

April 2017
Volume 1, Issue 1

Contacts

NDE

Jeff Anderson
Audinet: 200-3326
Office: 614-716-3326
Cell: 614-205-1055
jwanderson54@aep.com

Welding Engineering

Mike Crichton
Audinet: 200-3850
Office: 614-716-3850
Cell: 614-949-9539
mjcrichton@aep.com

R-Stamp Program

Ben Schaefer
Audinet: 200-1843
Office: 614-716-1843
Cell: 614-949-3715
bschaefer@aep.com

Central Machine Shop

Austin Jeffries
Audinet: 260-5528
Office: 304-746-5528
Cell: 304-206-7511
akjeffries@aep.com

We're on the intranet!

Just type any of these
shortcuts into your
browser and hit Enter:

NDE
WELD
RSTAMP

Have an idea?

We're always on the
lookout for new NDE
research projects!

Welcome

Welcome to the first edition of AEP's quarterly, non-destructive examination (NDE) newsletter! This newsletter is designed to inform and encourage our Quality Control Coordinators, Maintenance Superintendents, Planners, and anyone else who has an interest in all things NDE. As you know, NDE is all about safety and reliability, so please let me know if you have

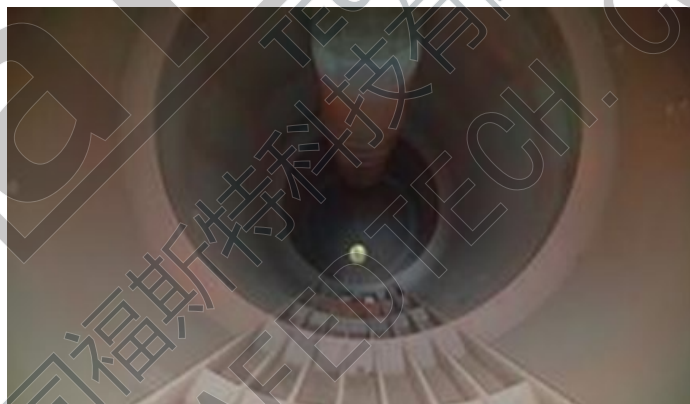
any suggestions for the newsletter that might be beneficial to others. And **thank you** for all you do to make AEP a safer place!

Jeff Anderson, AEP NDE Level III, Quality Assurance Services, 18th Floor, 1 Riverside Plaza, Columbus, OH 614-716-3326
jwanderson54@aep.com

A New Way To Inspect Deaerators

Several utilities, including AEP, have found that TesTex's Balanced Field Electromagnetic Technique (BFET) is an effective way to inspect deaerator and deaerator storage tank welds.

BFET is extremely sensitive to surface cracking, requires minimal surface preparation, is faster than magnetic particle testing (MT), and can reach welds that MT cannot.



Gavin Unit 1 Deaerator Storage Tank with reinforcement ribs welded to tank floor

deaerator storage tank reinforcing rib welds, TesTex successfully found three cracks which were confirmed with wet fluorescent mag particle testing (WFMT). One of the cracks was

removed with light grinding, while the other two cracks were approximately 40% through-wall.

Based on this successful demonstration, BFET has now been added to

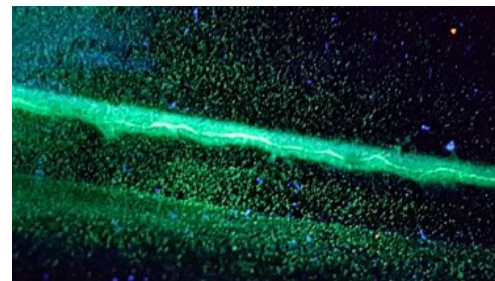
our deaerator inspection Circular Letter as a

TesTex, an NDE company specializing in electromagnetic inspection located near Pittsburgh, PA, performed BFET inspections for us in 2016 on the Gavin Unit 1 deaerator and deaerator storage tank welds. It is estimated that the efficiency of the BFET inspection saved two shifts of work versus using MT (valued at \$10K). Out of approximately 1300 feet of

recommended inspection technique. Contacts: Frank Michell, AEP Balance-of-Plant Engineering, 716-614-1745, and Milton Durstine, TesTex, 412-798-8990.



TesTex BFET probes



WFMT of BFET-found crack along deaerator storage tank reinforcement rib-to-shell fillet weld

Mag Checkers Are Here



First-ever AEP Mag Checker class (left-to-right): Jeff Anderson (instructor), John Adami, Brian Hamil, Mikel Gammon, Clint Barnes, Alan Speligene, Mike Hale, Matt Rice, David Corona, and Kody Parker

The first-ever class of AEP Mag Checkers was certified on January 11, 2017 at the Northeast Power Station. Mag Checkers are AEP NDE inspectors who have attended classroom training and passed written and practical exams in Magnetic Particle Testing (MT). This is an AEP designed, Limited Level II certification for dry and wet fluorescent particles with the yoke technique. To be eligible for Mag Checker, inspectors must already be Weld Checkers (Limited Level II Visual inspectors) and Dye Checkers (Limited Level II Liquid Penetrant inspectors).

The class was originally requested by John Adami, WRSO QC Supervisor, who suggested that time and money could be saved if AEP personnel were trained to perform MT on intermediate-pass piping welds.

Before the addition of Mag Checkers, AEP had to either wait for the welds to cool to use liquid penetrant (PT) or hire an outside contractor to use dry MT. Since the January class, two of the Mag Checkers have performed inspections which have saved AEP an estimated \$9,500 over using PT or hiring contractors.

For future Mag Checker and other class offerings, please see the schedule below.



In-class wet fluorescent yoke MT on a welded pipe coupon



Alan Speligene and Matt Rice practice dry powder yoke MT

True or False?

We can hire anyone to do NDE.

False. Some people mistakenly treat NDE as an afterthought or think that NDE is simple. The biggest temptation is to use an NDE company out of convenience, as in, "Hey, we've got these guys here magging this pipe from Mom & Pop NDE down the road, let's just have 'em UT the seam weld and inspect the turbine."

When hiring NDE inspectors, keep these thoughts in mind: 1) Use the NDE website for a list of approved general NDE companies and specialty inspectors (for UT phased array and turbine equipment), 2) Be sure to request a copy of the inspector's certs prior to arrival, 3) Discuss your job with the NDE company, and even the particular inspector, to get a feel for their competence.

Remember, NDE companies will sometimes tell you what you want to hear just to send you a warm body. It's the quality of the inspector that matters. Who do you want inspecting your equipment?



NDE Classes

Our annual offering of classes is coming up soon. QCCs, please check to see how many people you would like to send to each class.



Weld Checker

July 10-12, 2017

Contact: Jeff Anderson

Belmont Service Center
47687 National Rd. W,
St. Clairsville, OH,
43950

Dye Checker

July 13-14, 2017

Contact: Jeff Anderson

Belmont Service Center
47687 National Rd. W,
St. Clairsville, OH,
43950

Mag Checker

Aug 2-3, 2017

Contact: Jeff Anderson

Conesville Power Plant
14561 Twp. Rd. 263,
Conesville, OH, 43811

Weld Checker Planner

May 22-26, 2017

July 10-14, 2017

Contact: Ben Schaefer
1 Riverside Plaza,
Columbus, OH 43215

Welding Inspector Specialist

Aug 21-Sep 1, 2017

Contact: Ben Schaefer
1 Riverside Plaza,
Columbus, OH 43215