

THE NATIONWIDE BOILER

STEAMLINES

AUGUST 2022



NATIONWIDE'S EAGLE CONTROL SYSTEMS ARE SOARING!

You asked - we delivered! The Eagle Boiler Control System (BCS) was designed with the customer in mind and so far, the Eagle is soaring into the hands of many happy customers across the country.

Our team at Nationwide Control Solutions has curated a product that addresses the many wants and needs of boiler service contractors and boiler owners alike. Built with only high quality, industry standard components, the Eagle BCS is fully customizable from the enclosure to the HMI screen layouts and everything in between. The Eagle offers easy setup with a single HMI screen for burner tuning data & entry of all air/fuel ratio curves.



By utilizing non-proprietary components, replacement parts can be readily sourced by local distribution channels. Plus, our open-source policy for HMI and PLC programming offers a unique advantage to our customers. This means that we will not lock-up the configuration programs with passwords and other proprietary protocols,

and we furnish these program files to our clients at completion of each project. For segments of our program that do require password protection, such as air/fuel ratios and BMS safety functions, we work with our client's management team to ensure that those passwords are in the right hands.

The standard Eagle BCS consists of a NEMA 4 powder coated steel enclosure, 7" touchscreen HMI, and Allen-Bradley Micro850 PLC-based Combustion Control System, among other robust components. Clients can choose to upgrade to the Eagle Plus for a stainless steel enclosure, 10" HMI, CompactLogix or ControlLogix PLC platforms, and more.

Furthermore, we can also supply an optional, highly secure Ewon VPN for remote communication, remote support with our TECH-N-BOX© product, and the ability to communicate to a variety of industrial DCS and Building Automation systems. Our highly-qualified engineering staff will assist with the selection of proper commu-

WHAT'S INSIDE

PAGE 2

President's Corner
NBI News Briefs
Employee Spotlight
New Inventory Alert

PAGE 4

2.5 ppm Package Boiler In Production
Supply Chain Challenges
Hydrogen Firing for Boilers
NBI Representative Spotlight

PAGE 6

Charity Golf Tournament Recap
Rental Fleet Continues to Grow
Upcoming Events

nication protocols based on the clients existing infrastructure.

With the current state of supply chain challenges, rest assured the Nationwide Control Solutions will have the inventory available to build up to 12 systems at all times. And right now, our team is working hard with multiple Eagle BCS panels in production at our UL-certified facility in Washougal, Washington. Soon they will take flight and land in the hands of some satisfied customers!

"...INTEGRITY, DEPENDABILITY, REAL CUSTOMER SERVICE."



You may have seen our recent [press release](#) announcing a new partnership with Superior Boiler for the sales & marketing of their newly patented DFW watertube design. I've been in the boiler industry for 44 years and believe me, technological advances happen very slowly. Besides the obvious burner innovations for reduced emissions and electronic enhancements in controls and automation, advances in basic heat transfer are slow to occur.

Seems that the commercial side of the business has more advances than the industrial side, with the advent of condensing boilers and finned copper tubing for increased efficiency. On the industrial side, the industry was still building the same basic boilers as they did almost 70 years ago. For firetubes, 2, 3, and 4-pass designs using bare tubes with 5 square feet per boiler horsepower rating had always been the norm. As for watertube boilers, with the exception of Superior's recent Ds-type boiler, the basic D, A, and O-types using bare tubes hadn't changed either.

Back in 1997 we worked with Fintube Technologies on their newly patented X-ID tube technology. This design greatly increased heat transfer by creating additional heating surface inside the tube, as well as breaking up the boundary layer of the hot gases inside the tube. This allowed a radical new firetube boiler to be designed around the concept of a bigger furnace for lower heat release, less tubes in the convection area, and no loss in efficiency.

These compact units could produce the same capacity and efficiency with as little as 3 square feet of heating surface per boiler horsepower. For our rental needs, this allowed us to fit a 650HP boiler in basically the same van as a previous 350HP. Advance 25 years later and we now have expanded the X-ID design to 1000HP in a mobile, over-the-road system. Many firetube manufacturers are also now using these enhanced tubes specifically for the larger capacity systems to keep their overall size and weight down.

In 2018, I was out to dinner at an ABMA



meeting with Superior Boiler. In a discussion with one of their top engineers, I learned about a customer of theirs who had requested a watertube design with a lower furnace gas exit temperature. He explained to me how he would accomplish this and I asked him if they could apply this concept to one of our standard rental boilers to get increased capacity out of the same basic footprint. This is how the DFW concept started. Now, 4 years later, we have sold or put into our rental fleet 11 of these DFW boilers.

The DFW design not only lowers furnace exit temperature thus producing less thermal NOx, it also adds approximately 40% more heating surface within the furnace. This produces about 25% more steam capacity while also lowering

the heat release rate within the furnace for a more conservative heat flux. Now, our 82,500 lb/hr mobile boilers can be rated at 100,000 lb/hr without any decrease in efficiency or performance.

Although we are not a manufacturer nor hold the patents for these advanced technologies, I am proud to say Nationwide Boiler has been instrumental in bringing these new boiler designs to a market that has traditionally been very resistant to change.

This open-minded and forward thinking has allowed us to continue Nationwide's reputation as the innovative leader in the rental boiler industry.

Jerry

NBI NEWS BRIEFS

NBI Recognized for Top Sales & Innovation
During BOILER2022 in April this year, Nationwide Boiler was recognized for multiple distinguished awards and we are proud of our team for the hard work and effort that led to these honors.

First, at the Superior Boiler "Rep Roundup" and Annual Sales Meeting, Nationwide Boiler proudly received four (4) of Superior's Top Sales Awards: Million Dollar Club for Firetube Boilers, Million Dollar Club for Watertube Boilers, Top Watertube Boiler Sales, and Superior's highest honor, the President's Award.



Superior also acknowledged our creative marketing efforts in producing a video and new literature piece promoting Superior Boiler's strengths, providing additional industry recognition.

In addition, during day 2 of BOILER2022, the President of the ABMA, Scott Lynch, announced Nationwide Boiler as a recipient of the inaugural and prestigious Excellence in Boiler Innovation (EBI) Award. Nationwide was selected due to our significant efforts in supplying a large-capacity 450,000 lb/hr, ultra-low NOx temporary steam plant for the ExxonMobil Baytown Refinery and Chemical Complex. This project not only allowed the facility to meet production demand for 3-years during the construction, installation and start-up of a new boiler, but it also brought another first to the rental boiler industry with urea-based SCR system rentals.



These awards were earned by and through the dedication, commitment, and effort of our entire organization - a job well done by all! Learn more about these awards in our [press release](#).

The Newest Members of Team Nationwide
As our business continues to flourish, our team must grow! Please help us in welcoming the following new employees to Nationwide Boiler:

- Fredis Molina, Industrial Painter I
- Conor Rogers, Project Engineer Intern
- Scott Krahn, Project Engineer
- Emilio Molina, Shop Helper
- Fredis Molina Jr., Industrial Mechanic I
- Michael Riley, Boiler Technician I
- Dian Bressel, Accounts Payable Specialist
- Chris Cantu, Shop Helper

WELCOME 55 ME!

EMPLOYEE SPOTLIGHT: DOROTHY GAYOSO

Accounts Receivable is the lifeblood for the cash flow of any business, large or small. The individual appointed with this responsibility must be trustworthy, have a keen attention to detail, a good understanding of spreadsheets and numbers, and effective communication skills.



At Nationwide Boiler, this is Dorothy Gayoso. As our Accounts Receivable Specialist, Dorothy is responsible for billing customers, collecting on open invoices, and communicating with both external customer contacts as well as multiple departments company-wide.

Although she started with us a short three years ago, Dorothy is a natural fit within the accounting department and our company - it feels like she has been with us for much longer! Dorothy's favorite memories at Nationwide involve getting together with co-workers for our lunchtime BBQs, especially when there is water balloon fun involved. She also enjoys getting together outside of the work setting to attend the many sporting events that we coordinate.

Dorothy is another Nationwide Disney fanatic. Not only does she have a collection of Marvel, Pixar, and Star Wars pins, but she also collects all things Baby Yoda (as you can tell by the image above). She also loves to travel, and has a future goal of visiting all of the Disney parks in the world. She has already been to Disneyland and California Adventure, Disneyworld, and she will be heading to Disney Paris this October. She is eagerly waiting to plan her next few Disney trips to Japan and China.



With her exceptional skillset and outgoing personality, Dorothy is a valued member of the Nationwide Boiler family. Thank you, Dorothy, for your hard work and dedication. Keep it up!



NEW INVENTORY ALERT!

We recently acquired two, good condition, used package watertube boilers - 82,500 lb/hr, 500 psi and 100,000 lb/hr, 500 psi - for saturated steam production.

These boilers will undergo our QA process for reconditioning and will be offered for resale or join the rental fleet.

2½ PPM STOCK BOILER NEW PRODUCT, PROVEN SOLUTION

Nationwide Boiler has been a pioneer in the drive towards ultra low NOx performance for package boilers since the early 1990's. We initially chose selective catalytic reduction (SCR) technology because it was proven, efficient, and reliable for 2½ ppm performance. Even so, we tested the system as a user by operating the CataStak SCR with our fleet of package rental boilers to further prove our product. Now, with more than 200 installations, we have been able to achieve less than 1 ppm NOx for multiple CataStak projects.

Today, we are excited to announce another proven and reliable option for ultra low NOx emissions compliance: a 350HP, 150 psig Superior firetube boiler packaged with an Oilon burner, proven to perform at 2½ ppm NOx. The Oilon LN30 burner accomplishes this without the use of flue gas recirculation (FGR) or high excess air (mesh burners). After extensive testing, Oilon has demonstrated less than 2½ ppm performance with this burner, making way for a new package boiler solution and the first of its kind for ultra low NOx compliance.

With the exceptional quality from Superior and Oilon paired with Siemens LMV controls, this package boiler is a reliable and robust ultra low NOx solution. Nationwide Boiler is pleased to be teaming up with these top tier manufacturers to bring the next generation of ultra low NOx boiler/burner packages to customers in California and beyond.

This 350HP package boiler is now in production and will be ready for service later this year, providing an expedited solution for customers in need of a package boiler on a fast-track basis.



Current 200,000 lb/hr, 750 psig / 750F Superheat In Stock Package Watertube Boiler



SUPPLY CHAIN CHALLENGES AND THE STOCK BOILER SOLUTION

Supply chain challenges have affected industries across the globe with higher costs, longer lead times, and no end in sight. With large watertube boilers now averaging 40-50 weeks to manufacture, steam users are having to consider alternate solutions to meet production schedules and keep up with demand. Rental boilers can provide a temporary solution to these long lead times, but what happens when the rental market is tapped? The solution - stock boiler equipment.

Choosing to purchase a stock boiler rather than a boiler that is built-to-order will yield a significant reduction in project lead times. And at Nationwide Boiler, we maintain a stock boiler program specifically for these moments of need. Our stock inventory includes used and reconditioned boilers, units from the rental fleet that are often available for purchase, and brand new firetube and watertube boilers in a variety of sizes.

Our stocking program has been built based on historical data in terms of the most common steam capacities and operating pressures requested from the various industries that we serve. This includes a 200,000 pound-per-hour, 750 psi / 750F superheat package watertube boiler that is continually in-stock and often supplied to pulp and paper mills, refineries and petrochemical plants. We call this our "World Boiler" because it has been shipped to 6 of the 7 continents!

Stock boilers provide versatility, designed for a broad range of operating pressures to support a wide variety of process needs. All stock boilers include low NOx burners, however, they can meet even the most stringent emissions requirements with the inclusion of an optional CataStak™ SCR system. SCR technology is a proven solution for multi-pollutant reduction and emissions compliance as low as 2.5 ppm NOx.

In-stock boilers also offer the following advantages:

- An immediate solution when lead times are at their longest ever.
- Protection from price increases due to escalating steel costs.
- Engineering drawings that are immediately available.
- Equipment inspection is available prior to purchase.
- Equipment can often be shipped within days or weeks of receiving an order.

With the current supply chain concerns causing delays across the industry on an international scale, taking precious time out of projects and developments to customize a plan can be detrimental. Fortunately, our stock boiler program can help by cutting down schedules and providing a timely, affordable solution catered to each customer's unique needs. Check out our website to [view our inventory list](#) and find what boilers are available now.

H2



Oilon Burner Project for 50% Hydrogen-Blend Fuel

DECARBONIZATION AND HYDROGEN FIRING FOR BOILERS

The decarbonization initiative has led large corporations to explore options that will reduce their overall carbon footprint. To perpetuate this initiative, a hot topic of discussion recently has been the potential transition away from fossil fuels and towards the use of more environmentally friendly fuels, like hydrogen.

Hydrogen is one of the most abundant elements on the earth and when combusted, it produces water vapor and no greenhouse gas emissions. It can be safely produced, transported, stored and blended into the existing gas grid to help reduce CO2 emissions for existing fired equipment. Currently, the majority of hydrogen production is for use as a raw material within chemical processes, like refining oil, but hydrogen is by no means a new fuel option for boilers. In fact, boiler burners have been fired successfully on hydrogen-blended fuels for many years.

Nationwide Boiler and Nationwide Control Solutions have supplied equipment that can reliably operate with a fuel mixture of up to 60% hydrogen. Our knowledge and understanding of hydrogen firing, combined with the experience of our manufacturers, including Superior Boiler

and Oilon, provides a well-rounded team to support any future hydrogen firing initiatives. Oilon's experience in hydrogen combustion spans almost three decades, and they have designed and delivered hundreds of burners for different hydrogen mixtures across the globe.

Existing Oilon burner designs are well suited for firing mixtures with up to 20% hydrogen content without modification. If hydrogen content is increased up to 70%, a nozzle structure specifically designed for this purpose can be supplied. At higher levels of up to 100%, and when there is variation in the fuel's hydrogen content, a comprehensive solution designed for hydrogen combustion is usually required.

As an innovative leader in the rental boiler industry, we will be ready when the need arises and have already begun preparations to allow hydrogen-blended fuels to be fired on our fleet of rental boilers. Our engineering team has begun discussions on what burner modifications will be required, and we will be working with the manufacturers to perform CFD simulations. We are eager to begin offering this as an option for companies leading the pack in the decarbonization initiative.

NATIONWIDE REP SPOTLIGHT: ADCO COMPANIES LTD.



ADCO Companies is a family-owned organization that has been a part of the Nationwide family for nearly four decades. In 1986 we worked on our first project together, supplying a 52,000 lb/hr rental boiler to ADCO to support their customer needs - and from there it's history!

Similar to Nationwide Boiler, ADCO specializes in emergency rental boiler needs and they also offer new equipment sales, emergency services, ASME code repairs, control systems, HVAC, industrial pumps, and more. With headquarters in Bessemer and multiple branch locations throughout Alabama and Louisiana, ADCO is a manufacturers representative for the supply of new boiler equipment to customers in the aforementioned states as well as the Florida panhandle.

Nationwide and ADCO work closely to support customers throughout the Gulf Coast with reliable temporary rental boilers, and they have also been a valuable resource as one of our main storage and maintenance facilities for our fleet of package watertube rental boilers. And with more than 500 years of industry experience combined within their team, we know that we can rely on ADCO to help service and maintain our rental equipment.

We are extremely proud of ADCO's growth throughout the years and look forward to continuing this long-standing relationship for many decades to come.





41 YEARS OF GIVING BACK... ONE GOLF TOURNAMENT AT A TIME!

Our 41st Annual Charity Golf Tournament was held early this summer in May. We are happy to report another success with nearly \$54,000 raised in support of the ABMA's Randy Rawson Scholarship Fund and Make-A-Wish® Greater Bay Area!

After two years without our "normal" in-person event, our group was welcomed back to Pebble Beach with some surprisingly sunny weather and it was a great time had by all. The event began with a practice round at the Spyglass Hill Golf Course followed by tournament play at the world-famous Pebble Beach Golf Links. Golfers and guests visited from across the US and Canada to support this worthwhile cause.

Our team worked hard to raise funds through various sponsorship opportunities in addition to raffles, an online auction, and other fundraising activities throughout the two-day event. A big congratulations to our tournament winners this year: Allison Day (Nation-

*Save the date for next year's event:
May 10-11, 2023*

*Accommodations:
The Inn at Spanish Bay*

Practice Round at Spanish Bay

Tournament Play at Pebble Beach

wide Boiler) for the Women's Division, Miles Freeman (HTS, Inc.) for the Handicap Division, Jordan Cole (Cole Industrial) for the Callaway Division, and Jake Cushard (Nationwide Boiler) who took home this year's Low Gross trophy. Special note: Jake is the great grandson of our company's founder, Dick Bliss.

This year, our donation to Make-A-Wish sponsored the wish of Isabella, a 12-year old with a nervous system disorder who wished to go to Disney World. Our donation also helped with the ABMA's presentation of 11 scholarships to graduating seniors this year. Thank you to everyone who participated, sponsored, or donated to support our end goal of raising money for these two outstanding organizations.

We are proud to carry on this tradition of golfing for a good cause, and look forward to next year's event - which will be here before we know it! Find additional photos from our tournament on our [Facebook page](#).

MASSIVE RENTAL FLEET CONTINUES TO GROW

The rental boiler market is booming and with over 100 rental units already in our fleet, we continue to maintain extremely high utilization. And with a fleet of purpose built equipment, we must continue to build. We now have multiple new rental boilers in production and expect some to be ready for service before the end of this year.

On the firetube side, we are in the process of building two new mobile boiler rooms at our shop in Fremont, CA. These units - 650 hp and 800 hp package boilers - will include ultra-low NOx burners for 5 ppm compliance and will be pre-permitted for use in the SCAQMD. For our East Coast customers, we are nearing completion on two units - 350 hp and 500 hp mobile boiler rooms. These units will be 30 ppm low NOx and capable of firing natural gas or #2 oil.



On the watertube side, we will be adding two additional 110,000 lb/hr, 750 psi / 750F superheat trailer-mounted boilers to the fleet. These are the World's Largest trailer-mounted superheat boilers, an initiative we began many years ago to push the envelope and meet the needs of our customers with large capacity, highway-legal mobile boilers.



We also have multiple 100,000 lb/hr, 399 psi DFW boilers coming off the production line (and headed to their first rental job), in addition to another 50,000 lb/hr, 650 psi DFW rental boiler for the fleet.

UPCOMING INDUSTRY EVENTS



Southern Company Technical Conference
Birmingham, AL
August 23 - 24 (happening now!)



Oregon Society for Healthcare Engineering
Fall Conference
Salishan Glenden Beach, OR
September 13 - 16



Washington Society for Healthcare Engineering
Fall Conference
Vancouver, WA
October 18 - 21



BIC's PRIME Expo
Pasadena, TX
October 26

STOCK BOILER INVENTORY SPOTLIGHT



300 HP, 150 PSIG

Used Cleaver-Brooks
Ultra Low NOx
Package Firetube Boilers (2 available)

1500 HP, 250 PSIG

Reconditioned Donlee
Low or Ultra-Low NOx
Package Firetube Boiler

80,000 PPH, 250 PSIG

Reconditioned Cleaver-Brooks
Low NOx Package Watertube Boiler

82,500 PPH, 500 PSIG

Reconditioned Babcock & Wilcox
Low NOx Package Watertube Boiler

100,000 PPH, 500 PSIG

Reconditioned Cleaver-Brooks
Low NOx Package Watertube Boiler

100,000 PPH, 399 PSIG

New Superior, Low NOx
Package Watertube Boiler

200,000 PPH, 750 PSIG / 750F

New Babcock & Wilcox, Low NOx
Package Watertube Boiler

SUMMER FUN AT NATIONWIDE BOILER



4TH OF JULY BBQ



A'S BASEBALL GAMES



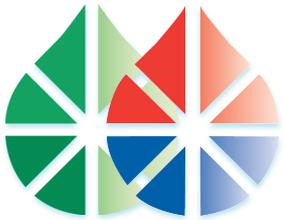
4TH OF JULY FUN

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| ADCO Companies
ABCS, Inc.
Alzeta Corp.
Antonio & Maricela De La O
Atlas Copco
Bank of the West
Boilerroom Group
BFS Industries
C&C Boiler
Campbell-Sevey
Clearway Energy
David Spain | Delval Equipment
E-Tech
Gordon & Keli Judd
Hartford Steam
Hayward Pipe
HTS, Inc.
JOH Fabrication
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Morello Metal Fab
NBW, Inc.
NBW South
NW Boiler
Oilon
Pebble Beach Company
Pio Roda Auctions
Power Equipment Co.
Powerhouse
Powerflame
Power Mechanical | Rasmussen Mechanical
Rentech
Sensiba San Filippo
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