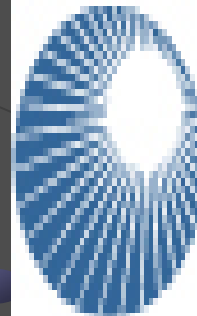




NEW AGE FASTENING SYSTEMS, Inc.

The Industry Leader in Studwelding

New Technology Review For Cyclone Boilers



Public Service
of New Hampshire
The Northeast Utilities System

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Agenda

1. New Age Overview
2. TungStud[®] Program
3. Thermal Monitoring Program

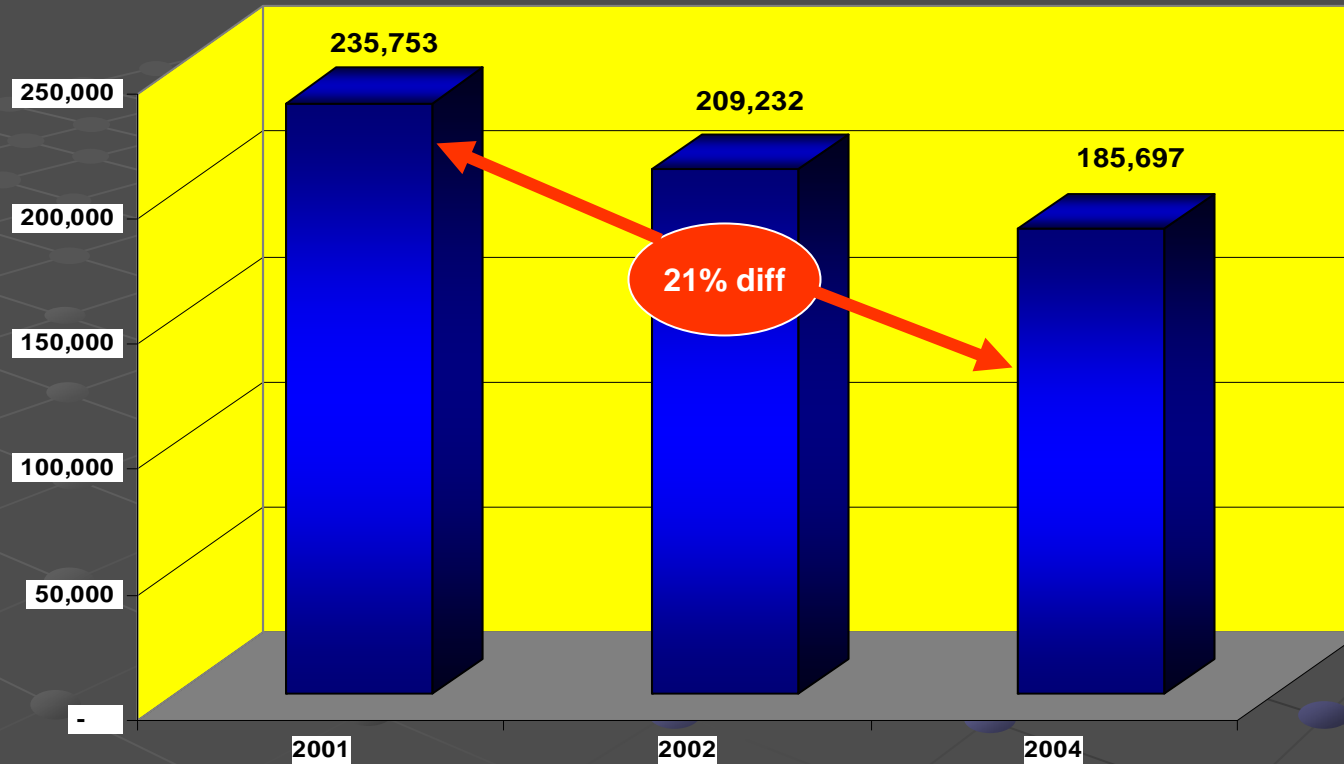
NEW AGE FASTENING SYSTEMS

1. Industry leader for more than 8 years
 - Installed over **12.0 million** studs in SPRING 2007
2. Stable and highly trained work force
 - Over 30 full time, experienced technicians
 - Signatory to International Brotherhood of Boilermakers
3. Innovative and Specialized Equipment
 - Over 100 automated studwelding units available across USA
4. New Technology Innovators
 - Developed Tung Stud and Thermal Monitoring Program to enhance operating life of cyclone boilers
5. Turn Key solution providers



Proper Stud Installation Saves Time and Expense

Example: PSNH Unit 1, 3 Cyclone Boiler



- ✓ All work performed by New Age. Cyclone outage schedule is 18 months
- ✓ Total savings to PSNH on studs installed was in excess of 20%

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TungStud[®] Program

- Specially Designed Stud for high temperature oxidation and sulfidizing environments.
- Current data indicates substantial improvement in the lining life of cyclone boilers!
- Multiple boiler environments all show positive impact on stud life!

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Tungstud and Public Service of New Hampshire

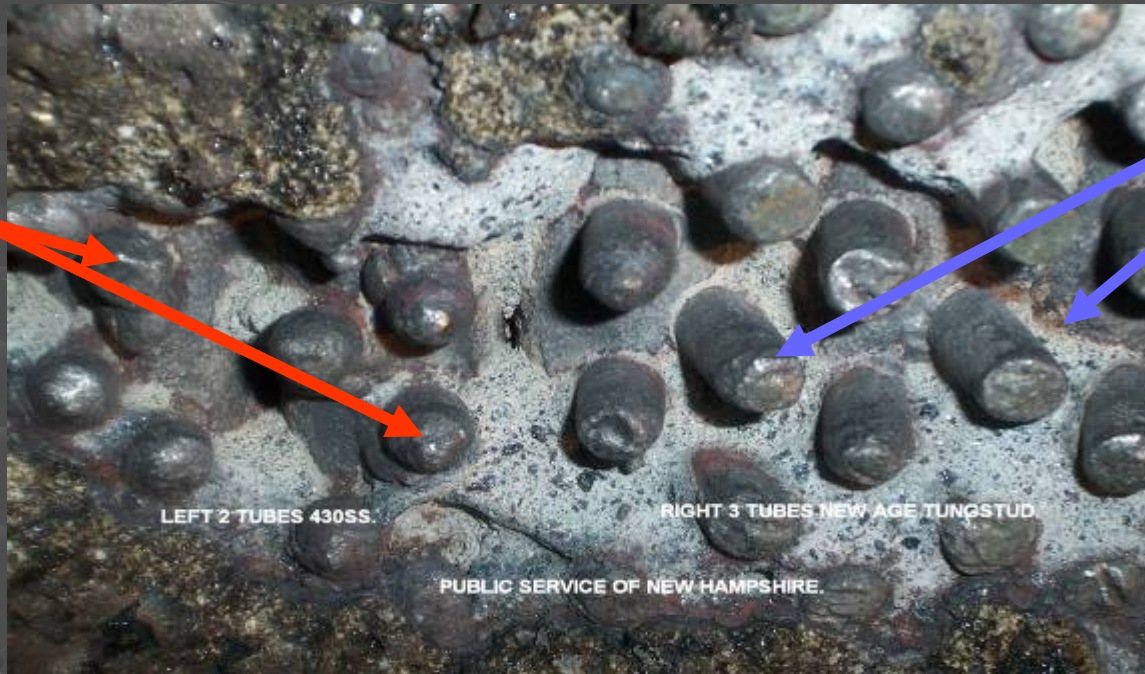
- First partnership to test new technology **Tung-Studs®** was with Public Service of New Hampshire.
- Installed two tests in 2003 and 2004 in cyclone boilers.
 - 2003 Beta Test of different types of Tung studs
 - 2004 45,000 T-5 studs were installed in Cyclone G
- Test results from T-5 install from 2004 through 2007 indicate substantial, measurable increases in stud life!
- Improved Refractory life observed with Tungstuds



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**TungStud®/ PSNH Beta Test Results of T-5 stud
Installed 2003 Uncovered 2005**

430 SS Studs



Tung-Studs®

- studs on left 2 tubes are 430 SS, right 3 tubes are T-5 studs
- 430 SS studs show significant erosion, corrosion and wear
- Tung-Studs® are still square with little to no wear effect on length.
- Tung-Studs® maintain ability to hold refractory after 2 outages.

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TungStud®/ PSNH 45.0k T-5 studs in Cyclone G Results from 2005 outage- 12 months of service



- Regular 430 SS Studs
- Refractory is missing from studs
- Stud length is less than 1/4"
- Studs are rounded and show considerable wear



- **New Age Tung-Stud®**
- Refractory still intact and chipped away to allow for inspection
- Stud length is 5/8"-3/4"
- **Tung-Stud®** is still square

**TungStud®/ PSNH 45.0k T-5 studs in Cyclone G
Results from 2006 outage- 24 months of service**



Only 250 TungStuds® needed to be replaced in
G Cyclone during outage in **May 2006**

TungStud®/ PSNH 45.0k T-5 studs in Cyclone G Results from 2006 outage- 24 months of service



PSNH typically re-studs cyclones every 12 months

After 2 Years in Service **Tungstuds®** still are 5/8" long and maintain ability to hold refractory and transfer heat

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**TungStud®/ PSNH 45.0k T-5 studs in Cyclone G
Results from 2007 outage- 36 months of service**

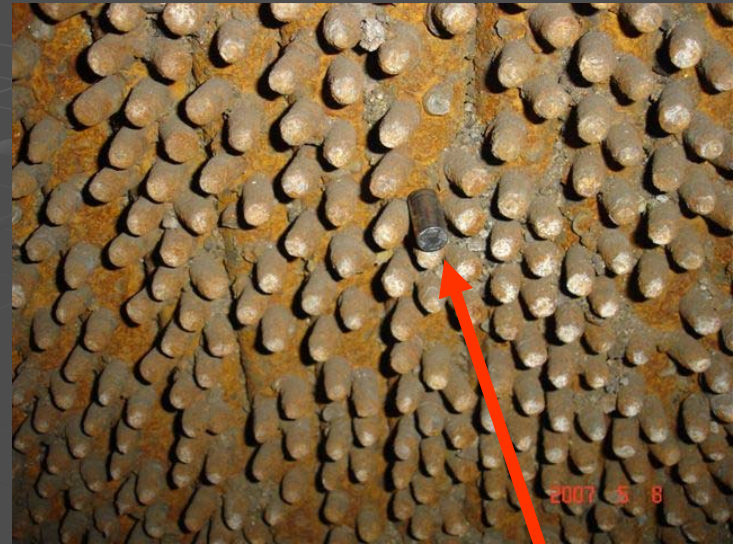


**Less than 200 TungStuds® needed to be replaced in G
Cyclone during outage in **May 2007****

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TungStud®/ PSNH 45.0k T-5 studs in Cyclone G Results from 2007 outage- 36 months of service



- Stud length AVERAGE IS 1/2 to 5/8"
- **Tung-Stud®** is still square and able to hold refractory and transfer heat.
- Note **arrow** showing new stud length vs. Tungstud
- G cyclone T-5 studs now entering 4th cycle year.

Recap of Results of Tungstud and Public Service of New Hampshire



- Tungstuds have now been in service for 36 months
- Avg. install of studs on barrel wall in G Cyclone is 45,000 studs per outage
- Since Tungstud install of 2004, there have been a total of less than 1,000 new studs installed!
- Tung Stud has saved PSNH the cost to install 135,000 studs through 3 outage periods.
- Studs are now going into the 4th cycle
- Tungstuds may have a direct impact on refractory life



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Tungstud and TVA Allen Fossil Plant

- New Age partnered with Tennessee Valley Authority's Allen Fossil Plant to test new technology studs.
- New Age Installed Tungstuds test in Feb 2005
 - Total **10,000 T-5 studs** were installed in Cyclone D
- Test results from T5 install uncovered in Fall 2006 indicate substantial, measurable increases in stud life!
- Direct impact observed on refractory life from Tungstud performance
- For additional details contact Buck Jeffrey at Allen Plant

New Age Fastening Systems, Inc.
Tung-Studs® / TVA Allen Plant
Install Feb 2005 Uncovered Nov 2006



- Stud length AVERAGE IS 5/8"-3/4"
- **Tung-Stud®** is still square and able to hold refractory and transfer heat.

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Tungstud and TVA Paradise Plant

- New Age partnered with TVA's Paradise Plant to install the T-5 studs in two cyclone boilers.
 - Total 130,000 T-5 studs were installed in Cyclones F3 and F5
- Install was performed during Spring 2007 outage in which New Age installed a total of over 2.2 millions studs

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Tung-Studs® / TVA Paradise Plant



➤ T5 studs on wear blocks



➤ T5 studs on barrel wall

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Tung-Studs® / TVA Paradise Plant



➤ T5 studs on neck wall



➤ T5 studs on barrel wall

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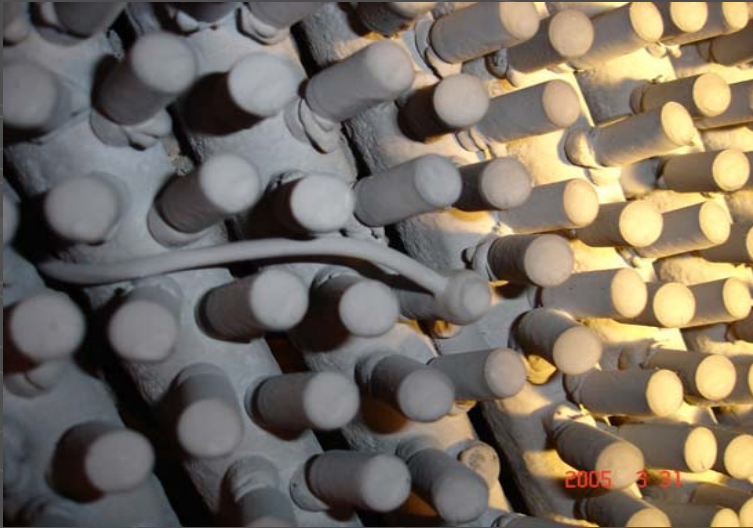
New Age Thermal Couple Monitoring at the TVA Paradise Plant

- New Age partnered with Tennessee Valley Authority's Paradise Plant to test new technology for Thermal Monitoring of Cyclone Boilers.
- Current thermal monitors for boilers measure average temps of boiler but **do not show specific ranges** or impact in different parts of the boiler.
- The New Age Temperature Monitoring System concept is to allow the plant to see actual impact of temperatures on refractory and studs in multiple areas of boiler in real time while in operation
- This test at TVA is the second major test for the program.
 - Initial test was done in 2005 at Ameren UE, Sioux Plant
 - Test ran from Apr 2005 to Jan 2006
- Test results from Ameren were very successful
- TC test was able to generate valuable data and reports for monitoring the thermal wear of boiler in specific areas.



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Thermal Couple Monitoring and TVA Paradise



State of the art technology in thermal temperature monitoring has been partnered with a unique, advanced stud application process.

The Patent pending program allows for easy, fast installation using New Age Fastening's specialized, trained technicians and equipment.

Install process is completely customized by New Age technicians who work direct with plant personnel to place monitors in exact areas requested.

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Thermal Couple Monitoring and TVA Paradise



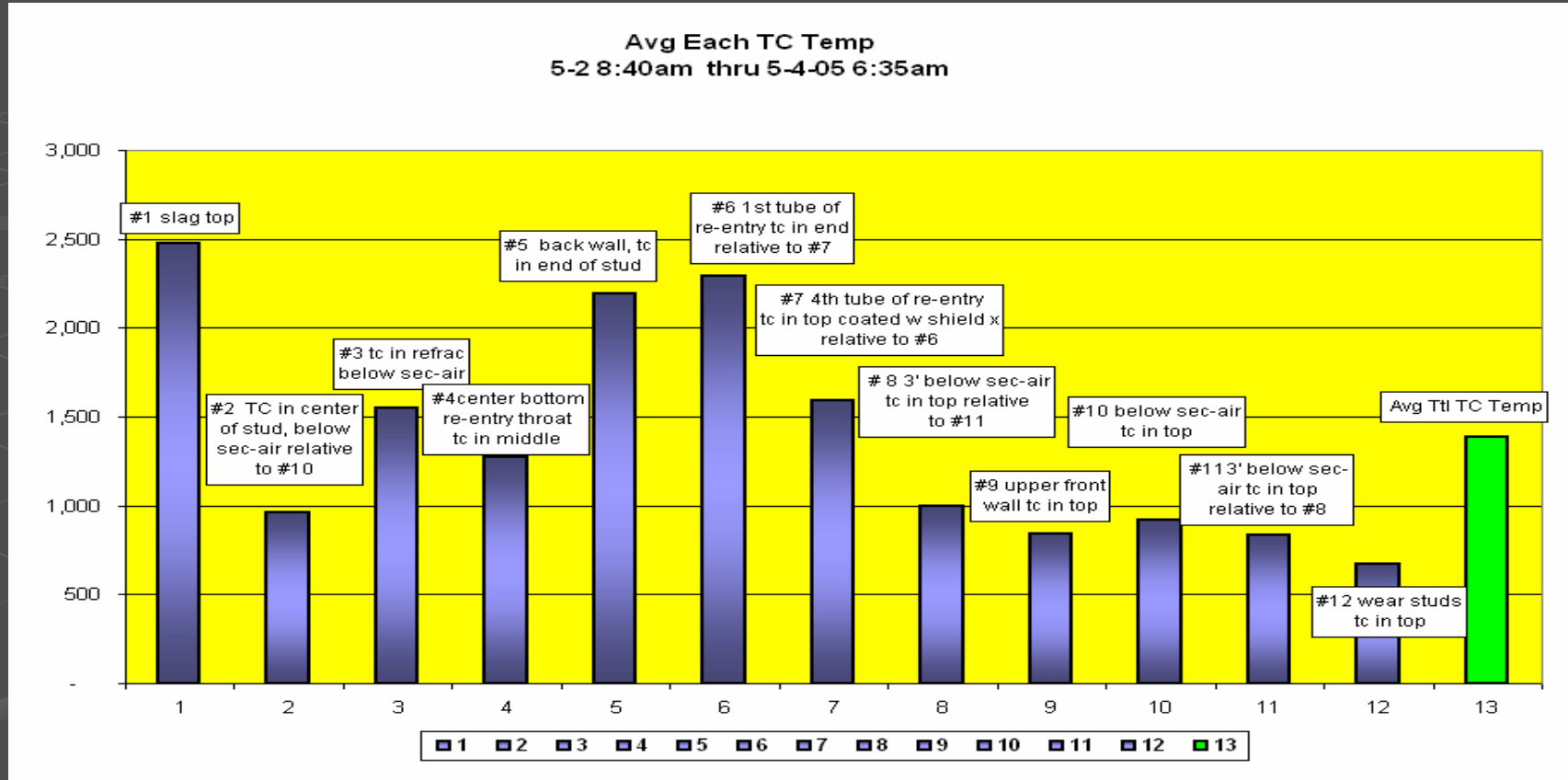
The Thermal Couple Monitoring process relies on real time data delivered via computerized tracking.

Customized reports are easily generated from the data. Reports are tailored to the needs of each individual plant's operating team.

Monitoring process allows for instant feedback on temperature and heat in multiple locations within the boiler.

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Thermal Couple Monitoring Reports



Customized reports and charts enable plant operations to quickly analyze data from multiple locations in boilers.

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Questions

www.newagestudwelding.com

