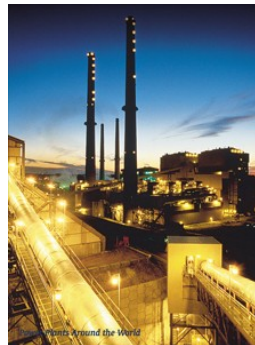
UDC offers inspection services through a fully trained and qualified HRSG Assessment Division. The HRSG Team is composed of members who are certified Level I or Level II in UT, MT, PT as well as Shear Wave NDE services. The division manager served as a former National Board of Boiler and Pressure Vessel Inspectors as a "Commissioned Inspector." He possesses 25 plus years of marine and fossil fired boiler and unfired pressure vessel inspection experience. He also gained experience through his 4 plus years working in the aftermarket department as the senior inspector for a major HRSG OEM.

- Experience
- Consistency
- Knowledge
- Schedule
- Real Time Reports

## "AN INDUSTRY IN TRANSITION"

HOW DO WE MAINTAIN OUR EXISTING COAL FIRED ASSETS WHILE NATURAL GAS FIRED ASSETS COME ONLINE.

### Coal vs Natural Gas, can we Co-exist?



Recent Natural Gas exploration and discovery has played an integral role in paving the road for future power generation options. For the past decade, so much time, effort, and research has been poured into bio-mass solutions, coal gasification projects, renewable generation etc. Although some of these

fuel source alternatives have proven to be of benefit, they have not proven to be a fossil fuel replacement.

As an industry and as a society, coal is being viewed more as a nuisance than a valuable resource. Although many feel that coal is unfairly judged in today's power sector, the end result is that alternatives and renewable resources are becoming more of a player in the game. The current fuel of choice appears to be Natural gas; natural gas emissions contain a fraction of the Co2 that coal emissions contain, and it is certainly a more clean emission. The cost reduction of Natural gas has

been the leading cause for this industrial shift.

So the big Question/ Discussion is "Can the fuels Co-exist efficiently and effectively, and if we are going to utilize both fuel resources as an industry, how do we protect our equipment during operation?" **The quick answer is yes;** however, we need to operate and function our systems in a manner that will minimize and reduce long term risk and damage to the system.



ID drum pitting found as a result of improper lay-up procedures on a coal fired boiler system taken out of service.

## LOOKING AHEAD

Coal-fueled electricity provides almost half of America's electricity generation which is about twice as much as the next largest fuel source. Coal is simply one of our country's most abundant domestically produced energy resources. America has more coal than any other country with more than a quarter of the world's known recoverable coal reserves. The use of Coal helps keep electricity prices affordable and the states which rely the most on coal to generate electricity showing the lowest energy rates. So should we remain committed to making coal a clean energy source?

If we all want America's energy future to be a clean one we have to realize it will require us to take action. We have a long history of deploying clean coal technologies to reduce air emissions and provide affordable, reliable electricity to meet the growing energy needs. We can continue to make great progress for improving environmental quality at the same time enjoying the benefits

of using domestic energy resources like coal to meet our growing demand for affordable, reliable and clean electricity.



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*The Name Behind The Flame*

### **UDC—NDE Service Solutions**

Visual Testing (AWS/CWI )  
Video Probe Inspections  
Liquid Dye Penetrant Testing  
Magnetic Particle Testing  
Ultrasonic Thickness Testing  
Internal Oxide Thickness Testing  
Phased Array Ultrasonic Testing  
Metallurgical Replications

UDC utilizes a variety of basic and special method non-destructive examination (NDE) techniques to determine material integrity and to perform condition assessments of boiler components and auxiliary boiler equipment. All Field Services Representatives receive specific NDE training and are certified in accordance with ASNT SNT-TC-1A.



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# United Dynamics Corporation

## 18th Annual All Users Conference

### Boiler Inspection

### "The Tricks of the Trade"

January 8 – 10, 2013

**The Reach Resort\*** 1435 Simonton Street Key West, FL 33040 (866)397-6427

\$1475 Per Person\*\* (includes all seminar materials, all sessions, breakfast & lunch, and beverages )

Three full days 7:30AM — 3:30PM

**Presenting Industry Authorities include:**

**Jon S. Cavote**, United Dynamics "AT" Corporation

Boiler tube failure reduction mechanisms & prevention methods - Boiler cycling & the affect on tube failures - Documentation & tube failure history

**John M. Cavote**, AABA Chairman of the Board

Raising awareness for Assessor Standards of Education & Training across the industry.

**Mike Neundorfer & Steve Ostanek**, Neundorfer Particulate Knowledge

Back end controls Question and Answer Session

**Richard (Dick) Storm**, Storm Technologies Inc.

Fundamentals of combustion, Combustion performance & reliability

**Lani Ache**—Foster Wheeler, AABA Board Member

Material Concerns

**Joel Feldstein**—Foster Wheeler, Chairman of the Board ASME

Latest Changes to the ASME Section 1 Code

### Session Topics:

**Boiler Inspection Tools - LPA & UDC AIR- Boiler Inspection Team - Back-pass Inspections Repair Priorities - Material Concerns - Coutant Slope - Changes to Section 1 Boiler Code Furnace Wall - Back End Issues**

Register online @ [udc.net](http://udc.net)

On the coal fleet side, we are concerned about excessive load variations and improper layup procedures. While on the Natural Gas side of the fence, we are concerned about an existing fleet of boilers and systems that have been run more as peaking units during hot summer months. Natural Gas costs are in a state of fluctuation, and recent news has lead some to believe that costs could rise again as a result of production cuts due to forecasting.

Cyclic conditions within our coal fired fleet is of great concern during this transi-

tion, and consistent operation of our HRSG/Natural Gas fleet after years of peaking and neglect are of concern.

#### What can you do:

(Conventional Coal Units)

- 1) **Develop an inspection plan/strategy that focuses on the affects of load swing variations.**
- 2) **If unit is to come out of service, perform proper procedures for lay-up and storage. This will reduce the work required if this unit is called back into service.**

- 4) **Ensure proper use of back end FGD / SCR equipment to reduce overall environmental impact.**

(Conventional Gas Units)

- 1) **Operate within design temperature and pressure parameters.**
- 2) **Minimize load swing frequency.**
- 3) **Maintain sufficient water quality and avoid PH excursion events.**

#### Quote of the Quarter:

*"Find your Passion, only then will you gain a sense of accomplishment"*

*Jon S Cavote*