

THE NATIONWIDE BOILER STEAMLINES

AUGUST 2021



WHEN GOALS BECOME REALITY NEW NATIONWIDE TEXAS FACILITY

Oil, lumber, cattle and cotton are the four cornerstones on which Texans built their thriving economy, and many companies within these industries utilize steam for their process needs. Refineries in particular make up a large portion of our customer base and are very prominent throughout the Gulf Coast. With so much industry and many of our customers in the region, having a Nationwide managed facility in Texas has been a long-term goal for us. The time has finally come, and our goal is now reality.

While we currently (and will continue to) team up with half-a-dozen partners throughout North America for the storage and maintenance of our rental equipment, the value of managing our own employees at a facility in Texas is huge. When approached with the opportunity by our long-time partner, NBW, Inc., our team worked diligently to evaluate the cost, potential revenue, and future opportunities that this new facility could bring. And after a thorough evaluation, it was an obvious decision. The lease has been signed and the space has been secured.

We are proud to announce the opening of Nationwide Boiler's new Houston Area sales, storage, and maintenance facility. With 25,000 sq. ft. of shop space, the new yard will be utilized for equipment turnarounds and capital improvement projects. Multiple 75,000 lb/hr super-heat steam boilers have already arrived, and a large portion of the equipment that supports end-users throughout the Gulf Coast region will be stored at this facility.

Managed by our very own Senior Service Engineer and now General Manager, Jim Souza, the shop will operate under the same procedures and integrity maintained throughout our organization. Jim's keen understanding, knowledge and extensive experience with the operation, troubleshooting, service and maintenance of our equipment makes him the perfect candidate to lead the charge.

Like the saying goes, "big things happen in Texas", and we sure are excited for this big new venture!

WHAT'S INSIDE

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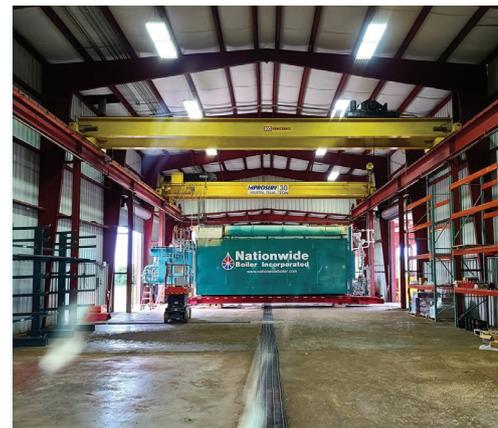
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"...INTEGRITY, DEPENDABILITY, REAL CUSTOMER SERVICE."



WE'VE COME A LONG WAY, BABY!

I started with Nationwide Boiler in 1984. This was right about the

time when NOx emissions became an issue and it was only in California. At that time, 0.10 lb/MMBtu or 83 ppm was considered "low NOx" technology. Because of the terrible smog seen throughout Los Angeles and the surrounding areas, the South Coast Air Quality Management District (SCAQMD) came out with their landmark retrofit rule 1146, and the race was on with burner manufacturer's to meet this new requirement.

Obtaining 40 ppm NOx back then was a big deal. While the SCAQMD may have been the first district in the state to implement stringent NOx requirements, other regions followed suit. Fast forward to today, and we're now retrofitting boilers with our CataStak™ SCR System for 2½ ppm NOx, the newest standard here in California. And if you have flown to LA recently, compared to 40 years ago, you will notice a big difference in the surrounding air quality. You can actually see the San Gabriel Mountains now!

Since developing our CataStak SCR system back in 1999 to safely meet reduced emissions requirements, we have now supplied over 200 systems for both short and long-term rentals, as well as permanent sales projects. While the CataStak was originally designed for use with anhydrous ammonia, our engineers worked vigorously to provide options for use with aqueous ammonia and urea, in lieu of anhydrous. In fact, we now have an entire fleet of urea-based CataStak SCR systems available for temporary applications. And believe it or not, we've had installations in nine different states and even one foreign country; low NOx is not just a California issue any longer.

We've looked at it before, and I am again tasking our engineering and marketing departments to come up with real time numbers on the tons of NOx our CataStak SCR systems have removed from the atmosphere for our many customers. I know this number will be pretty impressive for showing that this little Fremont company is doing our part and more in the reduction of Green House Gas Emissions and being a 'Green' company.

Larry

NBI NEWS BRIEFS

Oilon Burner Representation Agreement

Nationwide Boiler has signed an agreement for the exclusive rights to market and sell Oilon burners to customers throughout California, Oregon, and Washington. We are excited to add Oilon to our product line and look forward to a mutually beneficial relationship.

Check out our [press release](#) for all the details.



Superior Boiler President's Award Recipient

Earlier this year, Superior Boiler announced their sales rep awards for the 2020 Fiscal Year, and we are extremely proud of our organization for these accomplishments. Nationwide Boiler achieved top sales and received the Platinum Award for both the Firetube and Watertube boiler lines. In addition, we received the distinguished President's Award for "outstanding sales performance as a full line representative".



Congratulations to our entire company for a job well done!

\$40K Raised at our 40th Annual Charity Event

After an unexpected year off, employees and guests were excited to be back at Pebble Beach for our 40th Annual Charity Golf Tournament. While the golf side of our tournament was pretty straightforward and unchanged, other activities were modified to comply with COVID restrictions and we had fewer guests than the average year.

Our traditional clam bake buffet and in-person banquets did not happen, and instead guests dined in small groups and attended a virtual awards presentation followed by a fun round of Jeopardy! In addition, we held our first ever online auction, allowing guests who may not have been able to attend the opportunity to participate, purchase items, and ultimately give back to the charities.

Overall, the event was a great success and we came out of it with new ideas for future tournaments. In our 40th Anniversary year, we had 40 golfers and raised \$40,000 for the ABMA Scholarship Fund and Make-A-Wish Greater Bay Area. We are pleased with the results and look forward to another successful event in 2022.



Save the date for next year's event, May 12 - 13 at Pebble Beach. And check out the last page of our newsletter for some photos from this year's event!

MAKING MOVES: NEW EMPLOYEES & PROMOTIONS

Nationwide Boiler is always on the move, in search of new innovations, ways to improve our product offerings, and whatever else will help us to not just meet but exceed our potential. We have a brand new facility in Texas being prepped for the storage and maintenance of our rental equipment, a new burner line that we have added to our product offerings, and we've now begun building additional units to ramp up our fleet. This includes 1,000 HP mobile boiler rooms, 100,000 PPH saturated steam trailer-mounted boilers, and 110,000 PPH superheated steam trailer-mounted boilers. In addition to our business moves, our employees are making moves, too.



First off, we'd like to congratulate Anthony 'Tony' Difede on his recent promotion to Chief Financial Officer (CFO). Since coming on board with Nationwide in September 2019, Tony has shown a keen understanding of our unique tax issues, audit processes, and financial reporting. He has been a stabilizing influence to our shareholders and great addition to the team. Congratulations to Tony on his promotion to CFO.

We'd also like to mention some of our newer employees. Lisa DeCastro started with us in May as our new Accounting Man-

ager. With her extensive experience with public companies, financial analysis, and Netsuite, she has brought a wealth of knowledge and excitement to our accounting department. John Liccardo has joined the shop team in Fremont to assist with shop and facility operations, an important role that helps maintain a clean and organized workplace. And at our shop in Washougal, we recently welcomed Richard Heine. Rich joins us as a Fabricator I to assist with the manufacture of electrical control panels and piping skids.



Finally, we are pleased to announce Nationwide's new Business Development Manager, Nick LeJeune. Nick's previous experience with Superior Boiler and his extensive background in the industry adds tremendous depth and experience to our already robust team. Nick has relocated to our new Houston Area facility and will be working closely with our network of representatives. He will also take the lead on some of our larger boiler projects, both domestic and international.

The growth that we have had at Nationwide Boiler in the last ten years has been exponential, and we are excited to continue making moves within our industry!

EMPLOYEE SPOTLIGHT: JIM SOUZA

Sometimes you just get lucky. Jim Souza came to our office more than 30 years ago fresh out of the Navy after finding our job listing in the phone book. No referrals, employment agencies, or recruiters; he just walked in off the street. Today, Jim has grown to become the single best boiler service technician we know.

"Being in the boiler industry 43 years, I've come to know a lot of boiler companies and boiler techs. Jim is hands down the best and I am so glad he is on our team," stated Larry Day. "Many of our customers have actually tried to hire Jim after experiencing his technical abilities firsthand. Fortunately for us, he has always turned them down so his loyalty to Nationwide is one of his major attributes."

Larry continued to say, "Secretly, I like to call Jim, 'Uncle Bob'. My Uncle Bob could fix or build anything, a man of im-

mense mechanical talents and intellectual wisdom. He was the most industrialist man I knew and when I was young, he put all other fathers and men to shame as far as productivity. Jim is like my Uncle Bob."

Jim Souza is an all-around Service Tech and will do anything needed to get the job done. He is an ASME



code welder, refractory and insulation expert, and master pipefitter. He can run conduit, read wiring diagrams and troubleshoot problems, as well as set combustion curves using the old pneumatic controls or program PLC controls on his laptop whether single point, parallel positioning, or fully metered.

Furthermore, Jim is an expert low NOx service tech having grown with us over the last 3 decades. Going from 40 ppm down to 2½ ppm NOx, he has mastered the myriad of burners and SCR technology we use to achieve these outstanding results. We are hopeful that he will stick with us to train the next generation of Nationwide Service Technicians.

We are also excited for Jim as he transitions to managing our Texas storage and maintenance yard, and we wish him all the success in the world.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT
COMPLIANCE PLAN

Greenhouse gas and emissions reduction is at an all-time level of importance. While the push to clean the air is no longer just in California, some major changes have been made recently in the San Joaquin Valley Air Pollution Control District (APCD). Specifically, rules 4306 and 4320 which apply to gaseous or liquid fuel fired boilers, steam generators, and process heaters with a total heat input greater than 5 MMBtu/hr.

For units between 5 and 20 MMBtu/hr, whether governed by Rule 4306 or 4320, the primary compliance option is to **meet a limit of 5 ppm NOx by 2023**. For units greater than 20 MMBtu/hr, whether governed by Rule 4306 or 4320, the primary compliance option is to **meet a limit of 2½ ppm NOx by 2023**. If compliance is proven at either limit via source testing, end users will not be subject to any additional emission fees.

However, if an alternate compliance option is chosen (from 5 to 9 ppm NOx based on heat input - see table below), end-users may be required to pay additional annual fees of \$9,350 per ton of NOx emissions. Fees are based upon the tons of NOx emitted annually, between zero NOx and the permitted NOx limit.

Regardless of which method of control is chosen, the SJVAPCD will require each facility to submit an Emissions Compliance Plan no later than May 1, 2022.

With a history of providing reliable, ultra low NOx solutions, we are able to assist end-users in understanding these complex regulations. We can then help with evaluating and selecting a proven equipment solution, if required, and completing the compliance plan process.

Give us a call today to schedule a date to review, and to begin developing your mandatory compliance plan.

	INPUT	MAXIMUM REQUIREMENT	COMPLIANCE DUE (based on existing permit)
RULES 4320 AND 4306	units rated from 5 to 75 MMBtu/hr	7 ppm NOx	≤ 9 ppm: Dec 31, 2029 ≥ 9 ppm: Dec 31, 2023
	units rated > 75 MMBtu/hr	5 ppm NOx	≤ 7 ppm: Dec 31, 2029 ≥ 7 ppm: Dec 31, 2023
	firetube boilers from 5 to 20 MMBtu/hr	5 ppm NOx	≤ 9 ppm: Dec 31, 2029 ≥ 9 ppm: Dec 31, 2023
	any other unit from 5 to 20 MMBtu/hr	9 ppm NOx	≤ 12 ppm: Dec 31, 2029 ≥ 12 ppm: Dec 31, 2023



Burner Control Panel & Fuel Skid (left), Make-up Air Burner Assembly (above)

SUPPORTING SUSTAINABILITY INITIATIVES

Sustainability as a concept recognizes that the environment is an exhaustible resource, and we need to do what we can to preserve the environment for future generations. While we have our own goals and efforts here at Nationwide to help lead our industry in becoming more sustainable, many of our customers are doing their part as well.

One customer in particular is nearing the completion of a major project that will provide significant improvements in water and energy usage, enabling them to be one of the lowest-cost producers of high-quality, coated recycled board (CRB) paper machine. More than five years in the making, the installation of this new CRB machine is expected to reduce water usage by 300 million gallons per year, generate 20% less greenhouse gases, and reduce electricity use by 18%.

Pacific Combustion Engineering was chosen as the supplier for a portion of this major project. This included the supply of 14 make-up air burners that are now being used to heat the building that will soon house the new CRB machine. Our team of engineers designed, fabricated and supplied the burner assemblies, pre-fabricated interconnection piping, fuel skids, and control panels.

Protection from the elements was cru-

cial in this project, being that the control systems and fuel skids were to be installed on the outside of the building. Our engineers provided a solution rated for the cold winter and heavy snow conditions typical of the region. This meant that the BMS controls weren't the only components housed in a weatherproof enclosure. The main components of the fuel train were also piped, wired, and housed inside of a NEMA 4 enclosure for protection.

Another unique aspect of this project was that the make-up air heating units needed to be installed and commissioned ahead of the new CRB machine. Paper machines are very complex, so it was critical that the inside of the building was at the proper temperature to ensure the required tolerances of the new equipment. This meant that our units needed to be operable with a stand-alone control system, and online during the installation phase of the new CRB unit.

As the new CRB paper machine comes online later this year, the make-up air heaters will eventually be controlled via our customer's distributed control system (DCS). Once ready, we will dispatch an engineer to the site to interface our PLC-based control system to their DCS via an ethernet network within the new plant.



CRITICAL BOILER COMPONENTS: LOW WATER CUT-OFFS

We all know boilers are inherently dangerous, which is why they are equipped with multiple critical components that are designed to ensure a safe operating condition. Whether a steam or hot water design, maintaining a minimum permissible water level is critical to the safe operation of your boiler.

A hot water boiler typically operates within a closed loop environment, where the vessel remains at a flooded state throughout the operating cycle. By contrast, a steam boiler's water level is dynamic and fluctuates as the water is heated and converted to steam. As the steam exits the boiler and flows to the process, an equivalent volume of make-up water must be pumped into the boiler to maintain a safe operating level. Due to the dangers associated with a boiler that is allowed to operate at an unsafe water level, redundant low water cut-off (LWCO) devices are required.

Equipped with an automatic reset switch, the **primary LWCO** is designed to shut down the burner if the water within the boiler falls to an unsafe operating level. Once the proper water level is achieved, the primary LWCO will restart automatically, without operator intervention. The **secondary LWCO** is designed to provide a second layer of protection against an unsafe water condition. While both the primary and secondary devices typically include audible and visible alarms, the secondary device is equipped with a manual reset switch requiring direct operator intervention before the boiler can be re-fired. The intent is for an operator to investigate the situation and learn why the primary LWCO failed to function.

If these critical safety devices fail to function as intended, a low water condition can lead to overheating of the boiler internals, boiler failure, and in extreme cases, a catastrophic boiler explosion. To help avoid this situation, the primary LWCO must be tested daily for single shift operations and once every eight hours for multi-shift operations. This routine testing is typically accomplished by blowing down the water column until the primary LWCO trips, the alarms sounds, and the burner shuts down. The secondary LWCO should also be tested for proper operation at regular intervals.

While LWCO devices are typically very reliable, there are scenarios that can lead to a dangerous malfunction. This includes, but is not limited to, (1) buildup of mud and debris, (2) improper maintenance, (3) improper or damaged wiring, and (4) steam leaks within the water column. Never alter or disable the LWCO, and practice proper care, maintenance and regular testing to prevent downtime and damage to your boiler. When in doubt, contact a capable boiler/burner service professional for assistance.

Lastly, should an added level of safety be desired, a high stack temperature limit can be installed and wired into the burners running interlock circuit. This device provides an additional layer of protection by monitoring a separate operational condition that can identify a developing and dangerous low water level, damaged fireside baffles, excessive fireside scaling, or burner over-firing. If any of these conditions occur, the high stack temperature limit can help initiate a safe shutdown of the burner.

NBI REP SPOTLIGHT: AUJAN INDUSTRIAL SOLUTIONS

Although it's in our name, we are not just a 'nationwide' company. In fact, Nationwide Boiler has supplied equipment to customers in 6 of the 7 continents in the world. Since we can't be everywhere at once, this is why we developed a network of representatives - to provide local support for our customers not just in North America but worldwide.

Aujan Industrial Solutions is the Nationwide Boiler representative for the Middle East. Founded in 1977 and with headquarters in Khobar, Saudi Arabia, Aujan is an industrial equipment supplier and manufacturer's representative with extensive experience in the industry.

Aujan was a key player in our recent the rental and sale of (3) 200Kpph boilers to Saudi Aramco in Jizan, Saudi Arabia. Not only did they provide local support and direct communication



with the end-user throughout the duration of the project, but they were also instrumental in developing our second rental project that is still ongoing in the country. With the time difference and language barriers, the support Aujan provides has been invaluable.

We appreciate our relationship with Aujan and look forward to developing additional opportunities for the betterment of both of our companies.



Installation of six (6) 75,000 lb/hr trailer-mounted boilers with SCR's (above)



After demobilization of all rental equipment (below)

LARGE INVENTORY LEADS TO LARGE RENTAL PROJECTS

Last year the big news at Nationwide encompassed the largest sale in our company's history, which included three (3) 200,000 lb/hr package watertube boilers. This project began as a rental, and eventually the customer decided to buy the rental boilers, economizers, and deaerator that we had supplied. So what began as our largest rental project turned in to the largest sale in the history of our company.

Coining a project the "largest in company history" can actually be looked at in a number of different ways. Largest in terms of steam capacity supplied, revenue incurred, or even length of the rental. Believe it or not, the longest rental we have had lasted 20 years! And the 70,000 lb/hr rental boiler that was at a site for 20 years is still in our fleet providing reliable, temporary steam to this day.

This summer, we wrapped up another major project that can easily be coined as one of our largest. While it didn't quite make it to 20 years, nor was it 600,000 lb/hr of steam, it is one of our largest rental projects to date in terms of equipment supplied and revenue earned. This project, which began in the Fall of 2017, provided roughly 450,000 lb/hr of superheated process steam during the installation of a new, permanent steam plant.

To meet the total steam demand required of this project, we provided (6) 75,000 lb/hr, 750 psig / 750F superheat trailer-mounted rental boilers. In addition, this temporary equipment needed to satisfy the strict emissions regulations in the state of Texas. To do so, each boiler was equipped with a urea-based CataStak SCR system. All units were installed side-by-side and provided steam to the refinery for more than three years.

That's six boilers, six SCR systems, six urea supply skids, and numerous pieces of duct work, transition pieces, gas regulators, and other components necessary to complete this temporary steam plant. And we are happy to report that the equipment left a happy customer.

"The last of the Nationwide equipment left the site yesterday, and I would just like to say 'Thank You' to you and your team," stated the customer's Project Manager. "The last ~3 years, the service you provided to us was instrumental in keeping the complex in a healthy steam condition. When challenges arose, [Nationwide] worked with us to remedy in a timely fashion and always in a professional manner. Thanks again and look forward to working with you guys [in the future]."

AFTER WORK WE PLAY! MAINTAINING COMPANY CULTURE

There are many clear benefits to having a solid, unified company culture. When people feel that they are a valued part of an organization, they're more likely to stick around for the long term. Employee engagement is increased, leading to motivated and connected workers. And studies show that employees believe that a strong company culture enables them to produce their best work.

At Nationwide Boiler we strive to maintain our close-knit, family values and the culture that our company was built upon. We do so in many ways, including yearly goal setting, coming up with innovative, WOW projects, and celebrating employee and company successes. COVID has made this difficult, but we have been able to gather and celebrate in a safe manner and will keep at it even as the pandemic continues. Sporting events are also a big part of our company culture and if you know our President, Larry Day, that may not be a surprise. After a year of no sports, it has been great to get back out there.

Our first employee sporting event of the summer was the San Jose Earthquakes vs. Houston Dynamo. While the soccer game ended in a tie, this is always a fun event and great venue that offers a large space for our families to enjoy the game while socializing and catching up with coworkers. We're looking forward to another Earthquakes game later this year.



Our latest outing took place in the Presidential Suite at the Oakland Coliseum where the A's dominated against the Texas Rangers (and no, this TX theme has nothing to do with our new facility). We had a great view, good food, and we even had a first timer in attendance: our shop supervisor's now one-year old, Austin Horne.

Our final sporting event of the year will be "The Big Game" at Stanford. After a loss and then a year off, we're excited to find out if Stanford can pull through with a win against their local rival, the California Bears.



STOCK BOILER INVENTORY SPOTLIGHT



50 HP, 150 PSIG

New Precision
Zero Emissions
Electric Boiler System

350 HP, 250 PSIG

New Superior, Low or Ultra-Low NOx
Package Firetube Boiler

80,000 PPH, 250 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

HIGHLIGHTS FROM OUR 40TH ANNUAL CHARITY GOLF TOURNAMENT



IDEA ANNUAL CONFERENCE

Sept 27 - 29, 2021
Austin, TX



DOWNSTREAM CONFERENCE

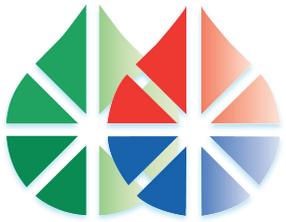
Oct 12 - 15, 2021
Houston, TX



WASHINGTON HEALTHCARE CONFERENCE

Oct 19 - 22, 2021
Kennewick, WA

OFFICES LOCATED IN FREMONT, CA - VISALIA, CA - WASHOUGAL, WA - ALVIN, TX
EQUIPMENT & REPRESENTATIVES LOCATED NATIONWIDE



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