

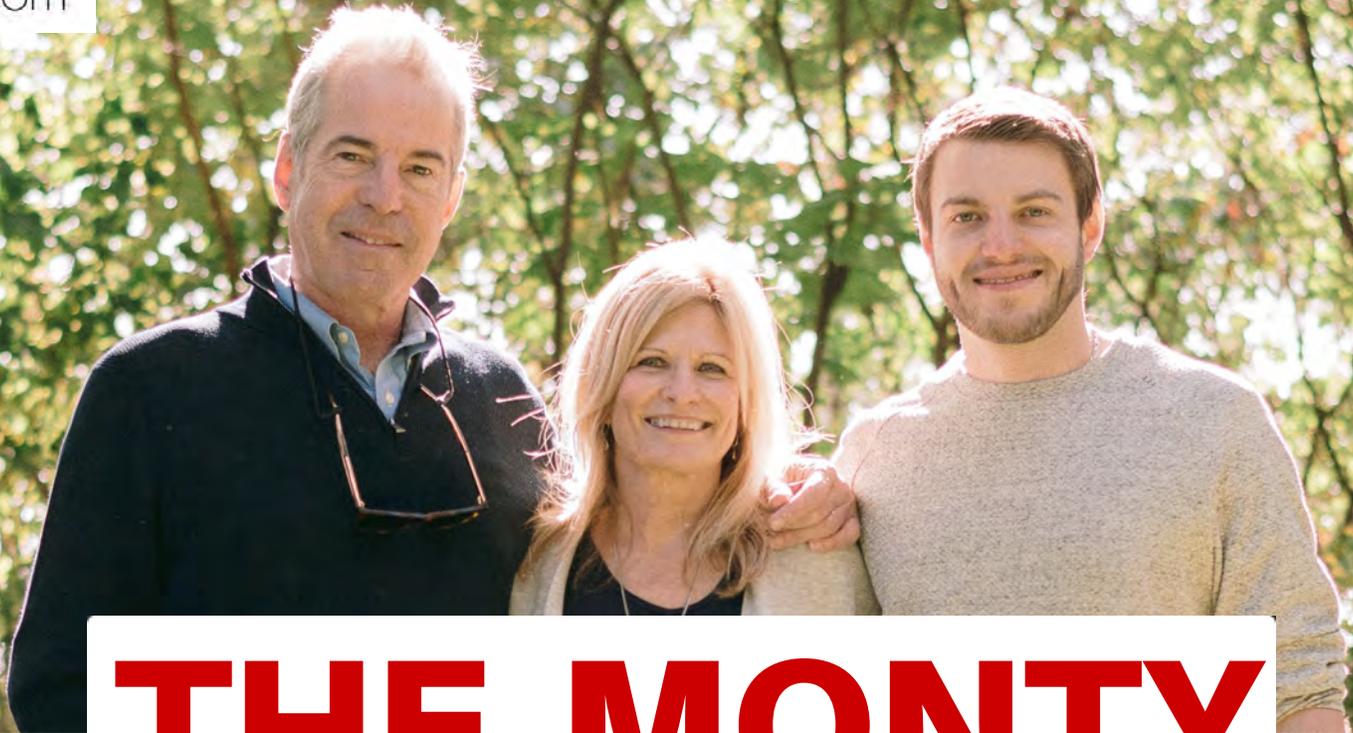
The background of the advertisement is a photograph of an industrial facility. In the foreground, a large, cylindrical heat treatment chamber with a circular door is visible. The door is open, revealing the interior. To the right of the chamber, there is a complex assembly of pipes, valves, and electrical components. In the background, more industrial equipment and structural elements of the factory are visible. The lighting is bright, typical of an industrial environment.

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# THE MONTY

## HEAT TREAT NEWS

WG Montgomery Ltd. is a third generation family owned business founded in 1969 by William Gordon Montgomery to service the worldwide heat treating industry. In 1999 the company starting publishing "The Monty Heat Treat News" digital magazine which was quickly followed by a website dedicated to the industry [www.themonty.com](http://www.themonty.com) "The Monty" is dedicated to providing the most up to date news and trends in the global heat treatment industry. Our readership consists of many of the largest captive heat treaters on the planet as well as commercial heat treaters and industry suppliers.



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## Fiat Chrysler Automobiles (FCA), Marysville, Michigan, USA Heat Treat Department

Oct 30, 2020



Back in 2008 what at the time was Chrysler LLC joined forces with German auto parts supplier ZF Friedrichshafen AG to produce a new axle manufacturing alliance. The partnership utilized Chrysler's new Marysville (Mich.) Axle Plant to build three families of state-of-the-art axles for improved fuel efficiency. Production started in early 2010 in what was at the time a 7000,000 square foot plant with the goal of producing approximately 500,000 axles per year. Fast forward to 2020 and we see that FCA plans on spinning off the plant to ZF Corp., in what is an amicable separation. What does this have to do with heat treating? Well it just so happens that this facility has a very substantial in house heat treating department. When production started back in 2010 the facility included several single row pusher furnaces supplied by Williams Industrial Service, Inc., of Bowling Green, Ohio. Since that time the heat treating department has expanded several times and now includes numerous Williams pusher furnaces combined with HEES press quenching systems, making it a very modern, impressive captive heat treat.



**Brett Burns, General Manager, Bodycote, Fort Wayne, Indiana, USA**

Oct 29, 2020



It is our understanding that Mr. Brett Burns recently became General Manager of the Bodycote, Fort Wayne, Indiana, USA facility. Brett was previously at the Canton, Michigan, USA facility. As the world's largest commercial heat treater Bodycote probably needs no introduction from us. The Fort Wayne location is not the standard Bodycote location in that this facility offers continuous furnace heat treat processing, not a staple of most Bodycote plants. In this photo Brett is the fellow in the mask-what a strange world we live in.



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## Nickel Pricing-The Key to Alloy Pricing

Oct 28, 2020

As we all now the main driver of alloy pricing is nickel pricing, in other words what you pay for fabricated baskets, cast radiant tubes, base trays, muffles and every other component which goes into a furnace is largely determined by the price of nickel. At the low end of the scale HK material consists of roughly 20% nickel, at the high end of the scale you find Inconel 600 material with a nickel content of at least 72%. So how are we doing this year? Not bad at all as you can see in our 1 year graph of nickel pricing. We feel confident in saying that there will not be dramatic swings in alloy pricing either up or down in the short term.



## Heat Treatment Safety

Oct 28, 2020

It can be easy to forget that heat treating can be a dangerous industry but examples abound of tragedies that have occurred either through equipment malfunctions, carelessness, mistakes or a combination of all of these. Recently we were approached by a captive heat treater who operates a number of vacuum furnaces-he was relatively new to the industry and he was asking about safety around his department and what should be considered. This prompted a discussion about the potential dangers of inert gases and suffocation and we used an example which occurred in North America a number of years back. We have deliberately removed the location, make of furnace and the company involved-our intent is to remind heat treaters that safety always needs to be considered in our industry. What you see below is the OSHA report on the accident.

*“At 9:30 a.m. on May 17, 2001, an accident occurred at the employer’s facility. At the time of the accident, Employee #1, a maintenance worker, was working to repair a hydraulic leak on the inside of a XXXX Vacuum Furnace. This furnace opens to the side and has a quench oil tank, 6-feet in diameter by 9-feet deep, on the inside which is used to cool metal parts once they have been heat treated under vacuum. Once the parts have been placed in the quenching tank by the parts elevator, the furnace is backfilled with an inert gas, either argon or nitrogen, to replace the vacuum from the system. The oil from this tank was drained three days before the accident in order to service the hydraulic lines and the motor located at the bottom of the quench oil tank.*

*While Employee #1 was working, he collapsed into the empty quench oil tank. Employee #2, the maintenance worker’s supervisor, who was in the area called for help and climbed into the furnace to attempt to render aid to Employee #1. Employees in the area who heard the call for help came to the furnace and saw Employee #1 lying on the elevator yolk and Employee #2 slumped next to him. At the time of the accident, the electrical panel for the furnace was energized and the argon and nitrogen valves on the pipes for the inert gases to Furnace Number 9 were open. There is a solenoid valve in-line on each of these pipes which controls gas release for the treatment cycle. It is not clear why or which gas was delivered to the furnace. However, witnesses at the site stated that the selector switch on the operation panel was selected for argon. Employee #1 and Employee #2 were not wearing a harness or retrieval lines. The fire department retrieved the two employees, who were pronounced dead at the hospital. The coroner’s report lists the cause of death for both employees as suffocation.”*

## CIBS GmbH-A New HT Rep Firm in Germany

Oct 28, 2020

Earlier this year *Martin van Rossum* and *Michael Aurand*, two individuals who have spent most of their working lives in the European heat treat industry



founded manufacturers rep firm *CIBS GmbH* in Kleve, Germany. Since their beginning the company has signed rep agreements with companies such as *ECM, Inductotherm, Blue Power, Stange, Isserstedt, Courth and Thermocontrol.*

In the past Michael was head of the Service Center at SECO/WARWICK Germany GmbH and Ipsen International GmbH while Martin has worked with companies such as Nespi International GmbH, IHU-Unna, IBW-Irretier-GmbH, SECO/WARWICK and Courth Edelstahl GmbH.

We wish them the best of luck, more details about the company can be found at <https://cibs.gmbh/>





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## Kyle Favors, Heat Treat Depot-A Novel Idea in the Heat Treating Industry

Oct 27, 2020

In South Carolina, USA *Kyle Favors* has made a real name for himself in the heat treating industry through his rep firm “*CF Thermal*” and his calibration/service company “*Heat Treating Services Unlimited*”. Kyle recently launched another venture, “*Heat Treat Depot*” whose banner ad can be found on the right side of the page. Heat Treat Depot is a rather unique idea and one which we predict will be quite successful. To cut a long story short “*Heat Treat Depot*” has a vast stock of new and used heat treat components, the twist is that while the company offers some larger items, the real focus is on smaller items such as alloy components, valves, switches, power supplies-the myriad of small parts necessary to keep a heat treat department running. <http://heattreat.store/>



## Phil Hilger Promoted to Director of EHS, Engineering & Purchasing at Premier Thermal

Oct 27, 2020

Premier Thermal is one of the largest commercial heat treaters in North America as ranked by “The Monty Heat Treat News” <https://themonty.com/project/largest-north-american-commercial-heat-treats-august-2020/> Phil’s career in the industry spans several commercial heat treats as you can see in the summary below;

*“Phil Hilger has over 20 years of heat treating and heat treat equipment design/rebuild experience. Phil began his career in 1997 working at Guardian Industries as an engineer on the glass annealing and forming furnaces. In 2000, Phil began working for Al-Fe Systems as an engineer; designing, building and refurbishing heat treat furnaces. Phil advanced to Lead Mechanical Engineer at Al-Fe Systems. This included managing the design and project management group. In 2008 Al-Fe Systems was closed and Al-Fe Corporate decided to focus the operations on heat treating. As a result Phil was moved to Al-Fe Corporate Group with responsibility for the Engineering, Safety, and Environmental departments. In 2013 Phil began a role as Senior Project Engineer for Superior Essex. In this role, Phil was responsible for new*



*design and installation, and upgrades to existing wire enameling ovens and ancillary equipment for the global company.*

*In 2016 Phil returned to Al-Fe Heat Treating as the Engineering Manager. Premier Thermal purchased Al-Fe in 2018 and Phil was retained as the Engineering and Purchasing Manager. In 2020, Phil was promoted to Director of EHS, Engineering, & Purchasing. Phil has a B.S. in Mechanical Engineering Technology from Purdue University, a Six-Sigma Green Belt from Cuyahoga Community College, a Leadership Certificate from Notre Dame and has also completed the Project Management training courses from PMI.”*

## **What's It Worth-Refurbished Ipsen T-7 Atmosphere IQ Furnace**

Oct 25, 2020



So what do you think a refurbished 1964 Ipsen Batch IQ furnace is worth-well we can tell you exactly what it is worth in the current market. What you see is a batch IQ furnace manufactured by Ipsen in 1964, Model T7-1000-DGM with working dimensions of 30" wide X 48" deep X 20" high. The furnace is gas fired and capable of Carburizing, Neutral Hardening and Carbonitriding comes with a loader, spare parts and ammonia tank.

The story behind this furnace is that it was refurbished by Unitherm (a furnace builder in Missouri) in 2015 down to bare metal, converted to Eclipse Recuperative Burners, new wiring and SSI controls, basically everything but the shell is new. Unit was even rebricked just two years ago. Cost for all of this? We don't know but \$150K is probably on the low side. Asking price was dropped several times and at the time of sale just a couple of weeks ago it was at \$49,000. Bottom line is it sold for \$20,000 USD, we are not surprised.



Generally we at "The Monty Heat Treat News" consider a furnace built in the 1960's to be worthless, however in this case it was basically almost new because of the rebuild project. However many buyers can't see beyond the original build date and combined with the relatively small size of the furnace it ended up selling for a

fraction of what the original owners invested in it which is a shame. By the way we reference the small size of the furnace as being a deterrent to the sale, except for some captive heat treaters and commercials in areas with small volumes such as parts of the US west cost and the US Northeast most heat treaters would consider this too small for their needs.

The moral of the story is that sometimes it doesn't make sense to invest in upgrading a very old furnace.

## Aerospace Supplier Egile Group Spain Installs Two New Vacuum Furnaces

Oct 25, 2020



French furnace builder BMI recently delivered and commissioned two vacuum furnaces for a Spanish customer, Egile Group. "Egile is a promising new actor on the market of aero transmissions. We have just validated the final acceptance of the furnaces which are both AMS2750F compliant and NADCAP certified.

The customer manufactures critical components that will be part of engines and aircrafts made by the industry leaders such as Safran, Airbus, Rolls Royce, Pratt & Whitney, GE Aviation, Guimbal. To heat treat these parts, the customer is equipped with a tempering and low pressure nitriding furnace, type B55RN, as well as a dual-chamber vacuum furnace type B64THC, allowing to do oil quenching, gas quenching and low pressure carburizing. Today, more than 60 BMI furnaces are in operation in Spain. The Spanish market has grown remarkably in the last five years, making Spain a major player in the development of European manufacturing.



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## Gasbarre Installs Vacuum Oil Quench Furnace

Oct 25, 2020

To go with this interesting press release from US furnace builder Gasbarre we have this photo of part of the team which *“The Monty Heat Treat News”* took at the ASM heat treat exhibition in Mexico in March of 2020.

*“Gasbarre Thermal Processing Systems is pleased to announce the recent commissioning of a Vacuum Oil Quench Furnace, which included 2 BAR gas quench capabilities to an international manufacturer. The batch system, with isolated graphite heating chamber, is capable of processing 12” wide by 12” high by 36” long loads weighing up to 500 pounds, and is rated to 3000°F. The modular furnace design gives the customer the capability of utilizing the 2 BAR gas quench in the heating chamber, or transferring through internal doors to the oil quench module. The Gasbarre designed Allen-Bradley control system ensures precise control to the customer’s strict requirements. Gasbarre was chosen as the equipment supplier based on the unique modular design that achieves both process flexibly and maintenance ease.*

*With locations in Plymouth, MI, Cranston, RI and St. Marys, PA Gasbarre Thermal Processing Systems has been designing, manufacturing, and servicing a full line of industrial thermal processing equipment for nearly 50 years. Gasbarre’s product offering includes batch and continuous thermal processing equipment for both atmosphere and vacuum applications as well as a full line of alloy fabrications, replacement parts and auxiliary equipment which consists of atmosphere generators, quench tanks, washers and charge cars. Gasbarre’s equipment is designed for your process by experienced engineers and metallurgists that understand your requirements.”*



*Left to Right; Bill Gasbarre, Mark Saline, Ben Gasbarre, Humberto Bastides*

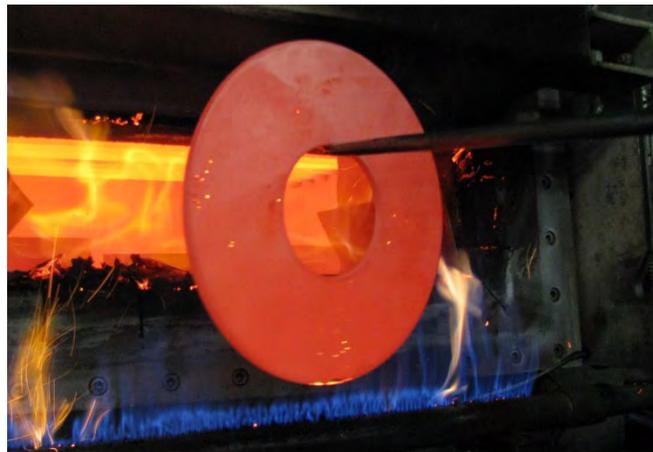
## Hestia Heat Treat, Racine Wisconsin To Add Nitriding Capacity

Oct 23, 2020



Out in Racine, Wisconsin, USA we see that commercial heat treater Hestia Heat Treat which was formerly Racine Heat Treat is making an impressive investment. *Darius Szczekocki*, the owner recently made the decision to invest in a new *Nitrex* gas nitriding system. For some background on the company we would refer you to the press release below which we published back in 2017 when Darius purchased the company. For more information about Hestia we would also suggest <https://hestiaheattreat.com/>

*“May 1/2017 Hestia Heat Treat, Racine, Wisconsin; If you are scratching your head asking who the heck Hestia Heat Treat is you are certainly not alone as we had not heard the name until yesterday. Hestia Heat Treat is the new name of Racine Heat Treat in Racine, Wisconsin, USA. Racine HT has been around for many years with at least two owners in the past few years, however very recently it was bought by a fellow by the name of Darius Szczekocki who brings to the company a new name and a wealth of experience. Darius has spent a number of years in the industry with companies such as Bodycote and most recently as General Manager at Bluewater Thermal another commercial heat treater. Hestia Heat Treat has a number of Ipsen batch IQ furnaces and vacuum units. We wish him the best of luck.”*





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## Certified Heat Treating, Springfield, Ohio/Promotions

Oct 22, 2020



January of 2018 Certified Heat Treating in Springfield, Ohio, USA was acquired by Thermal Process Holdings. Since that time the firm has seen some changes, today we are pleased to announce recent promotions. Further down we have an earlier press release from the company.

*“Certified Heat Treating (A division of Thermal Process Holdings) would like to announce that Mark DeBruin has been promoted to Vice President of the Ohio Region. Dan Antrim (pictured on the right) has been promoted to Plant Manager.”*

*“October 26, 2019; Thermal Process Holdings announces Mark Debruin as Plant Manager for Certified Heat Treat, Springfield, OH. Todd McDonald, CEO TPH, is pleased to announce the appointment of Mark DeBruin as Plant Manager of Certified Heat Treating, a commercial heat-treating operation located in Springfield, Ohio. Mark is a degreed Metallurgical Engineer and certified Six Sigma quality professional with extensive experiences that includes thermal processing and machining of metals. Mark has held a variety of positions including Technical Director, Operations Manager, Plant Manager and General Manager within the steel and iron foundry industry and induction furnace industry. Mark has a focus on continuous improvement and expertise in TS-16949 and ISO 9000 quality management systems. Mark will report to Ken Robinette, Regional Vice President, supporting the growth of Thermal Process Holdings commitment to customer satisfaction, employee engagement and performance excellence.*



**ABOUT THERMAL PROCESS HOLDINGS, INC;** *Thermal Process Holdings was formed by Calvert Street Capital Partners and John Hubbard (former CEO of Bodycote, PLC) to pursue a buy-and-build strategy in the thermal processing industry. The team has a stated goal to build a diversified, professionally-managed thermal processing business generating over \$100 million of revenue. TPH currently owns and operates four businesses: Diamond Heat Treat, based in Rockford, IL; Certified Heat Treating, based in Springfield, OH; Hudapack Metal Treating, based in Elkhorn and Franklin, WI; and P&L Heat Treating, based in Youngstown, OH. TPH is actively seeking other add-on acquisition opportunities.”*



*Mike Trimble, Maintenance Manager, Dan Antrim, Plant Manager*

## **Solar Atmospheres of California and Kittyhawk Form Strategic Partnership** Oct 22, 2020

*Solar Atmospheres of California and Kittyhawk are pleased to announce a strategic partnership for heat treating and hot isostatic pressing services. Kittyhawk, has been providing excellent, timely and economical hot isostatic pressing (HIP) services since 1981 for companies in the aerospace, commercial, military, medical, automotive, firearms and oil and gas industries. Solar Atmospheres provides quality vacuum heat treating services with bright, clean results and minimal distortion. The partnership comes at a perfect time as customers have been searching for value added propositions. As many parts require heat treating and HIP, the relationship allows the customer to work with two companies that have extensive experience and a strong reputation within the industry. Solar Atmospheres and Kittyhawk are both Nadcap, ISO9001, and AS9100 certified, and maintain source approvals for a full line of major aerospace primes.*

*“The partnership between Solar Atmospheres and Kittyhawk is a natural fit as both companies are market leaders in their respective industries. This*



partnership allows the customer to take advantage of hot isostatic pressing and heat treat without having to look further. I am very excited about the future and more importantly providing our customers with two of the best options in the service industry,” states Brandon Creason, President of Kittyhawk.

Derek Dennis, President, Solar Atmospheres of California adds, “In response to the needs and requirements of our valued customers, Solar Atmospheres is delighted to partner with a high caliber organization like Kittyhawk to provide hot isostatic pressing services. Both companies share a strong focus on quality and bringing a valued service to our customers, coupled with a best in the industry level of customer service and responsiveness, and you have a winning partnership for success.”



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- Temperature uniformity  $\pm 10^\circ\text{F}$  between 800°F to 2150°F, AMS 2750F Compliant
- Weight capacity up to 5000 pounds
- Internal gas quenching up to 15 PSIG (2 Bar)
- 150 HP gas blower motor
- SolarVac® PC based control system
- Full one year warranty



## HFL-3836-2EQ

### Ready for Quick Delivery!

This furnace was manufactured in 2013, completely refurbished with a new graphite insulated hot zone.

- Graphite insulated hot zone:  
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- Operating temperature up to 2400°F
- Temperature uniformity  $\pm 10^\circ\text{F}$  between 800°F to 2150°F, AMS 2750F Compliant
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- External gas quenching up to 15 PSIG (2 Bar)
- SolarVac® PC based control system
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- Weight capacity up to 250 pounds
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## Rassieur, Benjamin Franklin, Paulo Products

Oct 21, 2020

It is with regret that we hear about the passing of Benjamin Franklin Rassieur who we know of through Paulo Products Company. Paulo is the second largest commercial heat treater in North America and we have met many of the Rassieur clan over the years, all of whom are good people.

*“Monday, October 19, 2020, we lost Benjamin Franklin Rassieur, Jr. at the age of 93. A man of intelligence, dry wit, and integrity, he will be missed by all who knew him. A life-long St. Louisan, Frank was born March 13, 1927 to Pauline (nee Fite) and Ben Rassieur, a couple in marriage and in business. In 1943, his parents founded Paulo Products Company, which found its niche as a heat treater of metals. Joining the firm full-time after college, Frank built it into a highly respected, multi-state operation. He retired as Chairman Emeritus after six decades of service.*



*A true family business, the company is now run by his sons Ben and Terry and includes its fourth generation of Rassieurs. Frank felt strong kinship to his employees and remained in touch with several well after his retirement. Though modest about himself, he was extremely proud of them. For his development of numerous heat treating and brazing applications and his pioneering efforts in computerizing all aspects of heat treating, the American Society for Metals (now ASM International) honored him with the George H. Bodeen Heat Treating Achievement Award, named for his arch competitor and dear friend.*

*His first marriage, to the late Mary Terry, lasted twenty five years. Together they raised three sons. Subsequently, he married Mary Vollmer McDonald, who opened him to new levels of warmth as they knit together a large family. Together they've been going strong for four decades. They were longtime snowbirds, spending winters at Loblolly in Hobe Sound, Florida, where they developed friendships with people from across the country. Mary survives Frank, as do his children Ben/Frank (Lynn), Terry (Peggy), Tom (Chichi), his stepchildren Dan (Ann), Missy, and Carrie (Peder), his grandchildren, Ben, Will, Tee (Frances), Nick, Karen (Mark), Emily, Matthew, Rebecca, John, Katie, Koehler, Toby, and Charles, his great-grandchildren, Margaret and Mac, and his beloved nieces and nephews. He was predeceased by his parents and his sister Jeanne.*

*Frank graduated from Community School, John Burroughs School, and Princeton University. He was particularly fond of Burroughs for its outstanding teachers and students. A true believer in education, he taught himself to swim by reading a book and practicing on a dock before entering the water. As a boy, he worked in one of his parents' early entrepreneurial ventures, packing drill bits for three cents a box and used the money to buy books. In the 1960s, he taught himself to program computers and remained deeply engaged in automation and process control even after stepping down from the presidency of Paulo.*

*Duty and service were cornerstones of his life. He interrupted his studies to enlist in the Navy in the late stages of World War II. He served as a trustee of John Burroughs School and the Missouri Historical Society. He served as president of the Metal Treating Institute and was active in the ASM and the American Association of Industrial Management. He taught Sunday school at Central Presbyterian Church and was a longtime congregant of St. Peter's Episcopal Church. He was the president of the University Club. He served on the boards of Manchester Bank and then Commerce Bancshares. He was a generous donor to many local charities and cultural institutions. His interest in opening opportunities to new generations led him to establish a career awareness center and to support scholarships at Burroughs. He quietly mentored young entrepreneurs.*

*For Frank, life held many pleasures, an array expanded by his widow Mary. He sought friendly competition, whether on the tennis court, at the backgammon board or at the bridge table. He enjoyed travel, fishing, bird hunting, crosswords, and sudoku. Harry Carey and Jack Buck's descriptions and accounts provided his summer background music, and he could be found in row 13 of section 264 during the Cardinals' glory years of the 60s. Otherwise, his playlist included hits of the 1920s, opera, marching bands, and Dixieland jazz. His career as an amateur barber was cut short by a complaint from a young neighbor's mother, who had scheduled a shoot with a portrait photographer for later that day.*

*He sailed number 13 in the Thistle class. His kite flying prowess sometimes required emergency trips to the hardware store to get more string for a kite that though still aloft was long out of sight. He trained his intense powers of concentration on household repairs and could occasionally be heard cursing in the process. His inventive approach to fireworks resulted in a Zorro scar that he bore ever after. Frank had an increasingly acute sense for self-preservation. He gave up smoking in his twenties, flying in his forties, fried pork chops and*

hominY in his sixties, and alcohol in his eighties. He enjoyed almond biscotti to the end.

He loved dogs so much that he sometimes resisted getting another one, because the loss of the previous one hurt too much. Nonetheless, Sam, Bruno, Watson, Mitsy, Jenny, Traveller, and Annie marked his heart as well as his carpets. He appreciated his roots. The history of Saint Louis and Webster Groves led him to wander the neighborhoods in search of evidence of cherished loved ones or admired citizens. As a young man, he enjoyed cool summers in Michigan at Central Lake and Charlevoix and always enjoyed seeing a good Petoskey rock.

### New Furnace Installation, Bremen, Germany

Oct 20, 2020



Yesterday as part of our “Monday Morning Briefing” we had a really cool photo of a brand new furnace installation at IWT in Bremen, Germany <https://themonty.com/monday-morning-briefing-75/> What made the photo so interesting was that it was taken in the dark and was bathed in a blue light. We can now add this picture of the entire installation as seen in daylight.



*“This fully automatic Rohde Bell Hardening Center (BHC 50/60) has been delivered and installed in Bremen, Germany at Leibniz-Institut für Werkstofforientierte Technologien - IWT. The main purpose of the system will be process development in the field of gas carburizing. Especially in the field of gas distribution, temperature uniformity and energy efficiency the furnace sets new standards.”*

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**Company IVR is an Italian FURNACE BUILDER with more than 25 years experience, IVR designs and builds customised furnaces for heat treatment of metallic parts. IVR supply includes also installation, client's support and after sales service.**



## Komatsu Mining Corp., Heat Treat Project Update

Oct 20, 2020



As part of our Monday Morning Briefing we had the note below about mining equipment giant Komatsu adding a state of the art heat treating department to their new facility in Milwaukee, Wisconsin. To update this story we can say that the entire heat treatment department will be housed in its own building and the furnaces will be the most versatile in the world-Batch Integral Quench furnaces (IQ for short in North America, Sealed Quench in the rest of the world). While you could argue that the cost per pound of heat treating components in a continuous style furnace such as a pusher are lower, the benefit of a batch IQ is that they are versatile. Different part sizes, different weights not a problem and plus it is far easier to shut down a 3500 pound capacity batch IQ than a large pusher line.

*“For our Monday Morning Briefing for October 19/2020 we start off in Milwaukee, Wisconsin, USA. To begin we will use this press release which appeared just a couple of weeks ago; “Building on its 135-year-legacy in Milwaukee, Komatsu Mining Corp. officially broke ground earlier this month for its new state-of-the-art headquarters and manufacturing campus in Milwaukee’s Harbor District on east Greenfield Avenue. The company recently finalized the acquisition of two parcels of land totaling nearly 57 acres for the project.*



*Partnering with the State of Wisconsin and City of Milwaukee, Komatsu is investing approximately \$285 million in its South Harbor Campus, which will include purpose-built, modern manufacturing facilities; advanced technology, robotics, engineering and R&D labs; a large office complex, training facilities, a data solutions center and an experience center.” When this project was announced back in 2018 one of the details emphasized by Komatsu was that this new project would include a state of the art heat treating facility. We can confirm that this is the case and while we can’t provide details at this point we can say that the heat treat portion of the project is certainly moving ahead.”*

## Komatsu Investing in New Heat Treat Department, Overton Chicago Gear Has a New Heat Treat Manager And More Heat Treatment News

Oct 19, 2020

### Komatsu Investing in New Heat Treat Department, Overton Chicago Gear Has a New Heat Treat Manager And More Heat Treatment News

For our Monday Morning Briefing for October 19/2020 we start off in Milwaukee, Wisconsin, USA. To begin we will use this press release which appeared just a couple of weeks ago; *“Building on its 135-year-legacy in Milwaukee, **Komatsu Mining Corp.** officially broke ground earlier this month for its new state-of-the-art headquarters and manufacturing campus in Milwaukee’s Harbor District on east Greenfield Avenue. The company recently finalized the acquisition of two parcels of land totaling nearly 57 acres for the project. Partnering with the State of Wisconsin and City of Milwaukee, Komatsu is investing approximately \$285 million in its South Harbor Campus, which will include purpose-built, modern manufacturing facilities; advanced technology, robotics, engineering and R&D labs; a large office complex, training facilities, a data solutions center and an experience center.”* When this project was announced back in 2018 one of the details emphasized by Komatsu was that this new project would include a state of the art heat treating facility. We can confirm that this is the case and while we can’t provide details at this point we can say that the heat treat portion of the project is certainly moving ahead.

Moving on to the Chicago area we have this brief update about the new **Bodycote** facility in Elgin, Illinois, USA which we have mentioned in the past. This note doesn’t tell you much, hopefully in the future we can provide more details; *“Bodycote’s facility in Elgin, Illinois, replaces an aging Melrose Park facility. The site will support manufacturing supply chains in the Midwest, and the Melrose Park facility will close once the transfer of customers’ work has been completed. Classical Heat Treatment North America President **Tom Gibbons** says, “Our investment in the new facility enables us to expand our capacity and improve our ability to deliver high-quality heat treatment capabilities to our customers.” Bodycote has more than 70 locations in North America.”*



We now move on to Switzerland for this note from furnace builder **Codere** (whose banner ad can be found on this page).

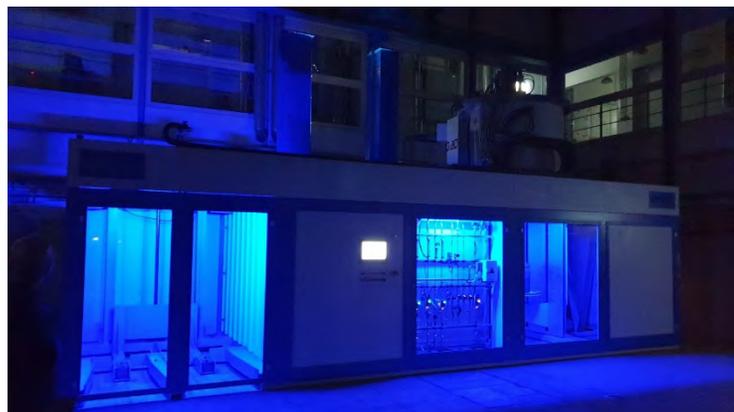


*“During these challenging times **Codere** has obtained orders for two installations in Europe for our System 250 modular batch lines. These installations have been installed with our latest HT View software which has been developed to meet current and future*

*customer demands. Also the final photo is our new nitriding furnace developed internally for nitriding & nitrocarburising processes with hitech atmosphere control settings. For further information on our latest product range, please contact [www.codere.ch](http://www.codere.ch) & you can contact [info@codere.ch](mailto:info@codere.ch)*

*“Italy’s **TAV Vacuum Furnaces** received an order for two horizontal vacuum heat-treatment furnaces from a leading global energy company. The equipment will be used for the production and maintenance of gas turbine components used to generate power from natural gas. The furnaces have useful dimensions of 48 inches wide x 48 inches high x 72 inches deep with a maximum charge weight of 4,850 pounds and peak operating temperature of 2360°F (1293°C). The equipment’s configuration enables quick and easy loading of different volumes using a customized TAV loading truck.”*

Isn’t this a really cool picture of a new furnace installation? It is **Rohde** furnace just installed in Bremen, Germany and this is what the builder has to say; *“This fully automatic Bell Hardening Center (BHC 50/60) has been delivered and installed in Bremen, Germany at Leibniz-Institut für Werkstofforientierte*



*Technologien – IWT. The main purpose of the system will be process development in the field of gas carburizing. Especially in the field of gas*

*distribution, temperature uniformity and energy efficiency the furnace sets new standards.”*



In the UK, **Vacuum & Atmosphere Services** feels the need to brag about a new Ipsen vacuum furnace installation they just did-good for them. *“Delivered this week, VAS have completed the installation of a brand new Ipsen VacTreater horizontal vacuum furnace. Purchased at the beginning of 2020, the Ipsen VacTreater vacuum furnace is the first VacTreater vacuum furnace to be sold within the UK. With a compact design, high versatility & maximum flexibility, the Ipsen VacTreater vacuum furnace has a quench performance of 12 bar cooling pressure.”*

In people news we see that Brian Bishop very recently became Heat Treat Manager at Overton Chicago Gear in Addison, Illinois, USA. Overton Chicago Gear is a gear manufacturing company which heat treats their own products in house and also does some commercial heat treating. Brian is obviously a very experienced fellow having worked with companies such as Bodycote and Diamond Heat Treat in Rockford, Illinois.



In more people news we recently learned that **Ludovic Chouraki** is now HIP Manager at **Accurate Brazing** in Greenville, SC, USA. Ludovic knows his stuff having worked with furnace builder **Ipsen** in the past. Most recently he was Maintenance Manager at Accurate. Accurate has got a really nice set up as you can see in this picture.



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## Brian Reid, Park Thermal

Oct 16, 2020

For 52 years now the names Brian Reid and Park Thermal have been synonymous, but that is no longer the case. Lets provide some background at this point; Park Thermal based in Ontario, Canada provides both new and used heat treating furnaces as well as catalyst for endo generator and salt for austempering furnaces and this is around the world. Brian has always been the man in charge but that changed very recently. Brian parted ways with the company leaving it in

the hands of long time President Jay Mistry. In the meantime Brian has started up another company by the name of "Heat Treat Furnace Solutions" again involved in the heat treat industry. Further updates are coming. In the meantime we have this photo from a few months ago shown Brian and others. Brian is on the right, Gord



Montgomery is on the left and in the middle are the founders of B & W Heat Treating, the Beingsner family. This photo was taken in front of the of B & W Heat Treating facility in Kitchener, Ontario, Canada which at one point was far and the largest commercial heat treater in Canada before the firm was shut down a year ago (that is a story for another day).



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## Why Would Anybody Run a Nitrogen/Methanol System?

Oct 15, 2020



September 23 of this year we ran an article entitled “Why Would Anybody Run a Nitrogen/Methanol System?” <https://themonty.com/why-would-anybody-run-a-nitrogen-methanol-system/> the basis of the article was that Endothermic generator produce an atmosphere similar to a Nitrogen/Methanol system but at a fraction of the cost. The article prompted a number of responses which can still be found on our website.

*Jim Senne* of *MetalPro Resources LLC.*, a manufacturers rep firm in Ohio has looked at this from a slightly different angle in that he is suggesting the relative costs would not be quite as lopsided if the Nitrogen in a Nitrogen/Methanol system was generated on site. One such company which generates their own nitrogen on site is commercial heat treater ETSA, Mexico’s second largest commercial heat treater. In their case they are generating the nitrogen for their vacuum heat treating department but for the same reason as Jim points out here-cost savings.



*“Hi Gord, Your recent post in the Monty about N2/Methanol vs. endo generated gas was quite interesting and got some really good feedback. Your comment about the cost per hour difference, where N2/methanol is 3-4 times more expensive seems about right. Your example calculation has it at 3.5 time the cost of endo generated atmosphere. With such a cost difference, clearly those who are using N2/methanol are doing so for a really good reason in order to justify such a premium.*

*What was not addressed in the article or any of the follow up comments is that the cost of the nitrogen component can be drastically reduced by using PSA generated N2 instead of bulk liquid N2. Your example calculation used \$0.70 per CCF for the N2 cost from a bulk liquid source. With PSA generated N2 at the same purity as bulk liquid (about 99.998%) your N2 cost goes from \$0.70 per CCF to \$0.126 per CCF, reducing the overall cost of the 4500 SCFH N2/methanol atmosphere by about \$10 per hour, a significant savings! South-Tek Systems have many PSA installations in the heat treating industry and their N2Gen systems have proven to be super reliable and the ROI’s are very attractive. In this case, the ROI on a machine capable of making 2000 SCFH*

*at 99.998% purity is about 1.3 years. That's an investment everyone using N2/methanol atmosphere should consider."*

## **Alugen Aluminum Turkey Installs Nitrex Nitriding/Nitrocarburizing System** Oct 15, 2020

Nitrex supplied Alugen Aluminium with a high-performance compact nitriding/nitrocarburizing system allowing the company to bring all manufacturing operations in-house for more optimal work planning and quality control.

Turkish aluminum extrusion company, Alugen Aluminium, recently expanded their production capabilities with the addition of a new Nitrex NXK series nitriding system. Founded in 2012, Alugen is a dynamic company and the only business of its kind in Turkey operating in a free trade zone, with customers in various European countries.

*"Utku Inan, Nitrex sales representative serving Turkey, led the discussion with*



*Alugen about the strategic decision to bring nitriding operations in-house based on improved quality consistency and cost-effectiveness of their gas nitriding processes. Over the years, Alugen has expanded its production to meet growing demand. The addition of a Nitrex system into the company's manufacturing process has increased efficiency and time to market for their customers,*

*supplying profiles reliably and with consistent quality," said Marcin Stoklosa, Project Manager at Nitrex Poland.*

*"Alugen provides mass production extrusion services as well as boutique production to its clients; therefore, Nitrex had to consider the performance benefits of a single system that can handle both custom and mass production requirements. The multipurpose NXK-612 batch-type furnace was a clear choice," noted Utku Inan. With a compact footprint, a work area of 23.5" x 47 ¼" (600 x 1200 mm), and a load capacity of 1700 lbs. (800 kg), the NXK system allows Alugen to mix special dies with regular production dies for a faster turnaround of product-specific production plans.*

Die Shop Manager, Özcan Sürücü, added, “In partnering with Nitrex, we (Alugen) have become self-sufficient from an operational point of view, no longer relying on external contractors to fill this work gap. This allows for more effective planning and ensures that all projects, whether big or small, are done on time and on budget. Moreover, I cannot say enough about the technical support we receive from Nitrex and locally from Utku Inan towards improving our heat treating and extrusion operations as well as our product quality. We are extremely satisfied with the performance and results of our Nitrex turnkey system and the expertise provided by Nitrex beyond the sale of the equipment.”

## German Furnace Manufacturer Simplon Files For Bankruptcy

Oct 14, 2020

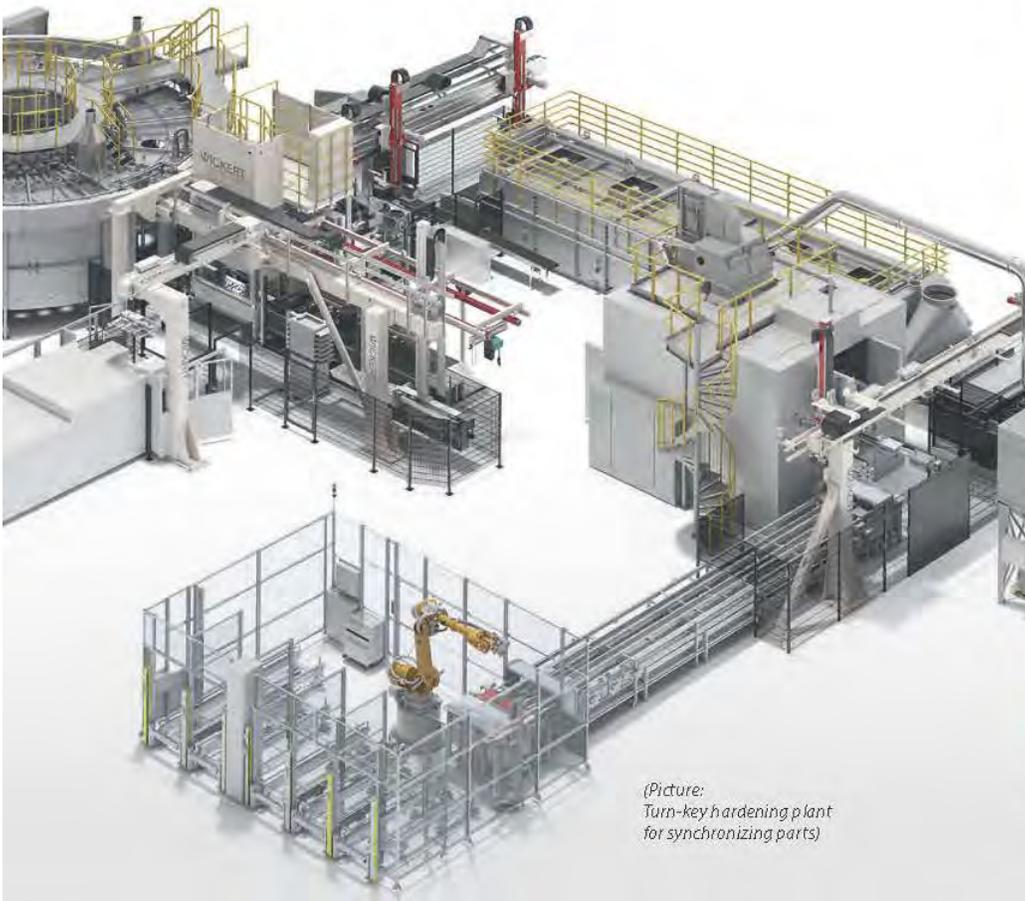
Unfortunately twice in the past week we have heard about German furnace manufacturers filing for Insolvency. In this case Simplon-Werk in Aue, Germany a supplier of heat treatment systems mainly for the automotive industry recently entered insolvency proceedings. The company will continue under court protection with their current 28 employees and will process all in house orders. From the trustees we have this statement’ “*The Simplon plant had experienced a large setback last year due to the failure of a major furnace order from the USA. While the company was able to stabilize things in the first quarter of 2020 the Corona pandemic stopped many hoped for international orders. Sales were down 50-60% at the time the company entered Insolvency.*”



## FIXTURE AND PRESS HARDENING SYSTEMS

Fixture hardening, press hardening, hot forming and hardening

- Fixture hardening
- Press hardening
- Hot forming and hardening
- Press automation



*(Picture:  
Turn-key hardening plant  
for synchronizing parts)*



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## An interview with Mr. Mrinal Nandi of Hofmann Engineering in Australia

Oct 13, 2020



Back in 2018 we ran across a very interesting fellow by the name of Mrinal Nandi who at the time was a metallurgist in India who was looking for a change. Fast forward and today Mrinal is a metallurgist in Australia who is going to tell us a bit about the heat treatment industry in Australia amongst other things.

Mrinal I just gave a very brief summary about your career, perhaps you could tell us how you got into the industry and how you ended up moving from India to Australia.



*First of all, I would like to thank TheMonty.com for this opportunity to share my background, work experience and present my employer, Hofmann Engineering, on this prestigious platform. I completed my engineering degree at one of the oldest Engineering Colleges in Gujarat, India. From there, I obtained a campus placement as Trainee with FAG Bearing India Ltd (Schaeffler Group) for 1 year before a permanent placement in the heat treatment department, where I remained for the next 5 years.*

*One of my professional passions is the automotive sector and I aspired to work in this fast paced, highly competitive industry. That opportunity came with Mahindra Automotive, one of the most reputable organizations in India that manufactures products for the global automotive market. Before moving to Australia I was working with Auto Auxiliary Giant Bosch India Ltd (Bosch Group) as department head- Heat Treatment for 5 years. In 2018, I received an offer I simply could not refuse and moved to Australia under an employer sponsorship program as skills and experience are in high demand for my field.*

A few years back I spent some time in Australia for a mixture of business and pleasure. One of the companies I had planned on visiting was your current employer Hofman Engineering, however due to the vastness of the country this did not come to pass. Please share with us some information about Hofman, particularly as it relates to heat treating.

*Since 1969 Hofmann Engineering has provided specialist engineering services to Australia's industry leaders. Quality Assurance accreditation by Lloyds*

*(LRQA) complements total quality culture. Hofmann Engineering is committed to continuous quality improvement which touches every aspect of products, services, and customer support. Hofmann Engineering staff and management alike pursue a single goal – a total focus on quality in every aspect of manufacture, customer service and on time delivery. We believe in continuous improvement and always working at being the engineering and technological leader in our industries. Our individual skills and experience are what underlies our reputation as a totally self-contained engineering company with all resources “under one roof”.*

For the full interview please click on the link below.

<https://themonty.com/project/mr-mrinal-nandi-of-hofmann-engineering-in-australia/>





### USA Commercial Heat Treater Sold

Oct 13, 2020



Commercial heat treat Metalex Thermal Specialties in Colorado, USA has new owners. This is a plant which has been in business for quite some time offering vacuum heat treating, oil hardening, stress relieving, annealing and many other processes, under the direction of Greg Alexander. The new owners are Debra James, CEO, Bruce James, Vice President, and Chris James, General Manager. Chris and Debra have been involved in the heat treatment field in California for several years. Greg Alexander plans to stay on for awhile as a consultant. The James Family have ambitious plans for expanding the business in Colorado.

### Can-Eng Furnaces Commissions 6,000 Pound Per Hour Mesh Belt Furnace Line

Oct 13, 2020



According to this press release Canadian furnace builder Can-Eng Furnaces recently started up a 6,000 pound per hour mesh belt furnace line; Can-Eng Furnaces International Ltd., recently commissioned a 6,000-pound/hour mesh belt furnace to a supplier of safety-critical automotive fasteners. The system includes a loading system, controlled-atmosphere mesh-belt hardening furnace, oil-quench system, post-quench wash system, mesh-belt tempering furnace, soluble oil system and Can-Eng's SCADA system.

This is the third mesh belt furnace line the company has announced in 2020. The two others include Gallos Metal Solutions in Milwaukee, WI, USA, and Metex Heat Treat in Brampton, Ontario, Canada and we have included those press releases below;

*“September 1/2020; Can-Eng Furnaces International, Ltd. (CAN-ENG) has recently delivered a high capacity Mesh Belt Heat Treatment Furnace line to Gallos Metal Solutions Inc., Milwaukee, WI (GALLOS). Specializing in continuous mesh belt atmosphere heat treatment, GALLOS selected CAN-ENG to provide a custom engineered continuous atmosphere heat treating system to be used primarily for demanding processing including Carbonitriding and Carburizing, while allowing for neutral heat treatment with a production capacity up to 4000 lb/hr. This furnace line is part of GALLOS’ massive plant expansion and modernization project which has more than doubled the existing plant square footage, increased capacity and added automation.”*



*“March 23/2020; Metex Heat Treat Orders Mesh Belt Furnace Line. Commercial heat treater Metex Heat Treat in Mississauga, Canada is*



*bucking the trend these days with a major new investment. Just last week the company placed on order a brand new 7200 pound per*

hour mesh belt furnace line. The gas fired line with oil quenching and state of the art controls will be provided by a Canadian company. Metex is a family owned business founded by the President and owner Mr. Surjit Bawa Metex which has grown to be one of the largest commercial heat treaters in North America for fasteners. Currently the company has 7 mesh belt furnace lines ranging in size from 1,000 pounds per hour up to 6,000 pounds per hour with a total capacity of over 300,000 pounds per day AND this is before this newest addition. Interestingly enough the demand for their continuous heat treating is so strong that the company has asked for an expedited delivery. This photo shows one of the lines installed at the plant. It is worth pointing out that second from the left we see Mr. John Vanas, President of Euclid Heat Treat, a very large facility located in Euclid, Ohio, USA.”

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## ECM ECO Furnace-What the Heck is It?

Oct 9, 2020



Last week furnace builder ECM issued a press release about an ECO furnace, a furnace which they feel is a very interesting alternative to a batch IQ or Sealed quench furnace. The press release caught our attention and we asked Dennis Beauchesne General Manager of ECM USA a few questions-these are his answers.

Dennis in your press release of last week <https://themonty.com/launch-of-the-new-eco-furnace-from-ecm-technologies/> you suggested that your “ECO” furnace is a very good alternative to sealed quench (SQ) or integral quench (IQ) furnaces, this leads to an obvious question; could an ECO furnace fit in line with a standard IQ furnace installation? As an example if a captive or commercial heat treater has a row of Surface Combustion Batch IQ furnaces could your system fit in the same system and utilize the same charge car? This leads to another question-what are the working dimensions?

We started the development of this furnace from the observation that many existing customers have already complete Sealed quench or IQ lines installed in their manufacturing facilities: maybe 3 or 4 sealed quench or IQ furnaces, a washer, several tempers and a charge car. Investing in a newly designed system with additional capabilities and added flexibility becomes a struggle. These capabilities exist in a good number of captive facilities today and now can be offered to heat treaters by only replacing or adding one furnace at a time and not their entire line. So we studied configurations of existing IQ lines and designed our equipment to be compatible with most of the existing designs. Behind the ECO name is a full range of equipment starting from 18” (450 mm) x 24” (600mm) x 18” (450mm), to the largest at 36” (900 mm) X 48” (1200 mm) X 36” (900mm).



**What is the quenching medium? Gas? Oil? Polymer?**

ECM has been working extensively on High Pressure Gas Quenching systems since the 80s. What most people don't know is that we also have a large installed base of oil quenching systems to be able to treat a really large range of alloys. The ECO line is able to provide Gas, or hot or cold Oil quenching

media depending on the customers' applications and the furnace. As for oil quenching, customers have shown a strong interest to eliminate risk of fires – you yourself reported in the Monty several fire accidents in the last few months and along with this technology is the possibility to decrease insurance premiums. The ECO line allows for clean and ergonomic heat treatment, in safe conditions. NO Flames, NO Smoke, NO Soot, NO Endothermic generator, NO Nitrogen Methanol.

### **Will this type of furnace help heat treaters find and retain personnel to work in the heat treat industry?**

As you well know, safety and working environment has become a major factor with finding and retaining personnel and we feel that the ECO will drastically change the working environment for the future. The reduced surface temperature of the equipment, reduced risk of explosions, and the reduced noise levels and less overall risks are significant added benefits for the workers and owners.

Right off the bat I noticed that this is electrically heated and I can understand why (that will be our next question by the way). But what about operating cost? In many parts of North America heat treaters will only consider gas fired furnaces because natural gas is so much cheaper than electricity. Can an electrically heated ECO compete with a gas fired Batch IQ with the same working dimensions?

The target of this furnace is to be competitive not only in Europe or North America, but also in the Asia and Central America markets. We have comparison data showing a significant reduction of cycle time (average 40%), process gas (average 95%) and energy consumption savings (average 40%). Electrification is key in other parts of the world. It is becoming more the case also in North and South America. With electric powered furnaces, comes huge gains in safety, reliability and maintainability, these must be considered in the investment along with additional savings which can be had by turning the equipment off during down-time such as weekends and holidays without supervision necessary and readily available within one hour after being turned on. ECO is the TESLA of furnaces.

You make the point that it is electrically heated which means you can substantially reduce CO2 emissions, you say by 80%. However in North America is that a selling point? Although many North Americans support reducing CO2 emissions study after study has shown that we are not

concerned enough about CO2 to actually pay to reduce it. Do you think this is a major selling point?

Environmental trends are evolving and younger generations are being educated to show more interest in reducing CO2 emissions even in North America. Rules, laws and restrictions are coming to most areas of all countries that will limit the amount of emissions from every plant with an added cost if those limits are exceeded. These potential additional operating costs should be considered when looking at future equipment expansion. The CO2 emissions are directly linked to the energy and gas consumption, so we do believe this should be a strong selling point as it the ECOlogical performance of this furnace is strongly representative of the ECONomic performance (and profits) of the heat treaters using this equipment.

Now this is the big question-how does this furnace compare in price to a standard 36" X 48" X 36" batch IQ furnace?

We would love to have this conversation with your readers and review their applications and details and compare. ECO 36" x 48"x 36" has a very good ratio of investment cost vs productivity in \$/Lbs./Hr or €/kg/Hr On top of this, quality of the parts, operating environment, process flexibility and integration of the heat treatment processes are improved and safety overall must be considered.

Have you sold or installed any of these furnaces yet?

We already have several smaller ECO furnaces ordered and installed in Europe and the America's. In our headquarters, the newest model, ECO 36" X 48" X 36" is currently under construction, we plan an Open House event early next year.





# Thermcraft incorporated

## Heat on Demand!

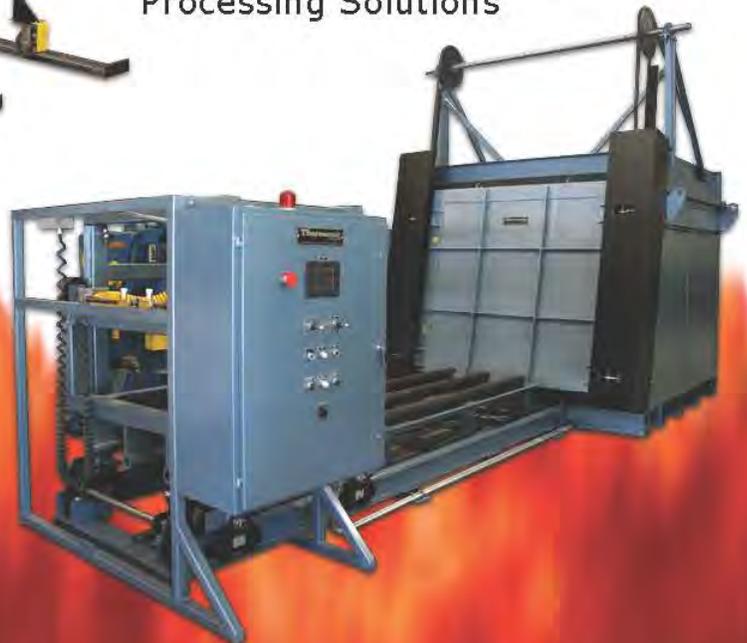
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## What's It Worth-2 Bar Quenching Horizontal Vacuum Furnace

Oct 9, 2020



From time to time we play the “what’s it worth” game about the value of a used heat treat furnace, today we look at quite an unusual item. What we are looking at is an unused horizontal vacuum furnace with working dimensions of 36" X 48" X 30", an operating temperature of 2500F, a diffusion pump, 2 bar quenching (either argon or nitrogen) and a Dry Coolers water cooling system. There is an interesting history behind this furnace, it was built in 2003 for the US government, tested and for reasons unknown to us it was never put into service and has sat in storage ever since then. New this would be \$600,000 or \$700,000 USD and it is a very desirable item, so what is it worth now?

It is difficult to say and that is partly because of the manufacturer. It was built by IVI Corp., of Pembroke, MA, USA, a long established furnace manufacturer who has been around since 1969. The issue is that IVI is a name that most vacuum heat treaters are not familiar with as the company seems to specialize in other technologies such as Ion Vapor Deposition (we hasten to add that it appears IVI is a top notch supplier just not known for this type of furnace).

The fact that the furnace has sat unused for so long, is a rather unknown brand and that the photo shows the furnace sitting in a field will all have an effect on the sale price (by the way it has been stored inside for all this time, the photo was taken when it was being moved). The vendor has assigned an asking price of \$175,000 USD and if this furnace was a better known brand it would probably sell in one day. With a lesser known name our guess would be that it will sell, might just take a bit more time. We will update you down the road.



## Wickert Press Quenching-An Interview with Mr. Hans-Joachim Wickert

Oct 8, 2020



Press Quenching (also known as fixture hardening) has long been known as a technology to reduce distortion in parts and is typically found in captive heat treating departments of gear or bearing manufacturers. Today we speak with Mr. Hans-Joachim Wickert, Managing Director of Wickert Maschinenbau one of the leading providers of Press Quenching systems.

Lets start with some background about you and your company. Perhaps you could share with us the history of Wickert, the size of the company and your part in it?

*“Wickert was founded in 1901 by Jakob Wickert, who was my grandfather. Originally he made forging presses for horseshoes. His business was located in the town of Landau which at the time was a garrison town which meant a lot of horses for the military which meant a lot of horseshoes. After the 1st World War, the Wickert company, located in the middle of a large wine-growing area, started making wine presses. This production continued until 1945, when it was gradually converted to industrial presses.*

*Today, Wickert employs 180 people, 25% of whom work in engineering and R & D. From this pool of qualified engineers the company today draws its innovative strength. From a company that only offered press quenches, Wickert has developed into a manufacturer who also offers complete turnkey systems for all aspects of presses. Today I personally take care of the sale of hardening systems and hardening presses and am the technical manager for the company.”*

When I think about Wickert I think of press quenches but I realize that is probably unfair as the press quench is only a small part of what you have to offer. It would probably be more fair to say that you offer complete heat treatment solutions with press quenching being one part of a complete system. What would a typical Wickert Heat Treatment system look like and consist of?

*“Yes, that is correct. As already mentioned, Wickert today is more a system manufacturer than a pure press quench manufacturer. Today Wickert supplies complete, fully automated hardening systems, primarily for manufacturing gears. A typical Wickert fixture hardening system starts with fully automated loading, followed by pre-washing*

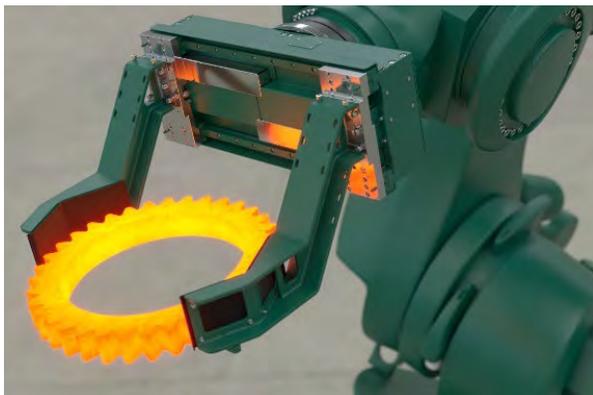
*machines and manipulators for loading the furnace. After the furnace comes the press quenching for which we provide all the fixturing and dies, followed by cooling, washing and transfer to tempering furnaces. After tempering, Wickert integrates clean blasting systems and post-washing machines. At the end of the production chain there are output stations with appropriate buffer systems.*



*If required, deep-freezing stations can also be integrated into the production process for the complete conversion of residual austenite. All components of the system are incorporated into the Wickert control system. This would include part tracking, process data, datalogging and complete control of the entire system. Interfaces to the customer's own computer systems are programmed according to customer specifications. Statistical process control enables the customer to set his individual test levels. Wickert thus supplies turn-key systems for component hardening in gear manufacturing with the corresponding planning and deadline tracking capacities.”*

Please click for full interview.

<https://themonty.com/project/mr-hans-joachim-wickert/>



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## Heat Treating in Mexico vs; The USA

Oct 7, 2020

Hector Ibarra has been involved in both captive and commercial heating in Mexico and the USA, most recently he worked with ALD Thermal Treatment, one of the largest commercial vacuum carburizing companies in the world. In this article he talks about the differences between heat treating in the two countries and in the process he puts some myths to rest.

*My cross-border heat treatment experience. By: Hector A. Ibarra.*

*During my professional career I have had the opportunity to work in*



*Companies who had internal atmosphere heat treatment operations and others who provided vacuum heat treatment services in North America. I will not get into the details of each of these processes as I wish to focus more on my personal observations. This article is going to be more focused on my experience while working in Mexico and the USA in a heat treatment setting-even though the process and procedures may be the same, the implementation has to be customized to each*

*location.*

**Safety.** *There is really not a lot of difference between working in the USA and Mexico, even though each country has its own set of government agencies, they usually follow the same guidelines. As we know OSHA is the leading standard in the USA and you will find very similar requirements in Mexico. Most international companies will follow the same tracking to compare performance across its facilities, most will track incidents, non-lost time accident and lost time accidents.*

*Companies will always put safety as their number one priority and prevention is equally important in each country. I have not observed any difference in people's behavior and the leaders have to lead by example, being aware that workers will test the boundaries to see how far they can go without getting in trouble (Ex: not wearing safety glasses all the time, not wearing ear plugs, etc.). I have always believed that your minimum expectation is the maximum you will receive, as an example: if you walk by someone and you do not notice or mention to them to properly use their Personal Protective Equipment (PPE), then you are allowing this bad behavior to continue, there is generally, no difference between countries. Regarding the Company security please be aware that in Mexico you will be more likely to have a company providing*

protection services than in the USA. (editors note; we have always found security to be more strict in Mexico than in the USA).

**Quality.** Since all companies follow the same standards if you are a supplier of automotive or aerospace industries, there are international standards that have to be followed, CQI-9 and NADCAP are the obvious examples. My personal experience is that both countries have similar implementation and maintenance on their quality systems.

**Moral.** This is where it starts to get interesting and where the same approach will not work. What I learned is that people are motivated differently in each country and sometimes you will find major differences between regions of the same country. The first major difference is that religion has been almost fully removed from the workplace in the United States. In my experience in the USA religion is a topic that you do not talk about it, everyone has their own religion and people respect each other without really talking about it. In Mexico, religion is quite often a part of the culture of the Company, for example there are several festivities that would never be held in a US manufacturing facility, but which are regularly held in Mexican facilities. For example in Mexico we have the Virgin of Guadalupe celebration, Day of the Dead celebration, etc., and for these occasions you will very likely have an event inside your Company where all of the employees participate-this is part of the culture and this is something which foreigners find different.

People in Mexico are very family oriented so it is very likely you will find several people from the same family working inside the same company. I think in the USA you will have something similar but not as strong as it is presented in Mexican culture. People inside the plant in Mexico perform better than they feel they are part of the "Company Familia". If you can build a family friendly environment you will see tremendous results. What I have seen is that in both countries people are looking for respect, to be treated fairly and to feel they belong.

Another thing you will find in Mexico is that most of the salaried people will have degrees sometimes bachelor, masters or above, there are a lot more opportunities for education in Mexico. In Mexico it is unusual to find individuals in higher positions who worked their way up the Corporate ladder based upon their hands on experience. In the US though it is quite common to find people who do not have a college degree but who worked their way up by learning skills and gaining experience on the floor. I believe both are very good for the heat treatment industry

**Costs.** As we know there has been a lot of talk about the cost difference between manufacturing in Mexico vs the USA. I would say the main difference will be in the hourly wages, but be aware that if your company is very technically advanced then your costs may be almost the same to produce in the USA as in Mexico. For example: if you are maintaining your equipment and want to do the right thing which is to use original OEM spare parts, this will likely be more expensive in Mexico than in the USA-this is mainly due to importation costs and also availability in the local market. This is improving every year, but I still believe that in the USA you have a better chance of getting parts for your high-tech furnaces at a cheaper price (of course maintaining the same quality) than in Mexico.

Salaries for Salary personnel will not be that much different between the countries, plan for your upper management salaries to be almost the same in both countries. In Mexico by the way plan on paying 12 months plus 1 month to cover the other benefits while in the USA it is a straight 12-month salary (bonus would be the same proportion in both countries). Be aware that Mexican currency fluctuates a lot more than the dollar or the euro, so you will have to account every month for the gains or losses due to this high value variation.

**Delivery.** As we know heat treatment is a service and transportation always needs to be considered so location will always be one of the reasons why companies are setting up facilities in a close range to their customer. In



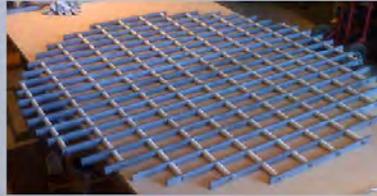
Mexico this is a very critical point to consider because as you may know the infrastructure is not comparable to the USA. This means the risk of damaged parts or late delivery is greater if not planned correctly.

I hope these are similar experiences for people who had the opportunity to work in both countries and hope it provides a small introduction into what to expect when running business on both sides of the MX/USA border. I want to thank to the Companies who offer me these opportunities during my professional life in the heat treatment and outside the heat treatment industry.

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## Aerospace Testing & Pyrometry, Inc. Launches Aerospace Compliance Software, LTD,

Oct 6, 2020

*Aerospace Testing & Pyrometry, Inc. (ATP), based in Bethlehem, PA, is happy to announce its latest venture, Aerospace Compliance Software (ACS), a customized pyrometry platform that streamlines the process for achieving accurate and timely electronic records of instrument calibration and testing.*



*The software has been developed to adopt not only AMS 2750 pyrometry requirements, but also industry-prime specifications such as General Electric Aviation P10TF3, Boeing BAC 5621, PS23401, DPS 1.700, SAFRAN Pr0011 and Rolls Royce RRP54000; it can also be customized to unique user requirements. ACS has the ability to address vacuum system calibration in accordance with AMS 2769 and P10TF3, as well as addressing*

*autoclaves pressure systems and bonding ovens for composite material applications, temperature and humidity for environmental clean rooms, and the requirements of CQI-9. The staged release of ACS will begin in October 2020 with the Calibration Module. This module allows users to input instrument calibration data into pre-set fields and will generate an automatic, real time accept/reject condition based upon the criteria of the requirement. The module alerts the user if any calibration readings are out of tolerance.*

*Furthermore, it alerts the user to conduct additional testing or perform evaluation of product based upon the outcome of the testing. Andrew Bassett, founder and owner of ATP and ACS, states, "This system will be a game changer for organizations forced to comply with all forms of pyrometry calibration and testing requirements. This software will have broad capability and functionality as it will be able to handle all pyrometry specifications as well as users' internal requirements. With reports available on demand, self-checking system for compliance and data storage on ACS secure servers, we are bringing pyrometry calibration, testing and documentation to an advanced level of accuracy, compliance and accessibility."*

*Realizing the significance of reliable, quality thermocouples in the overall pyrometry system, ATP has strategically partnered with thermocouple manufacturer Cleveland Electric Laboratories, Inc. (CEL), who is now celebrating its 100th year in business. For ACS to be fully scalable, thermocouple traceability is essential. Scott Puhalsky, Vice President of Sales, states: "CEL has enjoyed the privilege of supporting its relationship with ATP*

and we are excited to expand our work with them by offering Aerospace Compliance Software to our customer base; we feel that the capabilities of CEL are a perfect fit for this partnership with ATP.” As a trusted manufacturer for the aerospace market, CEL offers quality products supported by its fully accredited laboratory and is dedicated to providing innovative solutions, such as ACS, to its customers.

**About ATP:** ATP is an ISO/IEC 17025 accredited company specializing in on-site calibration of temperature processing instrumentation, calibration of vacuum measuring systems, system accuracy testing and temperature uniformity surveys of thermal processing equipment. ATP specializes in pyrometry, heat treating and materials testing training, procedure preparation, Nadcap accreditation consulting for heat treating, non-destructive testing (NDT), welding, brazing and materials testing laboratories. With offices located in Bethlehem, PA, Stroudsburg, PA, Hartford, CT, Cleveland, OH, Tulsa, OK, Los Angeles, CA, Greenville, SC, Bedford, OH (Calibration Laboratory) and Muskegon, MI, ATP services have expanded throughout the United States, Mexico, Canada and Europe. For more information, please visit [www.atp-cal.com](http://www.atp-cal.com) or call Andrew Bassett at 844-828-7225.

**About CEL:** Cleveland Electric Laboratories, Inc. has provided thermocouple and sensing solutions to their customers since 1920. A family-owned business providing top-quality products, CEL is headquartered in Twinsburg, OH, with an additional location housing their Advanced Technology Group in Tempe, AZ. CEL’s primary product lines include Industrial Thermocouple Products, Turbine Engine Testing & Instrumentation, and Fiber Optic Sensing Solutions, as well as a full line of Engineering Services that are aligned with their product lines. With its 17025 accredited certification lab and a team dedicated to the highest level of customer satisfaction, CEL provides competitively priced, quality thermocouples and accessories. For more information, please visit [www.clevelandelectriclabs.com](http://www.clevelandelectriclabs.com) or call 330-425-4747.



## ECM ECO Furnace-What the Heck is It?

Oct 6, 2020

Last week furnace builder ECM issued this press release which at least with us has prompted a lot of questions. Well we will have answers to our questions shortly and will give you a few more details about what the heck an ECO furnace is.

*“ECM Technologies announces the release of a new furnace system which will replace current sealed quench (SQ) or integral quench (IQ) style furnaces. The system offers cleaner, safer and greater performance in comparison to traditional SQ or IQ furnace on the market today. When developing this new furnace, ECM Technologies took into consideration all the key characteristics of sealed quench or integral quench furnaces and eliminated their drawbacks. All of its*

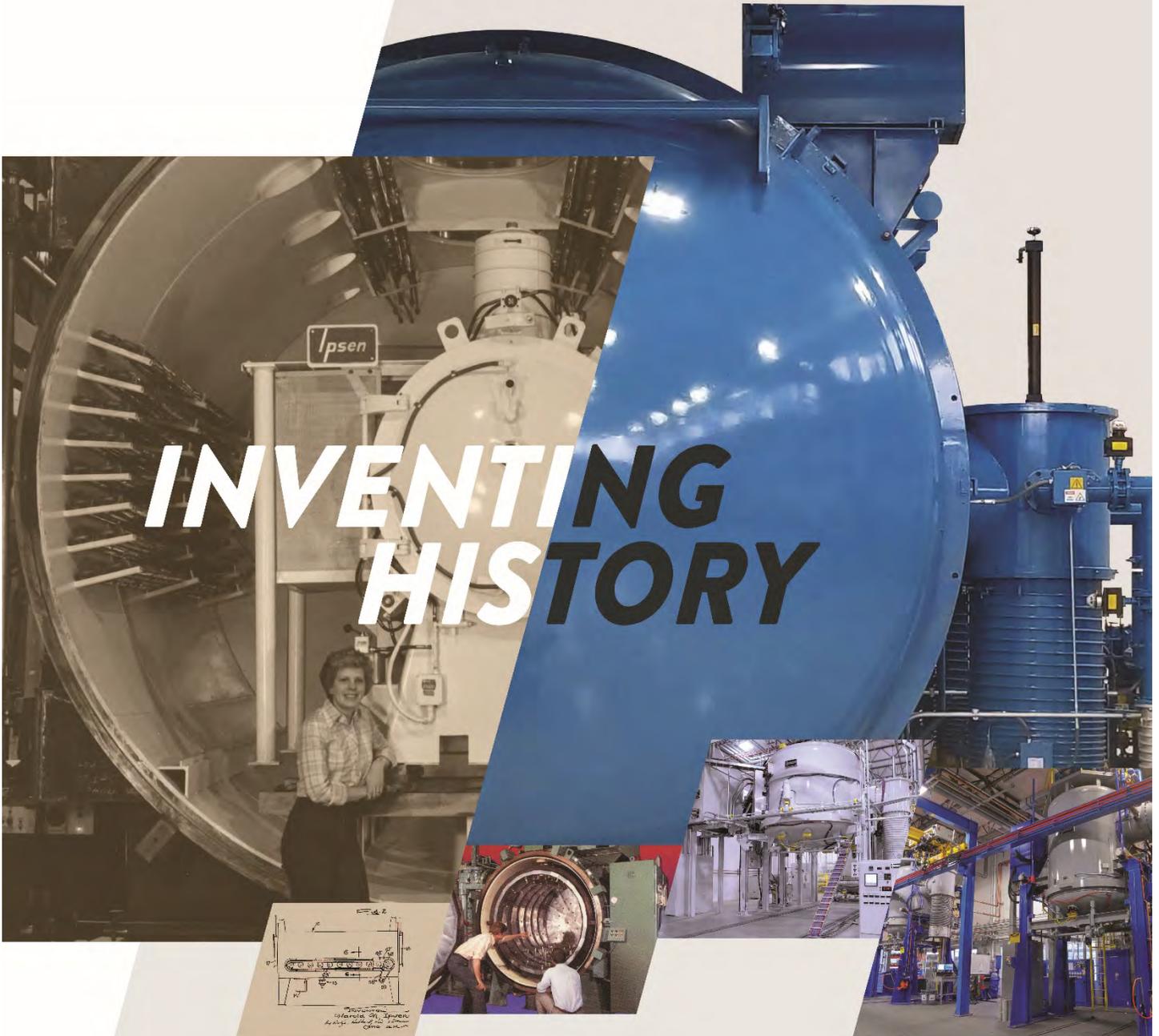
*development was based on four pillars: Environmental impact, efficiency, metallurgical quality & existing in line integration. The ECO furnace is an electrically heated system, enabling greater than 80% reduction in CO2 emissions. It also allows for higher temperatures, thereby enabling increased productivity through greater throughput. Further, a safer and far more ergonomic environment is provided without open flames and smoke, eliminating the risk of fire hazards. Additionally, the ECO furnace can be integrated in existing sealed quench or integral quench lines, using existing, pits, conveyors and peripheral equipment (tempers, washers, etc). The ECO line allows captive and commercial heat treaters to extend the life and expand the capabilities of their existing sealed quench or integral quench furnace lines. And, part quality reaches higher levels with the efficient and safe heat treatment processes in a new ECO production line.”*





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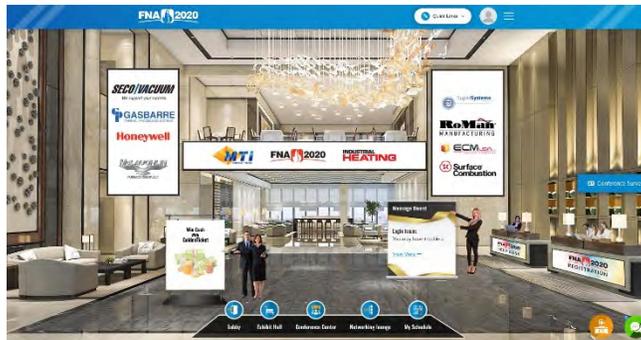
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## Furnaces North America 2020-The Numbers Are In Oct 6, 2020

Last week was the Furnaces North America 2020 Virtual Heat Treat Show, we at “The Monty” attended and our summary was posted last Friday <https://themonty.com/fna-2020-virtual-show-2/> “Virtual” shows are of course brand new and nobody knows exactly what to expect from them-a viable alternative to “live” shows or a poor imitation? These are the numbers as reported by FNA;

- FNA Virtual generated 1,009 attendees
- Attendees came from 30 U.S. states and 22 countries
- Exhibitors 554
- Visitors 455
- 

October 20-22nd sees the large annual German Heat Treat Show, HK20 which again is also “virtual”-it will be interesting to see the format and attendance, we will let you know.



## Solar Manufacturing Ships Five Furnaces to Southeast US

Oct 6, 2020

*“Solar Manufacturing recently shipped five Mentor® vacuum furnaces to a customer in the Southeast USA who provides products to a wide array of industries, including aerospace and medical. The model HFL-2018-2IQ furnaces feature a graphite-insulated hot zone, a load weight capacity of up to 250 lbs, and maximum operating temperature of 2400° F. The Mentor® vacuum furnaces will be used primarily to sinter and stress relieve stainless steel components.*



*“Our customer worked directly with our R&D team at our sister company, Solar Atmospheres, including in-house metallurgists and PhD Chemist,” states Dan Insogna, Southeast Regional Sales Manager for Solar Manufacturing. “In partnering with Solar Atmospheres, we developed the furnace recipes with use of Mentor® furnaces at*

*Solar Atmospheres. The customer received a line of brand new Mentor® furnaces with their custom recipe preloaded and ready to go.”*

*Solar Manufacturing designs and manufactures a wide variety of vacuum heat treating, sintering, and brazing furnaces and offers replacement hot zones, spare parts, and professional service. To learn more about Solar Manufacturing contact Pete Reh, VP of Sales, at 267-384-5040 x1509, or via email [pete@solarmfg.com](mailto:pete@solarmfg.com) or visit us at [www.solarmfg.com](http://www.solarmfg.com).”*



## HSH Härtereitechnik, Germany/Bankruptcy

Oct 5, 2020

Last week we had an unfortunate story about furnace builder HSH in Germany closing down. This article gives us the details (please note that this has been translated from German and while the grammar is good it is not perfect). With 49 employees this was a respectable sized company, but one which appears to have been having financial issues for some time.

*“The Duisburg lawyer Dr. Dirk Hammes has been appointed provisional insolvency administrator for the assets of HSH Härtereitechnik GmbH from Kranenburg. The company suffers from the massive structural problems of the industry and does not benefit from equity or guarantees from the state. The company from Kranenburg has made a name for itself since 1988 as a specialist service provider and supplier for the automotive supply industry. It stands for a comprehensive quality spare parts service and sophisticated logistics as well as a highly qualified customer service for all areas of heat treatment and various other special systems. Now the district court of Kleve has ordered the provisional insolvency administration over the assets of HSH GmbH and appointed Hammes as provisional insolvency administrator. The insolvency affects 49 workers who have been on short-time work since July 2020. There have been arrears of wages since August 2020, and salaries are secured by the insolvency money up to and including October. Employees were informed at a staff meeting on 28 September 2020.*

*The Federal Employment Agency has approved the pre-financing of the*



*insolvency money, so that the provisional insolvency administrator expects to be able to pay the arrears wages this week. “HSH*

*Härtereitechnik is a medium-sized supplier for the automotive supply industry. The largest customer is Schaeffler Technologies AG & Co. KG in Herzogenaurach, which recently announced that it will cut up to 4,400 jobs by the end of 2022.*

However, hSH already felt the structural problems of the industry in 2019. Even before the pandemic-related economic crisis, the company had to contend with a decline in sales as a result of a serious decline in orders,” emphasizes Dr. Dirk Hammes.

In addition, the Corona-related restrictions had delayed and in some cases even prevented the completion of projects, which had exacerbated the decline in sales. Similarly, remedial measures and efforts by the shareholders to attract an investor failed. The lawyer and his team are currently examining all possibilities for refurbishment and are doing everything possible to preserve the insolvent company and thus the jobs for the future. One option is a so-called transformation fund, which IG Metall has addressed for subcontracting companies. Hammes would like to clarify as soon as possible whether such a move could still help the company from Kranenburg. At the same time, it analyses the possibility of divesting the company, which will be difficult given the current economic and business situation.”



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## Monday Morning Briefing

Oct 5, 2020

We start off the week with an announcement from **G-M Enterprises** of California about an order the company just received for two horizontal vacuum furnaces; *“G-M Enterprises, a Nitrex company, has received a multimillion-dollar order from a global manufacturer of metal injection molding (MIM) products to supply two large-size horizontal vacuum furnaces. These 2-Bar vacuum sintering furnaces feature a work area of 36” wide x 30” high x 84” long (900 x 762 x 2100 mm), 4400 lb. weight capacity, a maximum operating temperature of 2600°F (1430°C), and uniformity of +/-10°F (+/- 5.5°C).*

*“This latest order comes from a customer we have had a strong cooperation with, and which will be part of a series of multiple furnaces provided by G-M Enterprises over the past decades. G-M Enterprises was carefully selected*



*because of our ability to meet the customer’s large-scale design requirements and to optimize the furnace performance, our competitive lead time as well as the predictable and repeatable metallurgical results,” said Michel Frison, VP Global Sales, Nitrex and G-M Enterprises. “I want to thank our loyal customer for their trust as well as Mr. Suresh Jhawar, G-M Enterprises Senior Adviser, and the whole team at*

*G-M Enterprises who were instrumental in securing this order,” added Michel Frison. The first of the two furnaces will be delivered this year and the second is scheduled for commissioning in March 2021.”*

Next up we can tell you about an order which Canadian furnace builder Can-Eng just received; *“Can-Eng Furnaces International Ltd. (CAN-ENG) has recently been awarded a contract from a leading Global Tier 1 manufacturer of Lightweight Forged Suspension Components. This exciting new North American project will produce high quality lightweight forged aluminum components for passenger vehicles. The system, comprised of a pre-forging aluminum heating furnace, water quench and continuous aging furnace will be*

*integrated into an automated forging cell that includes specialized material handling components and advance controls.”*



In people news we see that **Sergio Luevano** recently became Product Manager at **GM Enterprise** in California (GM was mentioned earlier in this briefing). Sergio like many of us in the industry has worked with several companies over the years including Baker Furnace and Tenaxol. In Germany experienced sales person **Markus Hildebrand** just started working with commercial heat treater **Härtha**, in Aldenhoven after a number of years working with Bodycote. Härtha is one of the larger commercial heat treating groups in Europe and this is what their facility in Aldenhoven looks like.



*Marc Glasser of Rolled Alloys in Michigan also makes our news today; “Rolled Alloys, Temperance, Mich., has announced that Marc Glasser, director of metallurgical services, has been reappointed to the board of the Heat Treating Society for the 2020-2023 term. He has been with Rolled Alloys since 2012 and has more than 39 years of experience in materials science and engineering. The Heat Treating Society, created by ASM Intl., is a membership society dedicated to the advancement of heat treating as a theoretical and applied discipline.”*



In Poland commercial heat treater **Hauck** is pretty proud of the fact that they are now NADCAP certified as you can see in this picture. Hauck is one of the largest commercials in Europe, see how they stack up on “The Monty” list of the largest European commercial heat treaters <https://themonty.com/project/largest-european-commercial-heat-treaters/>





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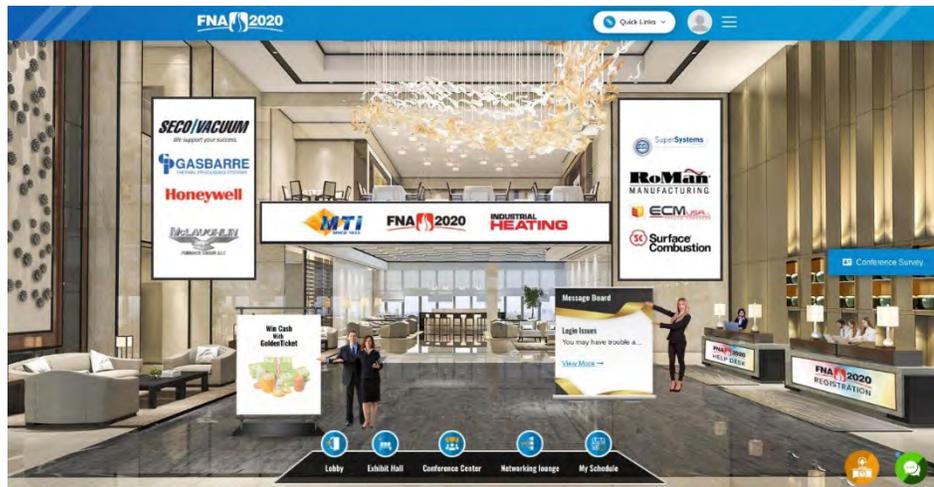
AS135 - AS220 / Quick Temper 275 - 430

## FNA 2020 Virtual Show

Oct 2, 2020

As we speak the Furnaces North America (FNA) 2020 virtual heat treat exhibition is in full swing and we have been checking it out. At 96 exhibitors it is substantially smaller than in past years which is no surprise but having said that the organizers have done a very good job of making this an enjoyable experience. For those of you who are not attending we will give you a brief summary of what a virtual show is.

After signing in you arrive at the home screen designed to look like the reception area of an exhibition hall (the screen shot below). This gives you a number of different options such as visiting the exhibition hall, going to the conference centre (this is an extra cost) or joining the networking lounge.



If you choose to go to the Exhibit Hall you are presented with a list of exhibitors, click on the one you want and you arrive at a “virtual booth”, the example below shows Heat Treating Services Unlimited.



This screen in turn gives you several options including a brief Company Bio, a list of contacts who are available by phone, text or e-mail and a section listing technical papers and videos. Our experience is that some booths have a long list of well prepared articles and videos

others are shall we say-more modest. The whole set up is easy to use and user

friendly. As far as visits go the jury is out. Some have told us they are receiving as many inquiries as shows gone past, others have a very different perspective, we will have to wait until the show is over.

One thing I think we can all agree on is that a virtual show is not as much fun as a real show and came up with these;



*Joern Rohde and Jordan Montgomery, FNA 2016 Nashville, TN*



*FNA Orlando, Florida 2010-Pat Torok, UPC*

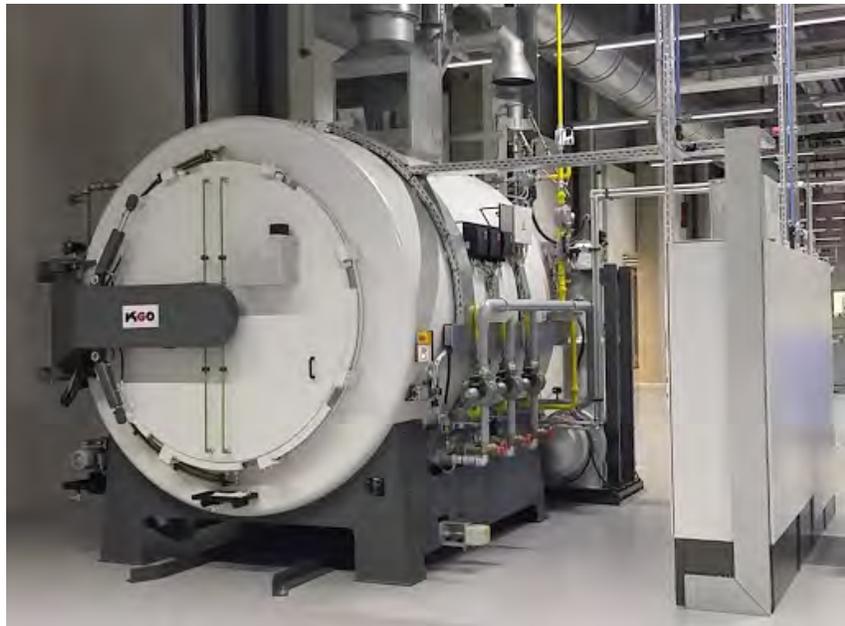
## Don Longenette, A+ Heat Treating Services LLC.

Oct 1, 2020



Not long ago we told you how long time heat treater Don Longenette was opening up a company by the name of A+ Heat Treating Services LLC,, now it becomes apparent why this came about. Don just contracted (October 1, 2020 to be exact) with KGO and Stange to support sales, service, startup and spare parts for all existing gas nitriding furnaces and controls in North America (25+ furnaces now) with more on

the way. Don plans to provide sales, service, installation and spare parts for the two companies from his location in Cleveland, Ohio, USA. KGO is a furnace manufacturer based in Germany who is best known for their nitriding systems although they do make most styles of furnace. Stange is a German furnace controls company very well known in Europe which is becoming better known in North America.



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## Launch of the new ECO Furnace from ECM Technologies

Oct 1, 2020

*“ECM Technologies announces the release of a new furnace system which will replace current sealed quench (SQ) or integral quench (IQ) style furnaces. The system offers cleaner, safer and greater performance in comparison to traditional SQ or IQ furnace on the market today. When developing this new furnace, ECM Technologies took into consideration all the key characteristics of sealed quench or integral quench furnaces and eliminated their drawbacks. All of its development was based on four pillars: Environmental impact, efficiency, metallurgical quality & existing in line integration. The ECO furnace is an electrically heated system, enabling greater than 80% reduction in CO2 emissions. It also allows for higher temperatures, thereby enabling increased productivity through greater throughput. Further, a safer and far more ergonomic environment is provided without open flames and smoke, eliminating the risk of fire hazards. Additionally, the ECO furnace can be integrated in existing sealed quench or integral quench lines, using existing, pits, conveyors and peripheral equipment (tempers, washers, etc). The ECO line allows captive and commercial heat treaters to extend the life and expand the capabilities of their existing sealed quench or integral quench furnace lines. And, part quality reaches higher levels with the efficient and safe heat treatment processes in a new ECO production line.*”

**About ECM Technologies.** ECM Technologies, Grenoble – France (400 employees, 100M€ of Revenue in 2019) designs, manufactures and sells industrial vacuum heat treatment and automation systems since 1928. ECM’s mastery of thermal processing and automated equipment allows it to offer turnkey solutions for various applications, and to diversify according to the needs of numerous industries such as: Renewable Energy, Automotive, Aeronautics, Electronics and Nuclear applications. Over the past 30 years, the ECM Group has shifted from being a company making 90% of its revenue in France, to a world leading Group exporting 90% of its production.”



## IVR Industrial Furnaces Approved by Fiat Chrysler Automobiles

Oct 1, 2020



IVR, a large furnace manufacturer in Italy recently became an approved furnace supplier to FCA (Fiat Chrysler Automobiles). The company recently delivered to FCA a continuous chamber furnace designed to stress-relieve and temper heat treat crankshaft motor parts. IVR offers a wide range of furnace types [www.ivrsrl.it](http://www.ivrsrl.it)



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