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INTRODUCTION

The beginning of September can only mean one thing-showtime! Every year without fail autumn brings the largest heat treat exhibitions of the year and this year is no exception. We at **"The Monty"** always look forward to them as trade shows are an excellent barometer about how our industry is doing-solid attendance means a vibrant industry, low attendance indicates an industry which is struggling. **"The Monty"** will be covering all of them whether they are in Europe or North America and we confidently predict that attendance at each of them will set new attendance records-we look forward to seeing you there.

Best regards,

Gord, Jordan and Dale Montgomery.

HEAT TREAT NEWS

The Website of Choice for Captive and Commercial Heat Treaters Since 1999



ALD Tratamientos Termicos, Ramos Arizpe, Coahuila, Mexico

Tuesday August 21st, 2018 ALD Thermal Treatment celebrated their 10th anniversary with a party and a seminar about their specialty Vacuum Carburizing (low pressure carburizing). In attendance were customers, City Major representatives and local industrial associations, personnel from ALD Heat Treatment Services plants including Port Huron Michigan and Limbach-Oberfrohna Germany. While we spoke about this event earlier we now have these additional photos. *August 31, 2018*



Management staff of ALD Heat Treatment Services (Germany, U.S.A and México)



Jesus Calderon, Plant Manager of ALD Tratamientos Termicos



Hector Ibarra and Jesus Calderon with representatives of Ramos Arizpe city major and local associations



Operative staff of ALD Ramos Arizpe



Darren Anthony Baysinger Obituary

July 21, 1965 – August 28, 2018. Darren Anthony Baysinger, 53, of Brazil, Indiana, passed away on Aug. 28, 2018, in Cicero, Indiana, after a spirited battle with cancer. He was born on July 21, 1965, to Frederick A Baysinger and Mary Alice McShanog Baysinger. Darren was a 1983 graduate of Brazil High School. He worked various places prior to finding his work home at Mercer Technologies in Terre Haute with his beloved boss, Mike Mercer Sr., and other members of his “work family” who he loved dearly. Darren traveled extensively throughout the U.S. and also a few other countries working on commercial furnaces, and was well loved by his clients everywhere. Darren was preceeded in death by his father, Fred Baysinger ;and brothers, Daniel and David Baysinger. His love of family was evident by his devotion to his mother, Mary Thomas, who survives; and his children, who were not blood relatives, but couldn’t have been loved more.

His world revolved very much around the lives of these special kids, who are so important to our family. He is survived by Nikki, Dylan, Nathan, Andrea and Kaleb, all of Terre Haute. He is also survived by his sisters and brothers-in-law, Dana and David Stout of Cicero, Indiana, and Erma and Bobby Harvey of Terre Haute; brothers and sisters-in-law, Doug Baysinger and Jana Reek, and Rob and Becky Baysinger of Oklahoma, and Greg Baysinger of Illinois. He is also survived by his close nieces and nephews, Allison and Chelsea Knox, and Daniel and Amber Baysinger; and other nieces and nephews, cousins, aunts, uncles and many close friends. The family would like to thank those who helped with his care, including the IU Cancer Center doctors, nurses and other staff members; and the Transition Hospice team who aided in his care on the final days. A celebration of life will be held at the Benwood Mount Lebanon Church at 945 E. 1200 North, Brazil, Indiana, at 1 p.m. on Saturday, Sept. 1, with his uncle, Dick McShanog, officiating. In lieu of flowers, the family requests that memorial contributions be made to Celebrate Recovery (a Christian 12-step program) at Crossroads Church in Westfield, Indiana Contributions can be made in Darren's memory at: www.fourneighbor.rocks August 31, 2018



Dowa Thermotech Setting Up Heat Treating Plant in North Carolina, USA

To the press release below we will speculate with probably a great deal of accuracy about what this facility will look like when finished. Dowa is an enormous Japanese conglomerate and amongst their many divisions are two which are of interest to us; their furnace manufacturing division and their commercial heat treating division-for this story we are going to concentrate on the heat treating division. The company currently has heat treating facilities in Japan, Thailand, India, Mexico and the USA. Each is a very impressive top notch facility which concentrates largely on the automotive sector, specifically heat treating for Japanese automotive companies. Based upon what we have seen at other Dowa plants we can say with a great deal of certainty that all of the equipment will be designed and built by Dowa (although some manufacturing might be outsourced). The furnaces will largely consist of batch IQ furnaces (sealed quench) and through feed style furnaces-basically small single row pusher furnaces. All of the equipment will be very automated although not to the same extent as Dowa plants in Japan mainly because labor in NC is far less expensive. On one final note we will say that \$22.5 million USD buys a lot of furnaces so this is going to end up being

a very substantial heat treating facility when finished. The photos below show some of the Dowa plants in Japan which we at “The Monty” visited a couple of years back.

*“Raleigh, N.C. – Dowa Thermotech Co. Ltd., a global provider of industrial furnaces and heat protection treatments, will open a new facility in Lee County, North Carolina, USA creating 109 jobs, Governor Roy Cooper announced today. The company plans to invest \$22.5 million in Sanford with plans to serve clients in the automotive and industrial machinery supply chains. “ Dowa Thermotech, with headquarters in Nagoya, Japan, is a subsidiary of Dowa Holdings Co. Ltd., a global company operating in a wide range of industry sectors including nonferrous metals, metal processing and environmental management and recycling. Dowa Thermotech specializes in the manufacture of industrial furnaces and offers high quality commercial heat treatment services. The company provides heat protection for metal engine parts, transmissions and other rotating elements that operate in harsh environments. “I hear that North Carolina has been chosen as the easiest state to live at all times and it is truly our honor to build our new factory in this a wonderful state,” said Ryuji Tsuji, President for Dowa Thermotech. “We dream of building a great factory in this area with your support.” **August 30, 2018***



Used Equipment

“The Monty” has one of the most complete lists of **Used Heat Treating Furnaces** in North America, a list which is updated **daily**. Our most recent additions are mentioned below. If you don’t see what you are looking for please let us know at jordan@themonty.com or 905-271-0033. **August 30, 2018**

Item # VF342 Ipsen Bottom Load Vacuum Furnace 48” X 54” \$525,000 USD

Item # VF341 Ipsen VFC-424-R Vacuum Furnace \$35,000 USD

Item # I178 Inductoheat Pick & Place Induction System \$85,000 USD

Item # VF340 Vac Aero 2 Bar Vacuum Furnace \$220,000 USD

Item # B458 Box Furnace, 70” X 42” 2,000F \$80,000 USD

Item # VF339 Centorr Vacuum Furnace \$25,000 USD

Item # B457 Surface Combustion “Super 72” \$29,000 USD



Heat Treater Adds SECO/VACUUM Gas Nitriding Furnace to Expand Capabilities

“A large North American heat treater expands their capabilities by adding a new ZeroFlow® precision gas nitriding vacuum furnace. This horizontal, front-loading furnace is designed specifically for precision gas nitriding, ferritic nitrocarburizing, and post oxidation, in a



retort-style furnace with vacuum purge. The new furnace complements a prior SECO/WARWICK gas nitriding furnace already in production. It extends the customer’s capabilities by offering greater capacity to its growing nitriding customer base. Among its many benefits, the ZeroFlow® gas nitriding method

precisely controls the case depth and nitride layer formation including white layer, achieving high surface hardness, improved wear resistance, and longer fatigue life.

Only SECO/VACUUM offers the proprietary ZeroFlow® control technology. The combination of vacuum purge and only using ammonia as a process gas reduces gas usage and emissions.

SVT's gas nitriding furnaces achieve optimum results by using uniform high convection heating and precision nitriding potential control. Along with vacuum purging, the operating cost reductions and repeatable quality are unmatched for nitriding a variety of metals.

About SECO/VACUUM. SECO/VACUUM Technologies LLC is a fully-owned entity of SECO/WARWICK Group in Europe. Through technological leadership, SVT offers unmatched vacuum furnace innovation and performance. Through its commitment to service, SVT provides its customers with the best support in the industry and the lowest cost of ownership.

Visit **www.secovacusa.com** August 30, 2018



Business Opportunities

Please take a look at our most recent employment offerings. If you see anything you like don't hesitate to get in touch with us at **jordan@themonty.com** or 905-271-0033. **August 30, 2018**

Item # 0353 Controls Engineer Wanted

Item # 0352 Sales Positions Available

Item # 0351 Metallurgical Engineer Wanted

Item # SE002 Direct Hire For Sales Position Seeking Employment

Item # 0350 Sales Agents Wanted

Item # 0349 Heat Treat Engineer Needed at AAM

Item # SE001 Metallurgical Engineer Seeking Employment

Heat Treatment Australia, California Facility

Numerous times in the past we have mentioned the largest commercial heat treater in Australia, Heat Treatment Australia, both to cover their facilities in Australia and also to mention their newest facility in California. As it turns out their location in California proved to be rather short lived as they quickly outgrew it. The result? The company will very shortly be moving into a new facility at 10140 Romandel Ave, Santa Fe Springs, CA. The

move will also include a bunch of new equipment, the details of which we will give you shortly. In the meantime we have this photo of the new plant. **August 29, 2018**



Where Have all the Heat Treaters Gone?


A number of years back Jim McNeal of International Search Partners sent us this article. It is very kind of Josh Hale of ISP to update the article for us. **August 29, 2018**

"There are issues in our industry and always will be, but the number #1 issue I keep hearing about these days is how hard it is to find experienced heat treaters. I know for a fact, that a significant number of heat treaters lost their jobs in the recent recession. I also know, for a fact, that a number were forced into other industries. Whether this explains why an experienced person is so hard to find is open to debate. Perhaps this, coupled with the fact that heat treating is a job that few individuals in their early 20's consider, explains the shortage. Be that as it may, I can think of numerous examples where retired heat treaters are asked to return by their previous employers either on a full time or part time basis. This is a situation that I personally do not see being resolved in the near-future."

The above quote from is from the January 2011 issue of The Monty. Now, almost 10 years later, not a lot has changed, as many of you are still asking, "Where Have all the Heat Treaters Gone?" When this question was first published, Jim McNeal, founder of International Search Partners which has specialized in recruitment

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for the heat treat industry since 1998, responded that this is “an interesting question, and one that I have dealt with in one form or another since I started recruiting.” Jim went on to elaborate that recruiting young people into heat treating has always been a challenge. As society becomes more technologically advanced, heat treating struggles to compete with the bells, whistles, and “sex appeal” of other industries. This continues to be the case as many young people entering the workforce for the first time are lured into hi-tech or web-based companies.

Jim also referenced a “general lack of work ethic in our young people,” as a cause for the talent shortage in the industry. While today there are certainly young people out there willing to put in the proverbial “honest day’s work for an honest day’s pay,” there are still plenty of heat treaters out there struggling to fill hourly positions where the only requirement is to “show up every day and work hard.” The original quote also asks where are all the experienced heat treaters? In 2011, the US economy was just coming out of the Great Recession, and while true that many people had lost their jobs or changed industries, Jim made the point that during a slower economy, employees are less apt to make a career change. Of course, the current bull run is one of the longest in history, but there is still trepidation in the market. For someone currently employed and happy with their career, it is very difficult to compel them to move. While the broader economy has recovered, individuals remain risk averse.



The best heat treaters have their heads down and are working hard. They’re not actively looking on job boards, so they need to be solicited directly, individually and professionally. The only way to really tap into the top echelon of candidate and recruit them to a new opportunity is to do so proactively. That’s why enlisting the services of a professional search and placement firm like International Search Partners is crucial to providing access to hiring top talent. For over 20 years, ISP has been the premier recruiting solution for the Heat Treat industry. The salary information provided is based on information gathered over that time and from interviewing 500+ industry professionals per year. If you’re hiring now, or exploring new opportunities for yourself, we are uniquely positioned to be your partner for success and would love to work with you. Please contact us at info@ispards.com or 619-465-9621.

Magnetic Specialties Ships Transformer for Wire Annealing

Magnetic Specialties recently shipped a 360KVA, three phase, 60HZ transformer for use in wire annealing. The transformer features an extended primary winding with multiple taps to adjust the output voltage of the high current secondary. The tap can easily be changed via the three phase tap switch mounted to the front of the enclosure. The delta connected secondary winding is designed for line currents up to 6,500 ARMS. The delta connection was made with large aluminum bus bars due to the high secondary current. The core and coil, along with the custom NEMA 1 enclosure, were designed using Solidworks 3D modeling. For additional information about Magnetic Specialties, email sales@magspecinc.com, call 267-384-5231, or visit www.magspecinc.com.

August 29, 2018



Ipsen Bottom Loader-What's it worth?

This is a very large Ipsen bottom loading vacuum furnace with working dimensions of 48" diameter X 54" deep. Two bar, completely rebuilt, 12 month warrantee and two bar quenching. Asking price of \$525,000 USD which is roughly half the price of new. Is it worth the asking price? The general consensus is that used furnaces never sell for more than half the price of new which means that this is really pushing the limits. The wild card in this case is that very few large bottom load furnaces are ever sold in any given year and the fact that this is pretty much ready to go means it might be attractive to a company in a hurry. The jury is out on the asking price of this item. *August 28, 2018*



Front View

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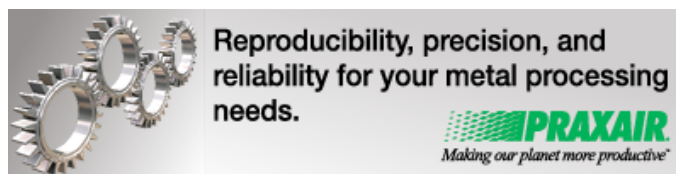
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Weekly Updates From “The Monty”

“**The Monty**” will now be sending out weekly updates of “**The Monty**” covering the most interesting heat treat stories and trends in the industry. This will be brief, to the point and will cover only the stories which we believe are most relevant to captive and commercial heat treaters. As always we appreciate your input-if you feel that this is overkill or conversely if you would like to include your message in our weekly news brief we would be happy to do so. **August 28, 2018**



International ThermProcess Summit Atlanta, GA, USA

This event was recently held and we have this summary from the organizing committee. We are pretty sure that the fellow looking rather bored in the photo below (seated at the table-centre) is none other than **Gary Berwick** of **Dry Coolers**. **August 28, 2018**

“Industry leaders and executives gathered in Atlanta from July 30 – August 1, for the second ITPS (International ThermProcess Summit) and by all accounts and comments, the event delivered a wide array of timely and critical information. One attendee exclaimed, “Had I known how good the content was going to be, we would have brought our entire management team! We certainly will next time.” Anne Goyer, IHEA’s Executive Vice President, noted that attendee evaluations showed executives felt the speakers and their presentations were very valuable. “I have been involved in organizing conferences and summits for more than 35 years. This year’s ITPS was one of the highest evaluated events we’ve ever produced.” From the opening session where attendees learned about the “Factory of the Future” from Dr. Irene Petrick of Intel, to the closing presentation on “Transitioning Your Business to the Next Generation” by The Brainzooming™ Group founder Mike Brown, the audience was engaged throughout the entire event.”



From left at table: Chad Spore – John Deere (speaker), Phil Chizek – Lightweight Innovations for Tomorrow (LIFT), Gary Berwick, Dr. Irene Patrick, Intel Corp (speaker), Chris Misorski, Mercury Marine

Monday Morning Briefing

Commercial heat treater **FPM** with several plants in the US Midwest sent us this press release; *"FPM is pleased to announce the successful re-certification of our Nadcap accreditation! Plus all three of our commercial heat treating locations upgraded to the new ISO 9001-2015 certification standards. To demonstrate their continued commitment to quality, FPM Heat Treating announces that they have been successful in achieving Nadcap recertification accreditation for Heat Treating. "Our employees recognize the importance of producing top quality heat treat processing to service the Aerospace Community. We continue to show this commitment by providing excellence in Aerospace Quality and Heat Treat Processing." "Compliance via Nadcap accreditation is a milestone in demonstrating manufacturing excellence." said Joe Pinto, Executive Vice President and Chief Operating Officer at the Performance Review Institute. "By obtaining Nadcap in Heat Treating, FPM Heat Treating has proved to the industry that they are committed to quality and aerospace safety." For more information about FPM Heat Treating please visit fpmht.com or feel free to call and/or email (sales@fpmht.com; 847-228-2525)".* **ALD Thermal Treatment** in Ramos Arizpe, Mexico celebrated their 10th anniversary with a big party and a discussion about vacuum carburizing at their facility just last week. The event was a hit and we have this photo of part of the plant tour. **August 27, 2018**





From California, USA we have this press release from **ThermoFusion**; *“ThermoFusion Hires 2018 Interns. ThermoFusion, helping make America great through heat treating and brazing services, announces the hiring of its summer intern for 2018. John Sheckel, a Materials Engineering student from San Jose State University, joined ThermoFusion for a 3 month practicum of heat treating and brazing. As an intern, John will learn and practice material testing (pre and post heat treat), incoming and outgoing inspection, furnace calibration and operational adherence to AMS 2759/D. ThermoFusion is a company focused on the long term growth of manufacturing in California, and takes social responsibility seriously. We began our Internship Program in 2011, to provide practical experience for engineers to better understand theoretical lessons. John is our 7th intern to be hired into the ThermoFusion Internship Program.”* In Canada **Northern Heat Treat** is in the process of moving into a much larger facility because business is so good. The company which has been around for over 25 years is moving from a 28,000 square foot location into a 54,000 square foot facility. The move will include some new ovens. In the one photo we see the owners George Sidun Senior and Junior.



People News; In the where are they now category we see **Danny McWilliams** who for many years was the heat treating rep in Texas and the surrounding states. Danny has this to say; *“Just wanted to let you know that I’m still alive and kicking. Going on 1 1/2 years of retirement. Keeping very busy. Every Wednesday I get to go grocery shopping with Dianne,*

and she allows me to push the cart. Haven't progressed to the point that I get to put items in the cart, but she assures me that someday I will reach that point. "**Premier Thermal Solutions** (Premier) is excited to announce the hiring of **Jennifer Howe** as Regional Sales Manager. Jennifer will be responsible for all aspects of sales within her territory of Michigan,



Illinois, Wisconsin, and Canada. Jennifer will report to Sara McMurray, Director of Sales & Marketing. We mentioned **Ron Graham** moving to **Paulo** recently but here is the formal announcement; "Ron Graham has joined the Paulo team as Key Account Manager for the Cleveland Division. Ron is an industry veteran with experience selling heat treatment furnaces to a national customer base. He joins the growing Cleveland Division which is in the process of an expansion. The Cleveland division primarily focuses on Aerospace, Power Generation, and Agriculture processing. Ron's experience both as a small business owner and various sales and account management roles will be an asset to the Cleveland team and Paulo as a whole. Ron is based in Toledo, Ohio but will be onsite at customer locations and at the plant in Willoughby on a regular basis." We regret to mention the passing

of **Dr. Hans Tensi** one of the founding fathers of modern heat treating metallurgy – what some would call the 3rd Generation of Heat Treating. In Texas Outside salesperson **Brian Taylor** made a switch from **National Heat Treating** to **Houston Heat Treat**. Both are in the Houston area.

The world is certainly a smaller place and events on the other side of the world can cause ripples around the globe. **Turkey** represents a large, very modern captive and commercial heat treating market, an example of which can be seen in the photo below showing a new gas nitriding installation. However recently the currency, the Turkish lira has been taking a beating which has caused several furnace suppliers in the US and Europe to see cancelled or delayed orders with customers waiting to see what happens. One such company that got caught in the crossfire is none other than ourselves at "**The Monty**". Time will tell what happens.



Back in August we had a brief story about how **Aremac Heat Treating** in California was closing their facility (their plant in Georgia is not effected). As of mid August the CA location was not accepting new work. A very unfortunate situation however it is no surprise that the remaining heat treaters in the area are reporting higher sales. *"To our Valued Customers, This year has brought us many challenges, but the greatest one of all is Aremac having to say GOOD-BYE to SOUTHERN CALIFORNIA. We were unable to renew our building lease and secure a new location locally. Thus, we made the difficult decision to leave CALIFORNIA and expand our operations in EASTMAN, GA. Currently, the GA facility is AS9100, NADCAP, Boeing, GE and Pratt and Whitney approved and we will continue to add other prime approvals as customer needs dictate."*



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Bob Robbins, Cambridge Heat Treating

It is with regret that we mention the passing of Bob Robbins, founder of commercial heat treat Cambridge Heat Treating in Cambridge, Canada. Bob founded the company in 1982 and over the years he and his family have turned into a very successful company. Bob will be missed. **August 24, 2018**

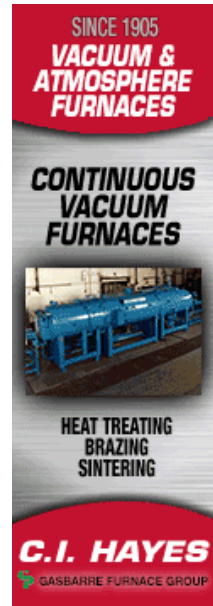
ROBBINS, Robert (Bob) William 80, of Cambridge, Ontario passed away peacefully on Wednesday, August 22nd at Freeport Hospital. A Celebration of Life will be held on Saturday August 25, 2018 at T. Little Funeral Home, 223 Main Street, Cambridge, Ontario at 2:30 p.m. Visitation will be at the funeral home prior to the service beginning at 1:30 p.m. In lieu of flowers, donations to Diabetes Canada or the Heart and Stroke Foundation would be appreciated. Bob was born March 14, 1938 in Mount Forest, Ontario. He was married to Eleanor (Orton) for 60 years. Bob was a life-long resident of Cambridge. After working as a heat treater at CMC-Ingersoll Rand for 30+ years, he founded Cambridge Heat Treating in 1982. Today the business remains owned and operated by his children. He enjoyed 30 years of cottage life at Conestoga Lake, where he and his family built



their cottage. He was an avid fisherman who enjoyed his remote fly-in fishing trips. After retirement he thoroughly enjoyed his frequent trips to Las Vegas and Niagara Falls playing craps and cards. Bob is survived by his wife Eleanor and their four children, Randy (Barb), Cheryl (Bob Mortimer), Peter (Lisa), Don (Tracey), his brother Ivan (Thorman); seven grandchildren, Michele, Stephanie, Mikaela, Bradley, Madison, Jodie and McKenzie; three great-grandchildren, Jaxson, Zachary and Benjamin. He was preceded in death by his mother Helen Thorman, father Melville Robbins, sister Evy Robbins and grandson Chris Robbins. Online condolences may be made at www.tlittelfuneralhome.com



Don and Peter Robbins





Applied Process, Fort Smith, Arkansas, USA

We promised you updates about the new Applied Process commercial heat treating facility in Fort Smith, Arkansas, USA and this is the first installment. This will be one of the largest new heat treating facility investments in North America in 2018. *"Livonia, Mich.-based Applied Process opened its doors to the public to celebrate the beginning of operations in Fort Smith. The company purchased and renovated an abandoned building at 5400 North 6th*



Street for \$2.751 million starting in January. The overall expansion has been between \$8 million and \$10 million, counting the addition of industrial equipment. The location was once a spice warehouse for OK Foods. For Tim Allen, president and CEO of the Fort Smith Regional Chamber of Commerce, the process started "about a year ago."

According to the company's recruiting brochure, the average entry-level production wage is \$31,500 and the company pays up to 95% of health insurance premiums. After adding in another \$3,600 in average entry-level bonus and profit sharing, the total compensation comes out to about \$49,600, or roughly \$23.85 per hour for new hires with no experience. Plant manager Rusty Rainbolt told Talk Business & Politics the facility had 20 employees when it officially opened last month, that it hopes to add "another 5-6 soon, and over the next five years, we're going to grow that number up to about 50." "We started as a half-size facility with three furnaces, and we'll grow out to six," he added. The current plant size is about 51,000 square feet.

Applied Process specializes in austempering heat treatment processing. It has "a diverse industry base," Rainbolt explained. "We work in everything from automotive to aerospace to mining and construction and agriculture. Big customers of ours would be Ford Motor Company, Fiat Chrysler, John Deere, Caterpillar, all the way to railroad companies." **August 24, 2018**




Largest Commercial Heat Treaters in North America

Very recently we put together our list of the largest commercial heat treaters in North America ranked by annual sales <https://www.themonty.com/largest-commercial-heat-treaters-in-north-america-august-2018/> It was no surprise that we received a number of comments/questions about the list with two topics in particular coming up. The first was basically *"Are we sure about the ranking and why isn't so and so company included on your list?"* As we pointed out while we are very sure about our rankings we are not going to guarantee it 100%. For instance we were asked about some of the larger players in Texas and why they aren't on the list-well yes there are some very big heat treaters in Texas but they are generally single shop operations and while large we don't believe they are amongst the 13 largest in North America. One company which came up repeatedly was **Specialty Steel Treating** based in Michigan <https://www.sst.net/> Yes this is a very large company and quite possibly deserves to be on our list but quite frankly we were not able to come up with a good estimate of their sales. The second topic which we ran across multiple times in various forms was *"I belong to Metal Treating Institute (MTI) which tells us on a regular basis where we stand in relation to others in our area. If as you say Bodycote is far and away the largest commercial heat treater in North America why doesn't their name appear on the MTI lists?"* The answer is that not every commercial heat treater in North America belongs to MTI and this includes Bodycote which means they will not appear on these reports. As always we enjoy feedback-good, bad or indifferent. **August 23, 2018**

TorqTek Auction

In Charleston, SC, USA TorqTek is having an online auction of some of their surplus equipment which includes a few heat treat items which should attract some interest. A rotary hearth furnace and some ovens come to mind but the highlight, a couple of Gleason 529 Press Quench units which are still listed have already been sold. A fellow by the name of Norm Laurens of Cincinnati swooped in at the last moment and bought them up prior to him shipping them off to Japan. This is an online auction which starts Thursday, August 23rd. TorqTek Design and Manufacturing LLC (TorqTek) emerged out of GETRAG Precision Gears LLC, in Charleston, South Carolina-now TorqTek is part of AAM. **August 23, 2018**









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Let's keep in touch:

GRAPHITE  **MATERIALS**

Congressman Kelly Visits Solar Atmospheres of Western PA

This past week US Representative Mike Kelly (PA District 3) was thrilled to tour Solar Atmospheres of Western PA. The congressman, a leading supporter to small business, was able to observe and hear firsthand how tax reform has influenced Solar's future. Kelly was



extremely pleased to hear how the tax reform bills, that he supported, have spurred tremendous private investment and job creation within the Hermitage PA facility. While touring the 80,000 square foot state of the art facility, Representative Kelly was able to marvel at the operation of the world's largest 48 foot long vacuum furnace. In addition, the Congressman observed a vast array of defense, aerospace, and medical components being thermally processed within smaller vacuum furnaces.

The Congressman stated, "I thoroughly enjoyed my visit to Solar Atmospheres in Hermitage last week. It is truly a world-class facility that I'm proud to represent right here in the Shenango Valley. It was fascinating to learn more about what they are producing, and just as importantly, how they are producing it. I was particularly glad to speak with Solar's dedicated professionals about the specific policies I can support to help them thrive in our community, including tax reform and the revival of the Export Import Bank." For additional information about Solar Atmospheres, contact Mike Johnson at 724-982-0660 x2223 or mike@solarwpa.com, and visit us at www.solaratm.com. For more information about U.S. Representative Mike Kelly, visit www.kelly.house.gov. August 23, 2018



Hardline Heat Treating, Southbridge, MA, USA Expanding

To add to this story we can say that Hardline is what we would consider a "full service" commercial heat treater in that the company offers vacuum heat treating, carburizing, marquenching and carbonitriding amongst other processes <http://www.hardlineheattreating.com/> August 22, 2018

"Town councilors Monday approved a 10-year tax increment financing agreement with Hardline Heat Treating Inc., a 14-year-old company in need of space to continue growing in automotive and firearms markets, and entry into aerospace. The company thermally treats metals to improve wear, toughness and aesthetics, has 36 employees and operates from 134 and 73 Ashland Ave., in a combined 18,000 square feet. During the 10-year TIF, the company plans to invest \$3.2 million and add 10 jobs, company president Robert Chalue Jr. said. It will spend \$1 million to purchase the two buildings it occupies, pay \$1.8 million for construction and \$400,000 for new equipment, Mr. Chalue said. Expanding and renovating 73 Ashland Ave., which is to occur first, would increase its space from more than 25,000 square feet to more than 41,000 square feet. The expansion and renovation of 134 Ashland Ave. would occur in a second phase, at least a year after the other building is completed and operational. Ms. Scrivens described the company as "bursting at the seams," and in requesting the TIF, Mr. Chalue said the company recognizes the need to invest in unskilled labor. He said its wages are \$40,000 to \$55,000 annually for its unskilled labor force. In addition, the company has been hard hit by increased costs in power, Mr. Chalue said. It's spending \$30,000 to \$40,000 a month, and because of supply and demand, those costs are expected to increase by 30 percent, he said."



Premier Thermal Solutions Added Capacity

Just last week we posted our list of the 10 largest commercial heat treaters in North America and in the #8 spot we had Premier Thermal Solutions <https://www.themonty.com/largest-commercial-heat-treaters-in-north-america-august-2018/> (our guess by the way is that the company has annual sales of roughly \$50 million USD). Their name comes up again today because they are adding more capacity. **August 22, 2018**

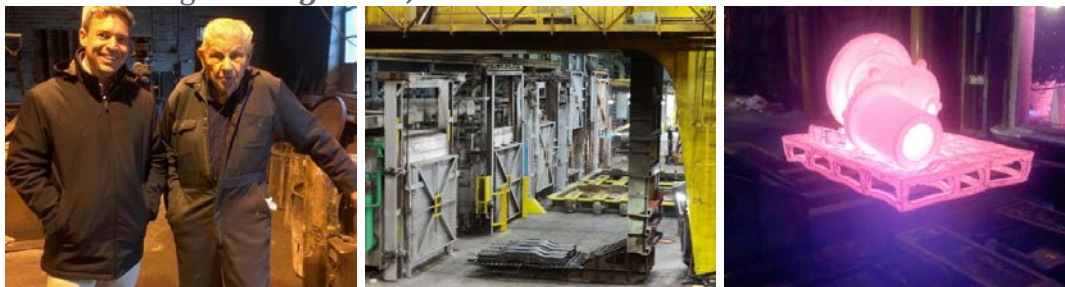
"Premier Thermal Solutions is pleased to announce it is increasing oil quench and temper capacity at its Atmosphere Annealing Mt. Hope Facility in Lansing, MI. Through the enhancement of an existing roller hearth tray furnace, the facility will double its oil quench capacity. The additional capacity is in response to increasing demand seen from many of the

industries that Atmosphere Annealing serves including automotive, energy, heavy equipment, heavy truck and rail . The furnace will be online in Q1 of 2019. "This is a really exciting time for our organization. With the conversion of this furnace, we will be able to react quickly to market needs, expand into new markets, and provide faster turnaround for our customers," said Sara McMurray, Director of Sales and Marketing. "The expansion not only provides us with additional capacity to meet our customers growing demand, it also provides additional back-up processing capabilities to further protect our customers' critical supply chain." Steve Wyatt, President, stated."



Complete Heat Treating Buys Commercial Heat Treating Inc.

Family owned commercial heat treater Complete out in Milwaukee, Wisconsin recently purchased Commercial Heat Treating Inc., also located in Milwaukee. Complete specializes in very large parts up to 53' long X 22' wide X 15' High and weighing up to 100,000 lbs., which require annealing, tempering, stress relieving, quenching or normalizing. One of the photos below shows the previous owner of Commercial Heat Treating along with our good friend Thomas Wingens. **August 21, 2018**



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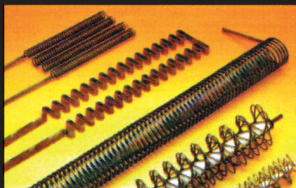
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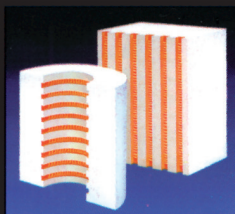
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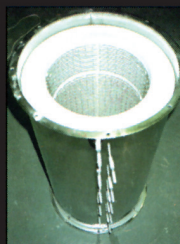
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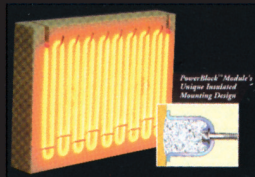
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Ceramaterials Founder, Dr. Jerry Weinstein Transitions to Retirement

"CeraMaterials, a leading provider of thermal processing solutions, would like to congratulate Jerry Weinstein on his retirement from the company. Over the last decade, Jerry built CeraMaterials into a thriving global organization supplying a myriad of thermal processing and electro-chemical materials along with consultative engineering support. Utilizing e-commerce and a skilled network of sales representatives, Jerry established CeraMaterials as the go to company for maintenance managers and engineers alike. "My approach was always to get customers what they needed in a timely fashion and at an affordable price. It sounds simple, but many companies fall short in one or both of these areas. Our ability to execute quickly as a "one stop resource" is what sets us apart. My successor, Jeff Opitz is equipped to bring CeraMaterials to the next level, while maintaining an unwavering commitment to our core philosophies," says Jerry Weinstein. Jerry will continue to consult with CeraMaterials as well as consult under his own company CeraGraphi Solutions, www.ceragraphisolutions.com. "Consulting is a way for me to remain engaged while allowing free time for my personal pursuits," says Weinstein.

"CeraMaterials success is a result of Jerry's tireless work and brilliant thinking; I will continue to lean on Jerry for technical guidance while growing the business. I wish Jerry and Jocelyn much happiness as they move to a new season in their lives. It's an exciting time for the company," says CeraMaterials President, Jeff Opitz.

ABOUT CERAMATERIALS AND GRAPHIMATERIALS CeraMaterials is a full service provider of thermal processing materials, serving the commercial heat treat, aerospace, steel, industrial oven, electro-chemical and craft artist industries. CeraMaterials can be found online at www.ceramaterials.com. GraphiMaterials, a subsidiary of CeraMaterials, focuses exclusively on carbon based products and custom engineering services. GraphiMaterials can be found online at www.graphimaterials.com." August 21, 2018



Is Social Media Relevant to the Heat Treating Industry?

For years now we have been told that having your company name prominent on social media (Facebook, LinkedIn, Twitter etc.) is crucial in this day and age. We at *"The Monty"* have always been a bit skeptical, however like all companies with a product to sell we did not want to miss out on any possible advertising tools. The result was that starting about a year ago we became active on LinkedIn (*which appears to be the most business friendly venue of the bunch*). "The Monty" now has almost 4,500 followers, our posts regularly attract thousands of views and as far as we can tell the revenue generated is \$0. It is quite possible that indirectly sales have been generated because of our LinkedIn presence but we would be hard pressed to point to one single dollar earned as a result of our efforts. We will keep at it and see what the future holds. **August 21, 2018**

Monday Morning Briefing

There are a number of events coming up in the worldwide heat treating industry which deserve a mention; **August 20, 2018**

Applied Process; Earlier this year commercial heat treater Applied Process announced the opening of a brand new location in Fort Smith, Arkansas, USA. Well everything is on track and the Grand Opening happens this week; *"Applied Process, Inc., the worldwide leader in austempering heat treatment technology, will expand with a new multi-million-dollar heat treatment plant in Fort Smith, Ark. The 51,000-square-foot plant will house six furnaces and add at least 30 jobs. The plant is expected to be fully operational in the 3rd quarter and will serve customers in the Midwest and South. "We are very excited to announce our expansion in Fort Smith," said Chief Executive Officer Harold Karp. "Record sales performance in 2016 and 2017, combined with a strong new product*



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forecast, make this the right time to expand.” Applied Process plants in Livonia, Mich., and Oshkosh, Wis., will remain in operation, serving the automotive, agriculture, aerospace, heavy truck, railroad, mining industries, as well as the military. The Oshkosh facility houses the world’s largest integral quench batch austempering furnace which is capable of austempering parts up to 20,000 lbs. in weight.” The photo below shows part of the Livonia plant.



ALD Thermal Treatment; August 22nd and 23rd sees a large celebration and LPC Seminar at ALD Thermal Treatment in Saltillo, Mexico. The celebration is in honor of their 10th anniversary while the seminar is entitled *Basics of LPC (Low Pressure Carburizing)*. It is designed to give attendees a basic understanding for the successful application of the LPC-process. Besides the basics of the process and the equipment, the furnaces can be seen in action on the shop-floor at ALD-Thermal Treatment.



Akron Steel Treating; Akron Steel Treating in Akron, Ohio, USA is having a big party to celebrate their 75th year in business. The event will occur Friday, August 31/2018 and we believe everybody is welcome. We visited the company just 2 weeks ago and have this photo of the President, Mr. Joe Powell in the batch IQ department.



ECM USA. It is hard to believe but furnace manufacturer ECM USA is celebrating their 20th anniversary in North America. The event will happen September 12th and 13th of 2018 at the company's location in Pleasant Prairie, WI and will include both a technical conference and an open house. A number of speakers will be in attendance including our friend Mr. Dan Herring who always gives an interesting and very informative talk (with a bit of humour thrown in).



Heat Treat Mexico 2018. Back in 2016 ASM had their first technical seminar in Queretaro, Mexico which we at “The Monty” attended. It wasn’t a super large event but we thought it was well organized and reasonably well attended. *“The ASM Heat Treating Society presents Heat Treat Mexico 2018 scheduled for September 25-28, 2018 at the Fiesta Americana in Queretaro, Mexico. This global conference will attract professionals in the industry such as maintenance supervisors, metallurgists, and production engineering staff and will provide a bridge for relevant new technology and applications for thermal processing.”*



FNA 2018. The largest event in North America in 2018 will be FNA 2018 (Furnaces North America) which this year takes place in Indianapolis, Indiana, USA October 8-10th. This event is organized by MTI (Metal Treating Institute) which always does a very good job. If you are only going to one show in North America in 2018 this is the one you should attend. We have this photo from their last show which was held in 2016 in Nashville, TN.



HK 2018. The largest European heat treatment show of 2018, *HartereiKongress* will be held October 16th to the 18th in Cologne Germany. As you would expect this mainly features exhibitors and attendees from European companies but there is a smattering of North American and Asian suppliers also in attendance (along with our good friends from Ion Heat in Colombia, South America). This is an annual event which we highly recommend.



Jones Metal Products-Do Captives Make Good Commercial Heat Treaters?

Located in West Lafayette, Ohio metal forming company Jones Metal Products Company is celebrating their 95th year in business. The company is now under the direction of Marion Sutton, the third generation of family leadership. Doing primarily aerospace work the firm has been doing vacuum and aluminum heat treating in house for a number of years before they ventured into the commercial heat treating business. Generally in-house heat treaters do NOT make good commercial heat treaters for a number of reasons (the now long gone Magna Powertrain facility in Syracuse, NY was an extreme example. Running high volume, low cost annealing work for outside customers through large pushers designed for heat

treating high end automotive gears proved to be not a good idea). Anyway it would appear that Jones is an example of a manufacturer successfully doing commercial heat treating. Over the years the company had invested in vacuum and aluminum drop bottom capacity entirely for their own products. At some point in time Jones realized that there was a need for aluminum heat treating services in their own backyard, Ohio, Kentucky and Indiana. The end result is that the firm now does about \$500,000 per year in commercial heat treating (both vacuum and aluminum) a number which is growing rapidly. Our personal feeling is that one of the main reasons that the company has seen such success at commercial heat treating are their approvals which include AS/ISO, NADCAP and ITAR Registration. Whatever the reasons its interesting to see a company branching out based upon their own internal strengths. **August 17, 2018**



Brand New Cincinnati Sub Zero System



Kent Howell, Tool Room/Production Manager, Jones Metal Products, Gord Montgomery



Solar Atmospheres Hosts Teachers Camp

“Solar Atmospheres, Inc. recently hosted the ASM International Teachers’ Camp to its Souderton, PA facility. The camp was sponsored by the ASM Philadelphia Liberty Bell Chapter. Twelve teachers from across the country, including one from Canada and three Temple students, spent a week at Temple University’s Ambler campus learning the basics of Materials Science Technology (MST) as taught at the high school level. They worked hands-on with metals, ceramics, polymers and composites to develop a greater appreciation for the importance of these materials to modern life. The ASM Materials Camp – Teachers is a proven program that strengthens the curriculum in Science, Technology, Engineering and Mathematics (STEM) at the secondary level. By introducing teachers to the engineering professions through Materials Science, ASM influences students for years to come.” **August 17, 2018**



Akron Steel Treating is Having a Party!

Akron Steel Treating of Akron, Ohio, USA will be having an open house later this month to celebrate their 75th anniversary in business. We at “The Monty” jumped the gun a little bit and decided to tell you early what the company is celebrating. The company was founded in 1943 by Prosper Paolucci Powell, father of the current owner, Joe Powell. Prosper at the time was working in the heat treating department of Firestone Tire and Rubber Company in Akron when he was approached by the US army to set up a heat treating shop in his home garage to heat treat firing pins for firearms. The army provided the furnaces and parts and a very successful endeavor was born. Through the end of WWII all the little

machine shops that sprung up in and around Akron heard about Prosper's heat treating shop in his garage. At the end of the war Prosper asked the army what they were going to do with the furnaces and the answer was "make us an offer". Prosper said he had no money to buy them and the US army response was "we will accept your offer" and the rest is history.

In 2018 we see a very successful commercial heat treat operation, Nadcap Certified, with 50,000 square feet, 48 employees and a multitude of heat treating processes including salt bath processing, batch IQ furnaces, vacuum heat treating and Joe's favorite the "IntensiQuench®" water quenching processes. (Joe has two new patents pending.)



Early in 2018, Joe put into place a succession plan for the company which involves Matt Moldvay, VP of Sales (and a long time heat treater), Joe's daughter Christina Somogyi (a mechanical engineer by background), and Joe's nephew, Steve Powell who is VP of Quality. The three currently own 30% of the company with Joe maintaining majority control. Over the next 15 years the new shareholders will complete the buyout of Joe. By the way Joe's advice is that if you go this route it is crucial that you work carefully through a CPA and a succession planner.

And his plans for the future? He will remain at Akron and while he is doing this he will be setting up "Integrated Heat Treating Solutions" a heat treat consulting company which will integrate part design and lean manufacture with experienced heat treaters; the goal is "better" hardened parts at a total lower cost of manufacture. Anybody who has met Joe Powell will instantly know that the man is not just focused on money and profits but rather by a very deep, intense love of metallurgy and heat treating – a very strong credit in our opinion and a passion which is shared by many of the most successful heat treaters in the business. **August 16, 2018**



Akron Steel Treating Salt





Matt Moldvay, VP of Sales, Akron Steel Treating



Joe Powell and Gord Montgomery. What you see is a portable Intensiquench unit which has been used at a number of forging shops to utilize the Intensiquench process for heat treating forgings-to great effect we will add.



Joe Powell in the Batch IQ Department of Akron Steel Treating

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We would like to welcome our newest advertiser **Advanced Corporation for Materials & Equipments Co., Ltd.** (ACME). ACME provides high end industrial heating equipment. They specialize in a lot of different furnaces but for more information please take a look at <https://www.acmefurnace.net/> . August 16, 2018

Mincon Group to install AFC-Holcroft Batch Furnace Lines on Two Continents

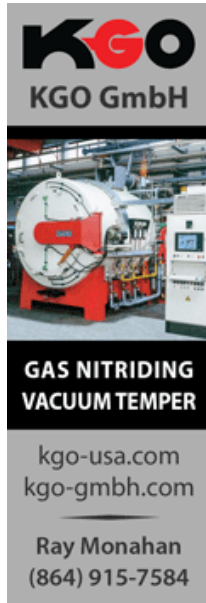
Mincon Group, headquartered in Shannon, Ireland, has purchased 2 separate, complete batch style integral quench heat treatment lines from AFC-Holcroft. The equipment will be utilized for the heat treatment of components such as those used in heavy industries like mining and drilling. The both batch furnace lines have features designed to reduce distortion of the products being processed.



One complete furnace line, consisting of an integral quench batch furnace with an effective load size of 36" x 72" x 56", tempering furnaces, washing and conveying equipment, controls system and accessory equipment, will be sent to the customer's manufacturing facility in Benton, Illinois, USA, and another smaller size line with an effective load size of 36" x 48" x 36" will be delivered to Perth, Australia. The size of the line in Benton is noteworthy in that the furnace load size is considered very large by industry standards (furnace has a gross load capacity of 6000 lbs or 2722 kg), yet AFC-Holcroft offers this size as one of its standard designs, with numerous installations of this size presently in operation.

"We've seen tremendous demand for on the part of manufacturers to continually improve control, quality, consistency and reduce distortion." stated Tracy Dougherty, Sales Manager at AFC-Holcroft. "The addition of these batch furnace lines will allow Mincon to increase production using brand-new equipment that meets their need for high quality and productivity. We're excited to be a part of their continued growth in the market." AFC-Holcroft is one of the leading companies supplying heat treating furnaces; and as a global company, are able to support the customer's activities worldwide.

Mincon Group PLC was founded in 1977 in Shannon, Ireland. Mincon manufactures and distributes a range of precision engineered hard rock drilling tools for a variety of industries including Mining, Exploration, Waterwell, Geothermal, Construction, Horizontal Directional



Drilling, Oil-Gas and Energy. They have invested heavily in modern manufacturing facilities in countries around the world including Ireland, USA, and Australia, which have been outfitted with the latest machinery – allowing Mincon to control all aspects of the production process. Delivery of the line for Benton, Illinois took place in the first quarter of 2018, and Perth, Australia will follow at a later date. <http://www.mincon.com/>

About AFC-Holcroft: Founded in 1916, AFC-Holcroft, is one of the US market leaders in the production of industrial furnace equipment for ferrous and non-ferrous metals. The company manufactures turn-key heat treating systems for applications including commercial heat treating, bearings, automotive, aerospace, mining, aluminum heat treatment, gear manufacturing, fastener manufacturing, and alternative energy

industries. Member of the Aichelin Group since 2016 and headquartered in Wixom, Michigan, AFC-Holcroft operates its own subsidiaries in China and Switzerland and has a global presence through a network of partners located in Australia, Brasil, China, India, Mexico, Poland and Spain.

About AICHELIN Holding: The AICHELIN Group, as part of the BERNDORF Group of companies, is a manufacturer of industrial furnace equipment for different industry segments and provider of after-sale services. AICHELIN Group also operates in the field of induction heating and in the manufacturing of industrial gas burner systems. The group's production sites are located in Austria, Germany, France, Slovenia, the US, China, and India. Altogether, the AICHELIN Group has 1,100 employees worldwide and ranges among the largest producers of heat treatment plants globally. For more information, contact media@afc-holcroft.com. August 15, 2018



Largest Commercial Heat Treaters in North America August 2018

It is now almost 20 years since *"The Monty"* put together our first list of the largest commercial heat treaters in North America. This is roughly the 4th update to our original ranking and like most things it gets better with age. It's a difficult task ranking what are largely privately held companies with little desire to share sales figures however after all these years we are quite proud of the accuracy of this list. (note; we are not going to guarantee 100% but, in our conceit, we feel it is possible). The basic criteria: **August 14, 2018**

-this ranking is based upon sales figures for 2017

-sales would include plants in the USA, Canada and Mexico (although Bodycote's figures do not include their operations in Mexico)

-we are only considering companies whose core business is commercial heat treating. As an example, our understanding is that Commercial Steel Treating in Madison Heights, Michigan and their associated companies such as Curtis Metal Treating have sales in the area of \$100 million USD per year. However, most of their sales are finishing as opposed to heat treating and for that reason we have excluded them.

-as a publicly traded company we have no issue sharing Bodycote's sales figures, however we have refrained with all the others on this list.

-while we started off with a "Top 10" list it grew to a "Top 13" list as you can see. The reason being that some of these companies are so close in size that it is difficult to include one and exclude another.

-as always we appreciate comments and corrections and indeed look forward to them

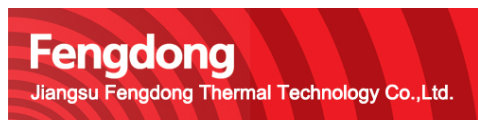
- Bodycote <https://www.bodycote.com/> It is absolutely no surprise that UK based Bodycote dwarfs all others in North America, as a matter of fact they dominate in almost every single area of the world. Total North American sales in 2017 were \$325 million USD (excluding Mexico). The US and Canada account for 34% of the group's total sales.

Click To Continue Reading

Monday Morning Briefing

We have a treat coming up for you Tuesday of this week, our updated list of the **10 Largest Commercial Heat Treaters in North America**. We have been doing this on an occasional basis for almost 20 years now and as far as we can tell *"The Monty"* is the only source in the world that does this. It is so clear cut who the largest is that we are not going to keep you in suspense. In 2017 total North American sales for *"Bodycote"* were \$325 million USD (*not including Mexico*), this number by the way represents 34% of total group sales. The next 9 will probably not be a surprise for those who know the industry well, however the order might be. News? Perhaps not but the unique design of this custom designed **Wisconsin Oven** caught our eye. It features three (3) pneumatically operated drawers. Each drawer has a maximum loading capacity of 6,600 pounds and uses air cylinders that are permanently lubricated.

Remember **Sona Precision Forge** in Selma, NC? It was a auto parts maker with a fairly large captive heat treat department which closed down a couple of years ago. It restarted for a short period of time under the name Selma Precision before it closed down again. The equipment is certainly very saleable however it appears that for the past year or so it has been sitting there idle and that there are no real plans for it. *What's it worth? "Abar Ipsen TurboTreater" vacuum furnace. "2 Bar quenching. Working dimensions of 36" X 36" X 24". 18" diffusion pump, Stokes 671 booster pump and 212H roughing pump. Yokogawa CX 2000 controller and CM31 vacuum gauges. Hot zone is approximately 6 years old. Moly elements with graphite insulation."* While this is an older furnace it is in excellent condition and came with an asking price of \$225,000 USD. It looks like it sold fairly quickly at roughly 95% of the asking price which is about what we would have expected.



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Furnaces like this do not come on the used market that often.



We're trying to figure out the story on this vacuum furnace. It is located in **San Antonio, Texas** and is part of an auction of surplus equipment located at a defense supplier in the area however we are struggling to find any details about it.



Juan Eliseo Cruz ortega at **ALD Thermal Treatment** in Mexico is moving up the ladder and now has the official title of Maintenance and Service Sales Director. **Erika Zarazua** is somebody else moving on up. Erika is now Project Manager at **Global Thermal Solutions** also in Mexico. Global Thermal Solutions provides calibration and pyrometry services. **Eric Boltz** in Cincinnati, Ohio has been in the industry for some time, mainly having to do with furnace controls. Looks like he made a change and is now selling high temperature fans of all things. Looks like **Hauck Heat Treatment** in Poland has a new Sale Manager; "We are pleased to welcome **Łukasz Turowski** to our Hauck Heat Treatment team in Poland. Lukasz joined our Poland sales department in May 2018 Lukasz has worked as a sales representative in the heat treatment industry (including laser hardening technology) for several years. His experience will prove to be very valuable to our customers and to our team. After graduating from Silesian University of Technology in the field of materials engineering, he became an International Welding Engineer (IWE). He continued his education in management and received the Executive Master of Business Administration (MBA) In his free time Łukasz likes spending time with his family. He loves physical activities such as functional training." **August 13, 2018**



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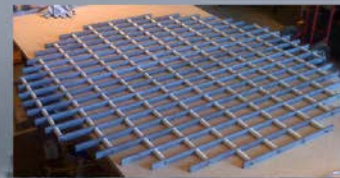
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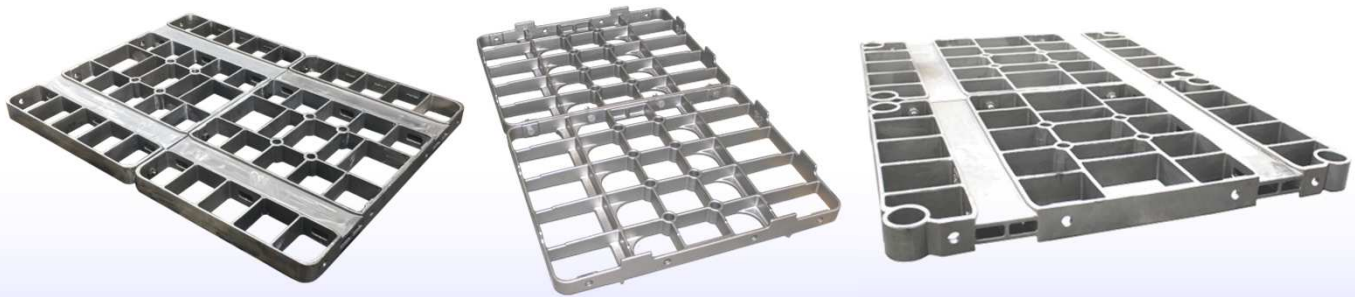
Siegen Tool and Hardening to Add Rohde Vacuum Nitriding

In Siegen, Germany we see that tooling supplier and commercial heat treater “Siegen Tool and Hardening Technology GmbH” is adding additional heat treating capacity. In the fall of 2018 this will include a ROHDE Schutzgasöfen GmbH vacuum nitriding system similar to the system in the photo below which is located at commercial heat treat HTU in Mühlhofen, Germany. Siegen Tool & Hardening currently has a number of furnaces which includes vacuum hardening up to 15 bar and the ability to offer Plasma nitriding and nitrocarburizing. **August 10, 2018**



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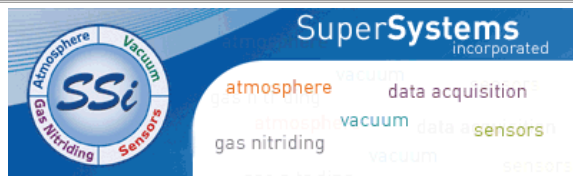
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* 1 week availability limited to standard products in stock, while supplies last. (Some restrictions apply.) Typical delivery 8 to 10 weeks for castings of existing patterns. Ask about our Staged Delivery™ options.

Where Are They Now-Ron Graham

Ron has been in the heat treating industry for a number of years now mainly selling capital equipment, as a matter of fact we enjoyed working with him for a period of time. Well Ron switched hats recently and is now a Key Account Manager for commercial heat treater **Paulo Heat Treating** in Willoughby, Ohio. If you recall we mentioned this location recently, mainly for the fact that it is going through an enormous expansion. Below you can see Ron's "mug shot" and a picture of the Paulo plant which was taken very recently. By the way Paulo will be mentioned in the near future in our list of **"The Largest North American Commercial Heat Treaters"**-you might be surprised at where the company ranks. **August 10, 2018**



Alex Bast Joins Cambridge Heat Treating

For many years Alex worked in the very impressive heat treating facility of Schaeffler Bearings in Stratford, Ontario, Canada. For a new challenge Alex recently made a substantial change and joined Cambridge Heat Treating in Cambridge, Canada where he will be in charge of quality. In the first photo below we see Alec on the left and Peter Robbins one of the owners of the company on the right. Cambridge has several batch IQ furnaces, vacuum furnaces up to 10 bar and a Rubig Ion Nitriders. The second photo shows Peter and Don Robbins in front of a SECO furnace which was new a couple of years ago. **August 9, 2018**



PhoenixTM And Temperature Profiling in the Aluminum Industry

*In today's manufacturing market aluminium is increasingly becoming the material of choice being lighter, safer and more sustainable. With estimated growth in global aluminium demand in 2018 of 4-5% both primary and secondary processors of aluminium are rapidly looking to improve the efficiency of their operations. Manufacturers looking to replace existing materials with aluminium are needing new methodology to prove that new thermal processing of aluminium parts and products is done to specification, efficiently and economically. Helping with this need PhoenixTM offers a range of temperature profiling solutions designed specifically for applications in the Aluminium manufacturing market. Whether reheating aluminium slabs/ingots or log homogenization in a continuous pusher or walking beam furnace, solution reheating (T6) aluminium automotive parts, CQI-9 & AMS2750 TUS, CAB brazing radiators or powder coating aluminium extrusions, plus many more a unique system solution is available. In many situations PhoenixTM has worked directly with key industry players to develop bespoke solutions for unique process challenges. **August 9, 2018***



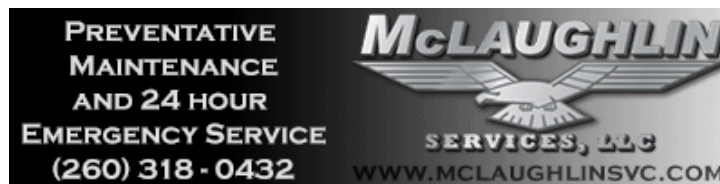
http://www.phoenixtm.com/assets/Uploads/industry-application/Aluminium-Processing-Temperature-Profiling-Solutions-from-PhoenixTM.pdf



ALD Mexico 10th Anniversary and LPC Seminar, August 22nd & 23rd

In a few short weeks ALD Thermal Treatment will be celebrating their 10th anniversary in Saltillo, Mexico-an event which will be combined with a seminar about Low Pressure Carburizing. We have no doubt but that this will be an excellent and informative event and well worth attending. Below we have two photos of this plant when we visited a couple of years back. **August 9, 2018**

Seminar- Basics of LPC (Low Pressure Carburizing); This seminar gives you a basic understanding for the successful application of the LPC-process. Besides the basics of the process and the equipment, the furnaces can be seen in action on the shop-floor at ALD-Thermal Treatment. The seminar is intended for personnel working in the fields of process-technology, quality, planning, scheduling and production (shift leaders). All conferences are in English. Date: August 22nd and 23rd, 2018. Venue: Hotel DoubleTree Suites, Saltillo, Coahuila, Mexico. Cost: 550 USD per person. Info and registration: ventas@alddt-mexico.com



What we Know About US Trade Tariffs-Alloy Components

Several times in the past few weeks we have mentioned about the new US trade tariffs and how they will affect the heat treating industry. We have heard stories about flanges and fittings imported into the US from Asian suppliers seeing very large tariffs. We have seen that moly products described as “furnace parts” will now have a 25% tariff applied and now

we are seeing that (*no surprise*) alloy components from outside of North America will also see new tariffs. Nickel prices have been rising for some time now which has been raising the price of components such as baskets, radiant tubes, base trays and fixturing and now we have increased tariffs which are further going to increase costs. Interestingly enough that while you would expect that only suppliers from outside of the US would be raising their prices because of increased tariffs it looks like domestic US suppliers of alloy components are raising their prices in step with foreign suppliers meaning that we all will be paying more for alloy. **August 8, 2018**



Bernard Family Clock Tower, Michigan, USA

If it has to do with the heat treating industry “The Monty” is on it. Read on to see the connection with our industry; *“A groundbreaking ceremony is being held today on the campus of Michigan Tech for the new Bernard Family Clock Tower. The clock tower will be located outside the Memorial Union Building near the MEEM. The clock tower and a student scholarship are being made possible by a donation from the William and Ilene Bernard Jr. family. Bernard received his bachelor’s in metallurgical engineering in 1969 and is the CEO and Chairman of Surface Combustion, Inc., a leading manufacturer of thermal processing equipment, headquartered in Maumee, Ohio. Bernard was born and raised in Houghton and says he is grateful for his Michigan Tech experience. “If Michigan Tech was not in Houghton, I would not have had the opportunity to attend college and then experience the success that my highly regarded Michigan Tech degree enabled,” he says. “My family and I are proud of our Copper Country roots and are grateful for how Michigan Tech enhances the community.”* **August 8, 2018**



Molybdenum Costs Going Up Substantially

Most heat treaters are familiar with molybdenum (moly) as a material which is extremely resistant to high temperatures. While relatively common in many vacuum furnace applications both for fixturing and hot zone linings moly use is light in atmosphere applications. While it has a number of advantages in high temperature applications it does have two drawbacks; the high cost and the fact that it is not shock resistant, meaning it doesn't distort but will break. With this background out of the way we get to the point of this story which is that US tariffs recently put in place mean higher prices and this is immediate. We understand that moly mill products (basically the raw material) are seeing small tariffs in the region of 5% however moly products described as "furnace components" are seeing tariffs of 25% which is really going to hurt a few heat treaters. **August 7, 2018**



Meritor Automotive Auctioning Off Heat Treating Equipment

Auto parts manufacturer Meritor in Morganton, NC is having an on line auction starting Tuesday, August 14, 2018. While the auction mainly consists of gear cutting equipment and related items which no self respecting heat treater cares about it does include some heat treating equipment. Featured are some Induction systems and a few ovens. From what we have seen nothing super exciting but we are sure it has some value. **August 7, 2018**

What's Are Two Real Old Gleason Press Quench Units Worth?

We weren't sure whether to file this under "what's it worth" or "your joke for the day"-at the end of the day we decided to be polite and file it under "what's it worth". Gleason press quench units are top quality units and a 537 model which is what these are (2 available) generally solicit some interest when they go on the market. However as we say in North America these were "ridden hard and put away wet" which is why we burst out laughing at the asking price of \$80,000 USD each. \$20-\$25K each is more the range we would suggest. Needless to say you will not be seeing these listed on our website-at least not at anywhere near \$80K each. **August 3, 2018**



Texas Heat Treating Bringing More Furnaces On-Line

Earlier this week we had two news items about Texas Heat Treating Inc., making investments. Well here is another news item about the company; *"Texas Heat Treating's Fort Worth operation has brought on-line its seventh "Super 36" integral quench furnace. This furnace was purchased new in February 2015. In consideration of declining oil-filed activity at the time, full commissioning and production use was delayed. Given current customer demands the furnace, with its associated fixturing and required qualifications, is now in use. The furnace is used for Carburizing and atmosphere-controlled Hardening. It has a work zone of 36" x 36" x 72" and a work-load rating of 6,000 pounds."* **August 3, 2018**



People “Stuff”

Steve Sumner who was Plant Manager at **Applied Process** in Livonia, Michigan has parted ways with the company. Applied Process has locations in Michigan and Wisconsin and is known as one of the larger commercial heat treaters in North America which specializes in salt quenching, in particular the ADI process. From Germany we have this; **“Bernhard**



Högner joined **Hauck Heat Treatment** in May 2018 to steer strategic sales for Hauck Heat Treatment Germany. He will develop strategic markets and will take care of the key accounts of our German plants. After his successful mechanical engineering studies at the RWTH Aachen, Marcus worked as a sales engineer. Afterwards he was the sales manager at a medium-sized business constructing special purpose and straightening machines for many years. Here he developed international sales structures. Bernhard lives in Wülfrath, Germany and is father to two children and is interested in music, football and travelling.

Out in Denver, Colorado we see that **Steve Bailey** who was manager of machine shop **Qualtek** is no longer with the company. Qualtek has a small (*but very neat*) in house heat treating department. At the age of 74 **Allan Hick** of **CHTA** has announced that he will be retiring within the year. **CHTA** (Contract Heat Treatment Association) is the UK organization for commercial heat treaters and Allan has been organizing it and their newsletter **“Hotline”** for as long as we can remember. **John Lewis** who was with furnace manufacturer **Baker Furnace, Inc.**, in Brea, California (*whose ad can be found on this page*) is no longer with the company. **August 2, 2018**

“Super 30” Allcase Available

The vendor of this furnace needs to remove it by the end of August 2018 and for that reason he has asked us to list it at a very special price. It is a 1970's vintage Surface Combustion, gas fired “Super 30” batch IQ furnace with working dimensions of 30” wide X 48” deep X 30” high. It is complete, ready to go and dismantled for loading on a truck. Asking price is \$39,000 USD which for a complete “Super 30” is a darn good price. jordan@themonty.com



Sandvik acquires US-based Custom Electric Manufacturing

On a personal level this makes for a very interesting news item as WG Montgomery Ltd., has represented Custom Electric of Wixom, Michigan for a number of years now. Unfortunately we couldn't find a good photo of the Custom Electric team but we do have this fairly recent photo from Kanthal (Sandvik) in Sweden. We have a very high opinion of both Custom Electric and Sandvik and have no doubt but that this will be an excellent marriage. **August 1, 2018**

“Sandvik acquires privately owned Custom Electric Manufacturing Co., headquartered in Wixom, Michigan, USA. The company is a leading manufacturer of original equipment and replacement heating elements on the North American market. “Through this acquisition we add further strength to our leading position in industrial heating systems. I am pleased to welcome the Custom Electric Manufacturing team into Kanthal and Sandvik Materials Technology”, says Göran Björkman, President, Sandvik Materials Technology. In 2017, the company had revenues of 5.2 million USD, approximately 20 employees and a strong sales network in North America. Custom Electric Manufacturing will continue to go to market

under its own brand. The transaction was closed today, and the business will be reported as part of the Product Area Kanthal within business area Sandvik Materials Technology. The parties have agreed not to disclose the purchase price. The deal is accretive to earnings per share from the start. Stockholm, 1 August 2018”



Ben Crawford, Contour Hardening Update

Last week we mentioned about how Ben Crawford, a very well known name in the North American heat treating market had recently become President and CEO of Contour Hardening based in Indianapolis, Indiana. Well as it turns out our news items are even more up to date than we thought, Ben actually started Monday of this week so this represents his second day on the job. Ben is replacing the previous President and CEO of the company Mr. John Storm who unfortunately passed away recently. Incidentally we have always thought of Contour Hardening as mainly a provider of induction heating equipment however that is incorrect. The main focus is induction heat treating, so much so that the company is probably the largest commercial induction heat treater in North America. **August 1, 2018**



USED EQUIPMENT

Want to get true market value for your used heat treating equipment?

themonty.com is the only way to do this! Unlike used equipment dealers we work on a commission basis meaning no high overheads, no buy and resells, no high expenses which means that you as a seller get what your equipment is worth-not what a used equipment dealer will pay you for it.

Not sure what your equipment is worth or how salable it is?

Let us know and we can give you a **free appraisal** and an honest answer about market conditions – **no BS**. Before listing we will require a signed copy of the “**Terms and Conditions**”.

Please email Jordan at **jordan@themonty.com** all pertinent information including asking price (which we strongly recommend) age, condition and if possible photos. When selling please keep in mind that we do NOT ask for an exclusive sales agreement – **if we don't sell it we don't get paid – PERIOD**. You can't lose by listing with **themonty.com** we sell your equipment or we don't get paid-period.

WE HAVE ATTEMPTED TO DESCRIBE ALL EQUIPMENT ACCURATELY FROM THE INFORMATION WE HAVE AVAILABLE.

ANY MISTAKES ARE UNINTENTIONAL. WE DO NOT GUARANTEE THE ACCURACY OF THE INFORMATION, NOR CAN WE GUARANTEE THE PERFORMANCE OF THE EQUIPMENT OR SUITABILITY TO YOUR APPLICATION. THE EQUIPMENT IS SOLD AS-IS, WHERE-IS. WE STRONGLY ENCOURAGE YOUR PERSONAL INSPECTION OF THE EQUIPMENT BEFORE PURCHASE.

BATCH FOR SALE

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, let us know.

[Contact Us](#)

Quick Jump To Items:

Item # B458 Box Furnace, 70" X 42" Retort 2,000F

Item # B457 Surface Combustion Batch IQ Furnace

Item # B456 "Super 30" Batch IQ Furnace

Item # B455 Lindberg Box Furnace

Item # B454 Lindberg Box Furnace

Item # B453 Williams Industrial Batch IQ's (2 Available)

Item # B452 Applied Heat Technologies (AHT) Fluidized Bed Furnace

Item # B451 Surface Combustion "Super 30" Allcase

Item # B450 Lindberg 24" x 24" x 36"

Item # B449 Air Atmosphere Box Furnace 2,000 F

Item # B448 Tip Up Furnaces (3 Available)

Item # B445 Surface Combustion "Super 36" Furnaces (3 available)

Item # B444 BOREL Furnace 550 °C

Item # B443 SOLO Heat Treatment Line

Item # B442 SOLO Quenching Machine

Item # B441 GM Batch IQ with Top Cool

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Item # B438 Holcroft Batch IQ Furnace

Item # B437 Ipsen Recirculating Box Furnace

Item # B436 36" x 60" Pit Gas Nitrider

Item # B426 Plasma Nitriding Unit 1000 kg Capacity

Item # B425 Box Furnace 2000 F

Item # B415 J.L. Becker Car Bottom 1800 F

Item # B399 Car Bottom Furnace 10' x 12' x 8'

Item # B398 Sauder Batch IQ Line 24" x 24" x 36"

Item # B397 "Lift-Off" Atmosphere Box Furnaces (2)

Item # B374 Atmosphere Box Furnace 2100 F

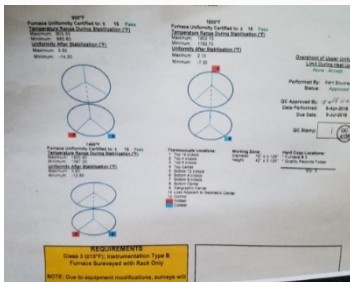
Item # B352 Pacific Scientific Box Furnace

ITEM # B458

BOX FURNACE, 70" X 42" RETORT 2,000F

Box Furnace, 70" X 42" Retort 2,000F. Manufactured by Noble Furnaces this is a gas fired box furnace capable of 2,000F. Furnace has a vertical lift front door with a charge car and retort. Furnace has working dimensions of 8' X 8' X 6" high (approximate). 330SS retort has working dimensions of 70" diameter X 42" high. Vendor has been processing aerospace parts in an argon atmosphere in the retort, however furnace can be used without the retort. Excellent condition, currently installed and in operation.

Asking Price \$80,000 USD



ITEM # B457

"SUPER 36" BATCH IQ FURNACE

"Super 36" Batch IQ Furnace. Manufactured by Surface Combustion in 1969 this is a "Super 36" batch IQ furnace with working dimensions of 36" X 72" X 36". Serial number is BX - 38680-1A. Gas fired. Maximum operating temperature of 1750F. 5,000 pound capacity, 5,000 gallon quench tank. This furnace is installed but not in operation due to a fire. While complete it will require work.

Asking Price \$29,000 USD



ITEM # B456

“SUPER 30” BATCH IQ FURNACE

“Super 30” Batch IQ Furnace. Manufactured by Surface combustion in the 1970’s this is a “Super 30” style batch IQ furnace. Gas fired. Working dimensions of 30” wide X 48” deep X 30” high. Complete. Currently in indoor storage and disassembled for loading.

Asking \$39,000 USD for quick sale.



ITEM # B455

LINDBERG BOX FURNACE

Lindberg Box Furnace 2000F. Lindberg Box Furnace Model 11-ROMT-489336-20F. Serial Number 88810-L. Electrically heated, voltage 480/3/60/190kW. Maximum operating temperature of 2000F. Working dimensions of 48” wide X 36” high X 96” long. Controls: Mounted and wired in a free standing control panel includes SCR for heating elements, digital temperature controllers for control and high limit, strip chart recorder etc. Description: Standard Lindberg design box furnace with “Rod Overbend” heating elements, vertical lift door, roller rail hearth, cast alloy tray, two (2) roof mounted fans and stationary powered loader/unloader. Very good condition.

Asking \$95,000 USD.



ITEM # B454

LINDBERG BOX FURNACE

Lindberg Box Furnace. Model #11-MT-489336-14. Serial #888809-L (9/1989). Electrically heated. Operating temperature of 1400F. Voltage: 480/3/60/164 kW. Working dimensions of 48" wide X 36" high X 96" deep. Controls: Mounted and wired in a free standing control panel includes SCR for heating elements, digital temperature controllers for control and high limit, strip chart recorder etc. Description: Standard Lindberg design box furnace with "Moldatherm" heating elements, vertical lift door, roller rail hearth, cast alloy tray, alloy air plenum for air distribution, roof mounted fan and stationary powered loader/unloader. Very good condition.

Asking \$75,000 USD.



ITEM # B453

WILLIAMS INDUSTRIAL BATCH IQ'S (2 AVAILABLE)

Williams Industrial Batch, high temperature, electric, Internal Quench furnaces. 24" W X 36" deep X 24" high load size. Mid 1990s built. 2 identical units available. Currently used for solution heat treat, water and Polymer quench. Max temp. 2100F, very tight $\pm 10^\circ\text{F}$ or better uniformity. Set up for Nitrogen atmosphere. Waukee meters for air and N₂ with solenoids tied to recipes. SSI Oxygen probe with panel/display. Sand Lion PLC touch screen controls for recipes, charting, temp, agitator, atmosphere control etc. Horizontal SiCarbide glow bars for heating. SiCarbide rails make up the hearth for tray support and transfer.

Chain guide and roller rails over the quench vestibule. Air operated inner and outer doors. Units are in use but ready to take out for the floor space. Transfer car not included.

Asking price \$25,000 each.



ITEM # B452

APPLIED HEAT TECHNOLOGIES (AHT) FLUIDIZED BED FURNACE

Applied Heat Technologies (AHT) Fluidized Bed Furnace. Applied Heat Technologies (AHT) fluidized bed furnace. Treatment chamber is 300 mm diameter x 900 mm deep (roughly 12 in diameter x 36 in deep.) Maximum temperature is 1050 °C (1922°F). Maximum load is rated at 50 kg at 1000 °C (110 lb at 1832 °F) and 90 kg at 570 °C (198 lb at 1058 °F.) Mark® fluid bed furnace controller software. Silicon carbide heating elements, 25 kW, configured in delta. Piping is set to accept nitrogen, argon, hydrogen chloride (HCl), and hydrogen gasses. Inert material is P120 grit aluminum oxide (Al₂O₃) powder. The fluidized bed is designed to deposit vanadium carbide (and other carbides with correct chemistry) onto steel. The fluidized bed system comes with a propane burner, HCl detection system, and scrubber system. The system also has a hood and quench bed that came with it but these have not been used and it cannot be verified that they work. The fluidized bed system with scrubber is currently operational but is not being used. Almost new heating elements with one spare included.

Asking \$99,000 USD



ITEM # B451

SURFACE COMBUSTION "SUPER 30" ALLCASE

Surface Combustion "Super 30" Allcase. Manufactured by Surface Combustion this is a batch IQ furnace. Working dimensions of 30" wide X 48" deep X 24" high. Gas fired. Nitrogen/Methanol with updated controls and an Atmosphere Engineering SmartMeth panel. Included datalogging and trending. SSi oxygen probe. Honeywell overtemp. Currently installed, complete and in good condition. Ready to go and available immediately.

Asking \$40,000 USD.



ITEM # B450

LINDBERG 24" X 24" X 36"

Lindberg Batch IQ 24" x 24" x 36". Straight through design with PLC controls. Serial number: 102350.

Asking Price: 35,000 Canadian



ITEM # B449

AIR ATMOSPHERE BOX FURNACE 2,000 F

Lindberg/MPH air atmosphere box. Model Number: 11-ROMT-243624-20, Job Number: 224745. Chamber Dimensions: 24" W x 36" D x 24" H. Electrically heated 40KW. Max Temp:

2,000°F. Capacity: 1,200 lbs. @ 2,000°F. Elect. Input: 480/3/60. SCCR Rating: 65 KW. F.L.A.: 5 AMPS. Elect. Drawing: 7315-1134-00A. Largest Motor/Load: 40 KW. Control Panel is included. Manufactured Date: September 2016. Never used this unit is available for immediate delivery with a full warranty.

Asking \$60,000 USD.



ITEM # B448

TIP UP FURNACES (3 AVAILABLE)

Tip Up Furnaces (3 available). Manufactured by Kleenair Products these "Tip Up" style furnaces have working dimensions of 60" wide X 60" high X 72" long. Natural gas heating-1200CFH. Maximum temperature 1500F & 2000F. 460/6/60 electrical. External dimensions of 8'W x 10'6"H (closed) x 14'L Each, 13'6"H when open. Controls: Temperature controls are missing. There is one (1) control cabinet which houses the flame relay modules, motor starters etc. and is common to all three (3) furnaces. Description: Currently available are two (2) 1500°F furnaces and one (1) 2000°F furnace. There is also one (1) loader and one (1) quench tank. Furnaces are ceramic fiber lined with Eclipse "TJ" direct fired burners. Burners fire from top rear and bottom front under the refractory piers. Dual hydraulic cylinders open/close the furnace cover. One (1) common hydraulic power unit for all three (3) furnaces. We will separate the line to sell individually or as a whole. We can provide hydraulic power units for each furnace. Very good condition.

Asking \$55,000 USD each or \$150,000 for all three.



ITEM # B445

SURFACE COMBUSTION “SUPER 36” FURNACES (3 AVAILABLE)

Surface combustion gas fired batch IQ furnaces model “Super 36”. Working dimensions of 36” wide X 48” deep X 32” high. Late 1980’s vintage. Casemate controls, SBS quench oil filter. Set up for endo atmosphere with ammonia addition. Currently installed, furnaces were in operation until February 27th 2018. Complete and in good operating condition. Pricing to come.



ITEM # B444

BOREL FURNACE 550 °C

BOREL Furnace 550 °C. Built by BOREL in 2006. Technical data: Power 20 kW – Frequency: 50 Hz – Tension: 400V 3LNPE – Maximum temperature: 550 °C – External dimensions: Length 135 cm, Width 130 cm, Height 175 cm – Internal dimension: Width 74 cm- Depth 82 cm – Height 39 cm. Located in France.

Price on request jordan@themonty.com



ITEM # B443

SOLO SWISS HEAT TREATMENT LINE

SOLO Swiss Heat Treatment Line 202-30/30/60. Built by Solo of Switzerland this is a SOLO 202-30/30/60 model. This heat treatment line was manufactured and modified in 1981-1987-1994. Composition: 1 washing machine, 1 "5 bar gas tank", 1 "5 bar gas tank" with 35 kW turbine, 1 oil tank, 1 tempering furnace, 1 salt tank, 1 furnace with max. temperature of 850 °C, 1 manual manipulator, temperature regulation system and % CP with regulator, loading material. Possibility of mounting and commissioning by the manufacturer (SOLO). Actually, in operation, located in Switzerland. Good condition. All manuals included.

Price on request jordan@themonty.com



ITEM # B442

SOLO QUENCHING MACHINE

SOLO Quenching Machine 209-30/30 6981 – 1150 °C. Built by Solo of Switzerland this is a SOLO 209-30/30 model. This furnace was manufactured in 1991. Quenching machine for self-hardening and oil quenching. Composition: quenching Bell Furnace, nitrogen quenching unit, tempering furnace, oil quenching unit, controller / programmer, operator panel, temperature controller, hydraulic control. Dedicated for austenitizing, annealing, tempering, oil quenching, quenching under nitrogen. Max. temperature: 1150°C. Main voltage: 3 x 400 V – 50 Hz. Power input: 10 kW. Effective load dimensions: Diameter 300 mm*Height 300 mm. Max. loading weight: 20 kg. Protective gas: N2 or mixture N2 to max. 5 % H2. Overall dimensions: Height 2200mm, width 2070mm, depth 2250m. Possibility of mounting and commissioning by the manufacturer (SOLO). Located in France. Good condition. All manuals included.

Price on request jordan@themonty.com



ITEM # B441

GM BATCH IQ WITH TOP COOL

GM Batch IQ with Top Cool. Manufacturer: GM. Type: Integral Quench Furnace with Top Cool. Heated: Natural Gas – 1.2 M BTU's/Hour. Max. Temperature: 1450-1875 deg. Voltage: 460/3/60. Work Area: 36"W x 36"H x 48"L.

Controls: All mounted in two freestanding panels next to the furnace Includes motor starters relays, pushbuttons, signal lights etc. Honeywell indicating controller and overtemp. Honeywell circular chart recorder for recording temperature. Carbon control system.

Description: Furnace has (4) "U" shaped radiant tubes mounted vertically, (2) on each side wall. Heated by recuperated burners. Alloy roller rail hearth, alloy circulating fan, dual quench cylinders, top cool chamber and heated quench tank. Brick lined with fiber roof. Rear handler system, 1998 vintage. Installed, complete and operational. Condition: Very Good. Availability: Immediate.

Asking Price: \$150,000.00



ITEM # B439

SURFACE "SUPER 36" ALLCASE

Surface "Super 36" Allcase. Surface Combustion "Allcase" batch IQ furnace with working dimensions of 36" X 48" X 30" high. Natural gas heating, 1 MBTU's/Hour. Maximum operating temperature of 1750F, voltage 460/3/60. External Dimensions: 10'W x 12'H x 15'L. Controls: All mounted in a panel attached to the furnace includes motor starters relays, pushbuttons, signal lights etc. Honeywell digital strip chart recorder for recording temperature, indicating controller and overtemp. Partlow controls for oil heating/cooling. Description: Surface Combustion Allcase Furnace with (6) "U" shaped radiant tubes mounted vertically 3 on each side wall. Fiber lined. Alloy roller rail hearth, alloy circulating fan, dual quench cylinders, top cool chamber and heated quench tank. Furnace has some

missing components (temperature controls, pressure switches, ignition transformers, regulator) which will be replaced prior to shipment. Condition: Very Good.

Please call for pricing.



ITEM # B438

HOLCROFT BATCH IQ FURNACE LINE

Holcroft Batch IQ Furnace Line. Model GP2500. Serial Number S/N #CJ-4233. Installed new in 1980. Gas fired, working dimensions of 30" X 48" X 30" and a capacity of 2500 pounds. Furnace was operational until shut down on 11/30/17 when plant closed. Also included is a double ended charge car (Holcroft) to handle loads of 30" X 48", a Holcroft Spray/Dunk washer with heating system 30" X 48" X 30" and 2 load tables, 1 stationary and 1 scissor lift. Complete, in very good condition and ready to go.

Asking \$125,000 USD for everything.



ITEM # B437

IPSEN RECIRCULATING BOX FURNACE

Ipsen Recirculating Box Furnace 38" high x 43" wide x 48" deep. Gas fired, 1,000,000 BTU/hr with a max temperature: 1400 deg.F. Model Number: DL-3036. Serial Number: 60458. Updated controls, Honeywell indicating controller and overtemp. High temperature tempering furnace. Vertical lift air operated door with overhead air cylinder. Fiber board insulation. Alloy roller rail hearth. Direct fired furnace, but the heating chamber is separate

from the work chamber and has a high velocity roof mounted circulating fan. Top mounted package burner. Complete combustion controls and safeties. 460/3/60 power. Test fired prior to shipment.

Asking Price: \$39,500.00



ITEM # B436

36" X 60" PIT GAS NITRIDER

36" x 60" pit gas nitrider (Lindberg Homo Nitrider – electric) built in late '70's, c/w with Super Systems Gas Nitriding Control system built in 2012. System was operational up until decommissioning last year, when it was replaced with new equipment. Price includes fixtures shown in pictures.

Asking Price \$50,000 USD.



ITEM # B426

PLASMA NITRIDING UNIT 1000 KG CAPACITY

Plasma Nitriding Unit. Manufactured by Plateg this is a Plateg Puls Plasma Nitriding unit. Type; Hot Wall Plasma Nitriding Furnace (Tandem). Built in 1997, the programmer was replaced in 2017. Working dimensions of 1000 mm diameter X 1450 mm high. Load capacity 1000 kg. Installed power 95 kW, 400 V, 50 Hz, 160 A.

Asking 98.000 Euro. Located in Turkey.



ITEM # B425

BOX FURNACE 42" HIGH X 48" WIDE X 14' LONG

Box Furnace 42" High X 48" Wide X 14' Long. Manufactured by Lindberg. Working dimensions of 42" high x 48" wide x 14'-0" long. Electrically heated 480/3/60, 160 KW. Operating temperature of 2000F. Temperature Controls: Free standing enclosed panel with updated Honeywell controls, including circular chart recorder, SCR controls, back up contactors and step down transformers for the heating elements. Description & Features: Fiber lined. Heated by Nichrome ribbon heating elements on both side walls. Two zones of control. Air cylinder operated door. Includes motor driven load/unload system. 8000 pound capacity. Originally installed at Boeing. Condition: Good. Vendor will repair the back wall, replace all broken element hanger modules and provide and install serviceable heating elements.

Asking \$85,000 USD.



ITEM # B415

J.L. BECKER CAR BOTTOM

J.L. Becker Car Bottom. Working Dimensions are 96" wide x 180" Long x 66" High with a Maximum Temperature of 1,800 Deg. F. Natural Gas fired with 4.3 Million Btu's. Serial Number: J 2060. Double Ended Car Bottom with Air Operated Doors to accommodate Dual – Full Length Motorized Cars. Each Car is 108" wide x 200" long with Castable Refractory Floor Insulation – Sand Sealed. The Furnace is Fiber/Refractory Lined with 8 Tempest Burners (4) per side wall, firing opposite and opposed. The Exhaust Flues are floor level

mounted for excellent temperature uniformity. Temperature Controls : Free Standing Panel Honeywell Digital Controls and Honeywell Tru-line Circular Chart Recorder.

Asking Price: \$95,000.00 USD.



ITEM # B399

CAR BOTTOM FURNACE

Car Bottom Furnace. Manufactured by Huber this is a gas fired car type furnace. Maximum operating temperature of 2000F. Working dimensions of 10' 4" wide X 12' 8" long X 8' high. Overall dimensions of 16' wide X 16" long X 14' high. Gas fired. Electricity requirements; 480 Volts, 3 Phase, 60 Hertz. Controls; Watlow digital controller, Honeywell digital overtemp and Honeywell digital recorder. Power driven car with (3) three sets of axles. Door is attached to furnace. Furnace is fibre lined and equipped with (4) four power flame model JD 130 package burners. Approximately 1,300,000 btu's each.

Asking \$85,000 USD.



ITEM # B398

SAUDER BATCH IQ LINE

Sauder Batch IQ Line. Serial Number 881978-83. Electrically heated 480/3/60/150kW total load. Maximum operating temperature of 1850F. Working dimensions of 24" Wide X 24" high X 36" long. Controls; Mounted and wired in an enclosure attached to the right

hand side of the furnace includes a Marathon 10 Pro digital temperature controller, Marathon Carbpro digital carbon controller, Barber Colman analog high limit and a Honeywell digital strip chart recorder. Three power meters are face mounted to the same enclosure which monitor power in each zone of the furnace. A Halmar "SCR" power controller controls power to the heating elements. Two (2) Allen Bradley PLC controllers are mounted in the same enclosure. Standard In/Out Integral Quench Furnace w/Top Cool. This line consists of IQ furnace with top cool, heated quench tank, charge car, dunk & spray washer, temper furnace, SBS oil cooler, scissors table, atmosphere flow panel and several spare parts. Very good condition. Asking \$125,000 USD for the complete line. Shipping

Dimensions:

Temper Oven: 72"W x 11'H x 72"L

Washer: 80"W x 10'3"H x 120"L

Furnace: 109"W x 11'H x 96"L

Quench: 106" x 10'H x 72"

Top Cool: Skid - 5' x 5' x 6'H

Charge Car: 78"W x 60"H x 86"L

Misc. skids, flow panel, SBS, spare parts

Asking \$125,000 USD for the complete line.



ITEM # B397

"LIFT-OFF" ATMOSPHERE BOX FURNACES (2 AVAILABLE)

"Lift-Off" Atmosphere Box Furnaces (2 available). Manufactured by Drever. Effective working dimensions of 10'6" Wide x 35' Long x 6' High. Gas fired-12,000,000 BTU/Hr. Max. Operating temperature of 1450F. Description; Ceramic Fiber Lined, Vertical Rising Atmosphere "Lift-Off" Furnace complete with (26) U-Shaped Radiant Tubes, North American Burner System, (4) Top-Mounted Alloy Circulating Fans, (4) Zones of Control, Stationary Hearth, "Knife-Edge" Atmosphere Seal, and Hydraulic Lifting Cylinders on each end of furnace. Furnace is capable of 100,000 lb. loads. Instrumentation; Free-Standing Control Panel with Honeywell PLC Digital Temperature Controller, and Honeywell Flame Safety System. Very good condition. Overall dimensions of 15'11" Wide x 41' Long x 13'6" High. Approximate weight 70,000 pounds. Units each can hold up to 100,000# loads and were used prior for tempering/normalizing wire rod and bar stock. Both of these have top mounted recirculating fans and are "atmosphere capable", good for FNC work.

Asking \$325,000 USD each.



ITEM # B374

ATMOSPHERE BOX FURNACE

Atmosphere Box Furnace. Manufacturer: R&G Services, Inc. Inside Dimensions: 18" high x 32" wide x 36" deep. Heated: Electric, 230/3/60, 60 KW. Temperature: 2100 deg. F Model Number: EB-183236 Serial Number: 77021 Temperature Controls: Updated indicating controller and overtemp. Description & Features: Air operated vertical rising door. Slanted face plate. Brick lined with silicon carbide hearth. Heated by heavy Nichrome ribbon heating elements. Atmosphere inlet and burn-off. Flame curtain with controls and safeties. Condition: Very good. Furnace will be cleaned & painted, repaired as necessary, checked out & test fired prior to shipment.

Asking Price: \$18,000.00 USD.



ITEM # B352

PACIFIC SCIENTIFIC BOX FURNACE

Pacific Scientific Box Furnace. Working dimensions of 72" wide X 120" long X 48" high, Gas fired radiant tube, maximum operating temperature of 2050F. Air operated vertical lift door, fiber lines, new refractory piers (12), hi-temp horizontal radiant tubes (6 above, 6 below), full safeties, side exhaust guard. Free standing control panel-rewired panel with

Honeywell Tru-Trend circular chart and Honeywell digital controllers and overtemp. Atmosphere capable. Comes with spare radiant tubes. Very good condition.

Asking \$70,000 USD.



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Quick Jump To Items:

- Item # C335** Compact Belt Furnace
- Item # C330** Mesh Belt Furnace Line
- Item # C329** CI Hayes Atmosphere Belt Furnace
- Item # C328** CI Hayes Atmosphere Belt Furnace
- Item # C327** Rogers Engineering Continuous Brazing Furnace
- Item # C324** C.I. Hayes Mesh Belt Furnace 12" Wide Belt
- Item # C323** Aichelin Cast Link Furnace Line 750 lbs/hr
- Item # C322** Surface Combustion Rotary Hearth Line
- Item # C321** Austempering System 500 lbs/hr
- Item # C319** CI Hayes High Temperature Pusher Furnace
- Item # C317** CI Hayes High Temperature Pusher Furnace
- Item # C314** Roller Hearth (Atmosphere) 4800 lbs/hr
- Item # C308** AFC Mesh Belt Furnace 54" Wide Belt
- Item # C301** Cast Link Belt Line 4000 lbs/hr
- Item # C283** Rotary Hearth Furnace System
- Item # C269** CI Hayes Mesh Belt Furnace 12" Wide Belt
- Item # C265** Sunbeam Pusher Carburizer 3000 lbs

ITEM # C335

COMPACT BELT FURNACE

Compact belt furnace 321-7-90 6677 1000°C. Built by Solo of Switzerland this is a SOLO 321-7-90 model. This furnace was manufactured in 1990. Composition: Loading frame,

heating part with frame, cooling part with frame, unloading frame, driving system, conveyor belt, NH3 cracker 3m3/h, distribution for treatment and cabinet gas, operator panel. Dedicated for annealing under cracked ammonia, brazing and hardening. Max. temperature of 1000 °C Heated length: 900 mm, cooled length: 1500 mm, channel section: 80 x 40 mm, Main voltage: 3 x 380 V – 50 Hz / TN, power input: 10,5 kW, gas generated: 75% H2 and 25% N2 (NH3), effective height with belt: 30 mm, conveyor belt width: 70 mm, external dimensions: L 5300 mm x l 800 mm x H 1250 mm. Perfect condition, ll manuals included. Located in France.

Price on request jordan@themonty.com



ITEM # C330

MESH BELT FURNACE LINE

Mesh Belt Furnace Line. Lobo Hornos built this mesh belt furnace line with all the engineering coming from Sunbeam. The line consists of a loader, high heat furnace, quench tank, wash, temper, and post wash. It has Honeywell, Shinha, and Siemens controls that are approximately 12 years old. The furnace has a heated length of 6 meters and a tempering length of 11.09 meters. Both the high heat and tempering lines can handle 500 KG/Hour each. The high heat furnace has an opening of 7" high by 40" wide. The tempering line has an opening of 6" high and 47" wide. Max temperature is 930 C. This mesh belt line is capable of either controlled atmosphere or Nitrogen gas. The alloy (AISI I-330, AISI I-310) and brickwork (T23& ceramic fiber) are in good condition. The quench oil is Equimsa 770 and there is a washer included. The furnace is complete in good condition and currently installed in Mexico.

Best offer.



ITEM # C329

CI HAYES ATMOSPHERE BELT FURNACE

CI Hayes Atmosphere Belt Furnace. Model: BAC. 385 KW 460 VAC. 2 zones of control, ribbon elements and glow-bars.

Asking Price \$15,000 USD



ITEM # C328

CI HAYES ATMOSPHERE BELT FURNACE

CI Hayes Atmosphere Belt Furnace. Model: LACMB 6" Belt. 306 KW 240 VAC. Ribbon elements. This furnace has been modified into a hump furnace with new controls and SCR. Bubbler, for wet hydrogen use.

Asking Price \$15,000 USD



ITEM # C327

ROGERS ENGINEERING CONTINUOUS BRAZING FURNACE

Rogers Engineering Continuous Brazing Furnace. Manufactured in 2007 by Rogers Engineering this an electrically heated, continuous, controlled atmosphere brazing furnace. System consists of an entry chamber with a manual door, two electrically heated braze zones, an Air-Jacketed atmosphere cooling chamber, manual door exit chamber and a Vac-U-Cool air cooling chamber. Parts are brought to a brazing temperature of 1112F (600C) then cooled in a controlled atmosphere to 482 F (250C). Each heating chamber is 7' 4" long. Maximum operating temperature of 1202F (650C). Like new condition.

Asking \$250,000 USD.



ITEM # C324

C.I. HAYES MESH BELT FURNACE

C.I. Hayes Mesh Belt Furnace. LAC Type. Work Zone: 12" Wide Belt, 12" High work area, 12' heat, 12' cool with 3 zones of temperature control. 1120C maximum temperature (2000F operating temperature). Power: 220V, 75KW, 212Amp, 60Hz, 3Ph. "Air Products" Gas Mixing Panel (N2, H2). Footprint: 9'W x 54'L (90'L Belt), 10'H + ductwork. Extra set of cooling muffles.

Please call for pricing.



ITEM # C323

AICHELIN CAST LINK FURNACE LINE

Aichelin Cast Link Furnace Line. The line consists of a loading table, cast link belt hardening furnace, oil quench, cross conveyor, post wash and two continuous tempering furnaces. High belt is 24" wide X 300" long with a capacity of 336 Kg/h. Nitrogen/Methanol atmosphere. Electrically heated 300 kW. Operating temperature of 1650F. Quench oil tank holds 7,000 litres. Air/oil quench oil cooler. Post wash has oil skimmer. Both tempering furnaces are electrically heated, 57 kW each. Belt widths 20" X 250" long. Maximum operating temperature of 575F. Installed in 2005 and currently used for automotive bearings. Complete installed and in operation until March 2017. Excellent condition.

Best offer.



ITEM # C322

SURFACE COMBUSTION ROTARY HEARTH FURNACE LINE

Surface Combustion Rotary Hearth Furnace Line. This system was designed for heat treating and straightening crankshafts and consists of a rotary hearth furnace, 2 Gleason straightening presses and a robot for loading/unloading. The furnace is S/N CC11590-1 with an outside diameter of 17' 3", inside 15', inside height of 2' 11" with an overall height of 8' 6". Built August 1979. Gas fired with 8 trident tubes. Atmosphere is Endo/Natural gas. Nominal tray size is 5" X 21", number of tray positions 60, tray loader/unloader length 10' 6". Hearth has ceramic tray support and guide tiles and embedded in 12" thick insulating firebrick. Sidewalls consist of 9" of insulating firebrick backed with 4 1/2" of insulating block. Alloy and brickwork are both excellent. System is complete, installed but not in operation.

Asking \$50,000 USD.



ITEM # C321

AUSTEMPERING SYSTEM

Austempering System. Ipsen Model SG500, S/N52822. Shaker hearth style hardening furnace is capable of 500 pounds/hour, 1850F operating temperature, gas fired 800,000 BTU's/hour with an 18" wide tray. Temper has an operating temperature of 800F and a heat input of 300,000 BTU's. Controls on both are Honeywell UDC units. Entire system consists of a magnetic conveyor loading system, Ipsen shaker-feeder-hopper. Mitsubishi variable speed AC drive on salt conveyors, 900 gallon wash tank with 30" conveyor and 280 gallon rust inhibitor tank with 32" conveyor. Currently installed but not in production. System is in reasonable condition but has not been used for some time.

Asking \$20,000 USD or best offer.



ITEM # C319

CI HAYES HIGH TEMPERATURE PUSHER FURNACE

CI Hayes High Temperature Pusher Furnace. C.I. Hayes model MY-040848-94PH high temperature pusher furnace. 4" opening above the hearth, 8" tray width. Max. Temp: pre-heat 1100 C, High Heat 1700 C. 94" long preheat, 1 control instrument/1 zone, 15 KW@440/3/60, metallic heating elements. 48" high heat, 1 instrument, 3 control zones, 45 KW2440/3/60, molybdenum heating elements. 48" metallic front tunnel with nitrogen curtains and burn off. 3 cooling sections. each 36" long, 1 section is insulated and all are water jacketed. Rear tunnel with nitrogen curtains and burn off. Multiple atmosphere inlets, for hydrogen/dissociated ammonia with nitrogen purging. Pusher screw drive.

Atmosphere bubbler. High heat chamber recently rebuilt. Overall Dimensions; 6'H x 4'-6"W x 39'L (Approx.)

Asking \$100,000 USD.



ITEM # C317

CI HAYES HIGH TEMPERATURE PUSHER FURNACE

CI Hayes High Temperature Pusher Furnace. Model MY-040848-94PH. 4" opening above furnace hearth. 8" tray width. Maximum temperature of the pre-heat is 1100C, maximum temperature of the high heat is 1700C. 94" preheat, 1 control instrument/1 zone, 30KW@440/3/60, metallic heating elements. 48" high heat, 3 instruments, 3 control zone, 45KW @ 440/3/60, moly heating elements. 48" metallic front tunnel with nitrogen curtains and burn off. 3 cooling sections each 36" long, 1 section is insulated and all are water jacketed. Rear tunnel with nitrogen curtains and burn off. Multiple atmosphere inlets for hydrogen/dissociated ammonia with nitrogen purging. Pusher screw drive. Atmosphere bubbler. Return conveyor system. High heat chamber recently rebuilt. Overall dimensions 6' high X 7.5' wide X 39' long (approximate). Excellent condition. Furnace was used for co-firing, can be converted for sintering with preheat muffle.

Asking \$110,000 USD.



ITEM # C314

ROLLER HEARTH FURNACE (ATMOSPHERE)

Roller Hearth Furnace (Atmosphere). Manufactured by Wellman in 1982. Model #AL-81-180 RH, S/N 180. Working dimensions of 60" Wide x 42' Long x 14" High – 4800#/HR. Electric – 480/3/60 – 469 KW (over (4) Zones of Control). Operating temperature of 1650° F. Brick Lined Atmosphere Capable Roller Hearth Furnace complete with (4) Zones of Control, Heating Elements above and below Rolls, Transformers, 25' Slow Cool Chamber (Air Cooled with Fans), and Variable Speed Drive. Free Standing Control Panels with Watlow Digital Controllers ((1) Per Zone), Watlow High Limits, and SCR Power Controls. Overall dimensions; Entrance Chamber: 12' Wide x 14' Long x 10' 6" High. High Heat Chamber: 10' 6" Wide x 30' Long x 10' 6" High. Cooling Zone: 12' Wide x 27' Long x 10' 6" High. Approximate weight 80,000 pounds. Very good condition.

Asking \$225,000 USD.



ITEM # C308

AFC MESH BELT HARDENING FURNACE

AFC Mesh Belt Hardening Furnace. Manufactured by Atmosphere Furnace Company this furnace has working dimensions of 6" high x 54" wide x 12' long (heated section). Gas fired with radiant tubes. Operating temperature of 1800F. S/N 6948. Temperature Controls: Free standing enclosed panel. Honeywell solid state digital readout indicating controllers, L&N overtemps. L&N strip chart temperature & carbon recorder. Marathon Monitors Carb-Pro carbon control. Description & Features: Fiber lined. Heated by (9) North American 4724-2-E burners firing into recuperated U-tubes. Two zones of control. Rear zone has a roof mounted recirculating fan. Cold belt return. Furnace has a flame curtain and complete combustion controls and safeties. Includes quench tank and conveyer.

Asking \$75,000 USD.



ITEM # C301

CAST LINK BELT QUENCH AND TEMPER LINE

Cast Link Belt Quench and Temper Line. Manufactured by Rogers Engineering 4,000 pounds/hour cast link belt furnace line consisting of a 1750F high heat furnace and 1700F temper furnace. Serial # CC-3977-0 (1997). High Heat Furnace: 48"W Omega Cast Link Belt, 4" pitch, 3" sides. Furnace has a 30'L heating section. Four (4) zones of control with three (3) roof mounted in the last three (3) zones. Maximum operating temperature of the hardening furnace is 1750°F. Furnace is radiant tube heated with recuperators. Furnace is currently set up for Endothermic w/Enriching Natural Gas & Air. Total BTU's for hardening furnace is 3,180,000 BTU/HR. Controls; All mounted in a free standing panel includes Allen Bradley PLC w/HMI Touchscreen, Honeywell UDC Digital Temperature Controls, SSI Carbon Controls. Voltage 480/3/60/200kW.

Tempering/Anneal Furnace: 60"W mesh belt with support rollers. Furnace has a 35'L heating section. Four (4) zones of control with four (4) roof mounted fans. Maximum operating temperature is 1700°F. Total BTU's for the tempering/annealing furnace 3,790,000 BTU/HR. Please note that this furnace has two (2) different modes of operation. Click on 'PDF' below for more information on the different modes of operation.

The sequence of this furnace is as follows:

- Load parts into pre-wash dump loader
- Pre-Wash, 190°F, Gas Heat
- Parts vibrate onto mesh (soft load) then onto cast link belt.
- High heat cycle
- Quench cycle, 200°F, Gas Heat, 8000 Gallon
- Wash cycle, 190°F, Gas Heat
- Temper cycle
- Oil blackening cycle

Includes:

- 5600 CFH Air Cooled Endothermic Gas Generator
- SBS Air to Oil Heat Exchanger which consists of three (3) 5 H.P. fans.- Manuals & Drawings

Very good condition, available immediately.

Asking \$650,000 USD.



ITEM # C283

DENTON THERMAL SYSTEMS (O'BRIEN & GERE) 2150°F ROTARY HEARTH FURNACE SYSTEM

Denton Thermal Systems (O'Brien & Gere) 2150°F Rotary Hearth Furnace System. Includes high temperature furnace, Nitrogen-Methanol Panel and Quench Press. Working Zone: 6 ft Diameter Hearth, Door Opening is 14"W x 13"H Overall Size: 9ft-8in Diameter x 10ft-10"Tall. Heating: Electric, 125 kW, 1 Zone, Globar Heating Elements. Power Requirement: 200 Amps, 480V/3Ph/60Hz. Temperature Rating: 2150°F. Water Requirement: 3 GPM. Air Requirement: 100 PSI. Controls: GE90 PLC. Honeywell Temperature Controller and Overtmp (missing but will be replaced). Marathon Monitors Carbon Control System. Includes Quench Press that was handling up to 5" Diameter bearings. Prior user reference available upon request.

Asking price: \$29,000 USD.



ITEM # C269

CI HAYES MESH BELT FURNACE

CI Hayes Mesh Belt Furnace. Working dimensions of 5" over belt, 12" wide X 120" of heated length. Electrically heated 230/3/60, operating temperature of 2100F. Model LAC. Temperature controls are new state of the art, control panel with Honeywell solid state digital readout controller and overtemp for each of three zones, includes volt and amp meters. Full alloy muffle in hot zone. 20' long sealed water jacketed cooling. Globar heating elements over and under the belt. (3) zones of control. (4) argon flowmeters. Dayton AC

inverter provides adjustable belt speed. Updated SCR controls. Muffle and belt are new. Very good condition.

Asking \$39,000 USD.



ITEM # C265

SUNBEAM PUSHER CARBURIZER

Sunbeam Pusher Carburizer. This is a very unusual style of furnace and perfect for carburizing of large gears, bearings or races. Working dimensions of 50" X 50" X 34" high. Operating temperature of 1750F. 3,000 pound capacity. Gas fired 12 Honeywell composite single ended recuperated tubes (recently replaced). Surface Casemate controls. 1800 gallon quench tank. System does not need a pit. Comes with a spray washer, temper and an oversized IHRE air cooled quench oil cooler. System is installed but not currently in use. Very good condition.

Asking \$40,000 USD.



DRAW/TEMPER FOR SALE

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Quick Jump To Items:

Item # T351 Mesh Belt Temper Furnace

Item # T349 Recirculating Box Type Draw Furnace

Item # T343 Batch Temper 36"W X 36"H X 96"L

Item # T342 Recirculating Walk In Oven 72" X 48" X 120"

Item # T341 Temper Furnace

Item # T340 Safed/Borel Annealing Furnace

Item # T339 Box Tempering Oven

Item # T336 Mesh Belt Temper Furnace 48" Wide

Item # T335 Batch Oven 37"H X 37"W X 25"D

Item # T325 3-Station Despatch Temper Furnace

Item # T320 Pifco Conveyor Oven

Item # T318 Temper 48" W X 48" D X 36" H

Item # T303 Pifco Temper Furnace

Item # T290 Tempering Ovens 36" X 48" X 36" (2 available)

Item # T286 Tempering Ovens 36" X 48" X 36" (2 available)

ITEM # T351

MESH BELT TEMPER FURNACE AVAILABLE

Mesh Belt Temper Furnace Available. Manufactured by Electric Furnace Company in the early 1980's. Gas fired with one burner, recirculating fan. Operating temperature of 1200F. 48" wide belt, rated for 3,000 pounds per hour. 480V. 24' heated length. Currently installed and in operation. Good overall condition.

Asking \$20,000 USD.



ITEM # T349

RECIRCULATING BOX TYPE DRAW FURNACE

Recirculating Box Type Draw Furnace. Manufacturer: Eclipse. Inside Dimensions: 30"high x 42"wide x 96"deep. Heated: Gas fired. Temperature: 1250 deg.F. Model Number: Box Draw. Serial Number: 3424-00773. Temperature Controls: Updated controls, Honeywell indicating controller and overtemp, circular chart recorder. Description & Features: Vertical lift air operated door. Brick lined. Alloy roller rail hearth. Seven adjustable roof baffles. Rear combustion chamber with atmospheric burner and high velocity recirculating fan. Complete combustion controls and safeties. Includes manual load table. Condition: Very Good, Operational.

Asking Price: \$39,500.00



ITEM # T343

BATCH TEMPER 36"W X 36"H X 96"L

Batch Temper 36"W X 36"H X 96"L. Manufactured by Wisconsin Oven, Model SDB-6616-10G, S/N 033899307. Natural gas fired, 1 MBTU's/hour. Maximum temperature rating 1000F. Voltage 480/3/60/16 amps. External dimensions of 96" wide X 13' 4" high assembled (10'6"H shipping) x 11'L. Controls; Mounted and wired in an enclosure with fused disconnect attached to the side of the furnace. Temperature controls consist of a digital Barber Colman 560 digital for temperature and a Barber Colman digital "Limitrol" 75L high limit. ATC process timer to control heating cycle. Allen Bradley switches for control power, circulation fan, ignition and gas valve reset. Signal lights for control power, air flow, high/low gas pressure, purge, etc. Eclipse package burner with Honeywell flame safety, UV scanner and spark ignition.

General Description; Recirculating gas fired batch temper with air operated vertical lift doors on each end. Eclipse package burner with roof mounted recirculating fan distributes heated air in a combination air flow pattern. Roller rail hearth with chain guide. Furnace includes two (2) scissor lift tables. Manual and drawings are included with this furnace. Very good condition.

Asking \$49,900.00 USD.



ITEM # T342

RECIRCULATING WALK IN OVEN 72" X 48" X 120"

Recirculating Walk In Oven. Manufactured by Precision Quincy. Working dimensions of 72"high x 48"wide x 120"deep. Gas heated, 300,000 BTU's per hour. Operating temperature of 450F. Model EC-410, S/N 25766. Temperature Controls: Partlow indicating controller and overtemp. Side mounted control cabinet. Double swing open doors, horizontal air flow. Powered exhaust blower, rear mounted combustion and fan chamber. Atmospheric type burner system. Complete combustion controls and safeties. Air flow switch. Oven will be checked out and test fired prior to shipment. Approximate shipping weight 4,310 lbs.

Asking \$16,500 USD.



ITEM # T341

TEMPER FURNACE

Temper Furnace 36" X 48" X 36". Made by McLaughlin Services. Working dimensions of 36" X 48" X 36", 5,000 pound capacity. Gas fired 750 cfh @ 2-5 PSI, 750,000 BTUH. Operating temperature 250F to 1400F, +-10F. Electricity; 40 Amps, 480V/3Ph. Compressed Air; 100 psi, Intermittent. Temperature Controls; Super Systems 9130 Temperature Controller with 12" Touchscreen, Super System 7SL 1/16 DIN Limit Controller. Logic Controls; Allen Bradley Micrologix PLC is included for alarming and sequencing.

Asking \$91,000 USD.



ITEM # T340

SAFED/BOREL ANNEALING FURNACE

Safed/Borel Annealing Furnace built in 1991. The working dimensions consist of: Diameter 400 mm, Height 500 mm. External Dimensions: 1800 mm x 1767 mm x 2412 mm. Maximum Temperature: 650 C with a maximum load capacity of 100 kg (not including baskets). Main voltage is 3 x 400V / 50 Hz, Control voltage is 230V / 24V. This setup includes a Eurotherm programmer, threshold controller, recorder, programmable clock, timing relay, control for water flow, vacuum pump, pressure reducer, and fire engine. Located in France.

Price on request.

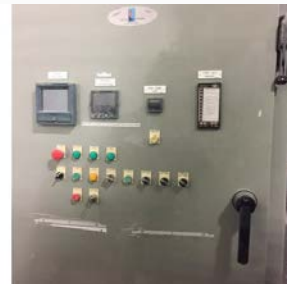


ITEM # T339

BOX TEMPERING OVEN

Box Tempering Oven. Manufactured by Eisenmann in 2002. Model HN-FNC-006. Working dimensions of 108" Wide x 96" Deep x 64" High. Natural Gas (3,200,000 BTU/HR). Operating temperature of 1200F. Stainless Steel Lined Recirculating Box Tempering Oven complete with Top-Mounted Alloy Recirculating Fan (20 HP – 13,000 CFM), Rear-Mounted Heater Box with Eclipse Burner System, Alloy Skid Hearth, Forced Cool Down Fan System (7,333 CFM), Vertical Rising Motor Driven Front Door, and Stationary Loading Table. Free Standing Control Panel with Eurotherm Digital Set Point Programmable Temperature Controller, High Limit, Chessel Strip Chart Recorder, and Honeywell Flame Safety System. Overall dimensions of 13'2" Wide x 23' Long x 17'8" High (includes Door Structure). Approximate weight of 32,000 pounds. Excellent condition.

Asking price is \$72,500 USD.



ITEM # T336

MESH BELT TEMPER FURNACE 48" WIDE

Mesh Belt Temper Furnace 48" Wide. Continuous belt temper furnace manufactured by Industrial Heating Equipment, Model # TF-5. Inside dimensions 10" over belt, 48" wide X 12' heating. Gas fired, Eclipse package burner. Maximum operating temperature 1000 F. Temperature Controls: Free standing enclosed panel. Solid state digital readout indicating controller & overtemp. Top mounted brick lined combustion chamber houses high velocity

stainless steel circulating fan. Steel lined work chamber has 8-1/2" insulation. Stainless steel mesh belt on top of edge wire belt. Very good condition.

Asking \$29,500 USD.



ITEM # T335

BATCH OVEN 37"H X 37"W X 25"D

Batch Oven 37"H X 37"W X 25"D. Batch type recirculating oven manufactured by Despatch, Model V-29-STD. Inside dimensions of 37" high X 37" wide X 25" deep. Electrically heated 480/3/60, 12 KW. Serial number 126552. Temperature Controls: Partlow indicating controller and Honeywell overtemp, timer. Double swing open doors. Side mounted recirculating fan. Adjustable horizontal air flow. Provisions for 12 shelves, 4 shelves included. Powered exhaust blower. Oven has been checked out and test fired and is ready for immediate shipment. Excellent condition.

Asking \$8,000.00 USD.



ITEM # T325

STATION DESPATCH TEMPER FURNACE

3-Station Despatch Temper Furnace. Manufactured in 1980 by Despatch Industries, Inc. 3 Independently loaded and operated furnace stations with shared panel. Tops elevate off bases for loading and unloading. Work Zone: 22"W x 40"L x 25"H Each. Hearth Height:

Estimated at 36-40" (Can measure for you). Max. Temperature: 850°F with a Uniformity of +/- 25°F (Center area of 12"W x 20"L x 10"H meets +/-10°F). Electrically heated with a power of 490V/3Ph/60Hz. 3 West 4400 Temperature Contrl. & West 6700 Hi-Limit. (We can quote upgrade to new Super Systems, Inc. controls, if desired.). Just rebuilt. New heating elements, new hearth ceramics, New stainless steel side panels, new paint.

Asking Price: \$39,500 USD, Offers considered.



ITEM # T320

PIFCO CONVEYOR OVEN

Pifco Conveyor Oven. Electrically heated 2 zone conveyor oven 480/3/60/144 kW. Maximum operating temperature of 600F. Work area; 72"W x 12"H x 25'L heated length. External dimensions 9'W x 10'H x 40'L – approx.. Controls; Mounted and wired in a free standing panel includes an Allen Bradley PLC with PanelView Plus 1000 touchscreen interface. Power to the heating elements are controlled through two (2) Allen Bradley "SCR" power controllers, one (1) for each zone. An Allen Bradley PowerFlex "VFD" controls oven conveyor belt speed. Standard two (2) zone electrically heated conveyor oven with a wire on edge belt. This oven has a 10'L load end and 8'L unload end with cooling. Access doors with "Brixon" door latches on both sides of oven and one in each heating chamber. Very good condition.

Asking Price: \$59,000 USD.



ITEM # T318

TEMPER 48" W X 48" D X 36" H

Large Box Tempering Ovens (4 available). Built by Eisenmann in 2002, Model # HN-FNC-002. Working dimensions of 108" Wide x 96" Deep x 64" High. Natural gas fired, 3.2 million BTU's per hour. Operating temperature of 1200F.

Description; Stainless Steel Lined Recirculating Box Tempering Oven complete with Top-Mounted Alloy Recirculating Fan (20 HP – 13,000 CFM), Rear-Mounted Heater Box with Eclipse Burner System, Alloy Skid Hearth, Forced Cool Down Fan System (7,333 CFM), Vertical Rising Motor Driven Front Door, and Stationary Loading Table.

Instrumentation; Free Standing Control Panel with Eurotherm Digital Set Point Programmable Temperature Controller, High Limit, Chessel Strip Chart Recorder, and Honeywell Flame Safety System.

OVERALL DIMENSIONS: Oven: 13' Wide x 20' Long x 17'8" High (includes Door Structure. (Shipping Dimensions: 12'6" Wide x 20' Long x 10'8" High). Loader: 9'6" Wide x 12" Long x 4' High. Approximate weight 20,000 pounds. Excellent condition, operational.

Asking Price: \$72,500 USD each.



ITEM # T303

PIFCO TEMPER FURNACE

Pifco Temper Furnace. S/N 8177 built in 1988. Working dimensions of 126" long x 60" wide x 40" high. Overall dimensions of 13' x 11' x 11' high. Comes with load and unload discharge tables and combustion fan. Maximum operating temperature 950 deg. F. Rated for 250 pound net weight x 37.4in long tray loaded every 15 minutes. Furnace holds three (3) trays. Approximate nineteen (19) minutes to operating temperature. Forty-five minutes in furnace @ 15 minute load cycle. Heated by one gas burner approximate rating 600,000 BTU/hour. Utilities required: 1000 BTU natural gas @ 5PSI, 480v 3Ph 60Hz. Water 80 deg. F maximum @ 20PSI. Compressed air 60PSIG minimum. Adequate drain for water. Good condition.

Asking Price: \$38,000 USD.



ITEM # T290

TEMPERING OVENS 36" X 48" X 36" (2 AVAILABLE)

Tempering Ovens 36" X 48" X 36" (2 available). Working dimensions of 36"W x 48"D x 36"H. Shells have just been completed and buyer has the option of Gas-Fired or Electric, Hearth Height, Burner Locations (Left or Right) and Panel Location. These can be completed, fully tested and ready to ship to your facility in 8-9 weeks at a very attractive price.

Please call for pricing.



ITEM # T286

LINDBERG BOX TEMPER

Lindberg Box Temper. Model 11-7212048-G14, S/N 24947. Working dimensions of 72" wide X 120" long X 48" high. Gas fired with a maximum operating temperature of 1200F. Vertical lift-air operated door, brick lined, 5 course refractory hearth, alloy roof baffles, alloy side wall ducts, dual zone burners-roof mounted combustion chambers with dual belt driven fans. Free standing prewired control panel. Good condition.

Asking Price: \$65,000 USD



GENERATORS FOR SALE

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, let us know.

[Contact Us](#)

Quick Jump To Items:

Item # G201 Ammonia Dissociator 250 SCFH

Item # G198 Endothermic Generator 3000 CFH

Item # G197 Ammonia Dissociator 1000 CFH

Item # G196 Surface Combustion 5000 CFH Endo Generator

Item # G189 Surface Combustion 2400 CFH Endo Generator

Item # G178 Ammonia Dissociators 3000 CFH

Item # G176 Surface "Multi-Bottle" Endo Generators

Item # G173 Lindberg Endo Generator 4500 CFH

Item # G169 Gasbarre Endo Generator 3000 CFH

ITEM # G201

AMMONIA DISSOCIATOR 250 SCFH

Ammonia Dissociator 250 SCFH. Manufactured by CI Hayes. Model ADC 250. Included is a CI Hayes Molecular Sieve Dryer Model: MSA 11 Molecular – Dryer. Good operating condition.

Best Offer



ITEM # G198

3,000 CFH ENDOTHERMIC GENERATOR

3,000 CFH Endothermic Generator. Manufactured by Sunbeam, model # ENG-30, S/N F-377-79. Gas fired, operating temperature of 1900F. Temperature Controls: Upgraded controls. Honeywell digital indicating controller and overtemp. Single alloy retort. Selas compressor. Waukee flowmeters. Air cooled. Package burner. Complete combustion controls and safeties. Good condition.

Asking \$22,500.00 USD.



ITEM # G197

AMMONIA DISSOCIATOR

Ammonia Dissociator. Manufactured by Lindberg. 1,000 CFH. Model Number: 16-1000-HYAM. Serial number 26004. Electrically heated, 460/3/60, 30 KW, 37.6 amps. Operating Temperature: 2000 deg.F. Temperature Controls: Honeywell indicating controller and overtemp. Standard Lindberg design with vertical sealed catalyst chamber. Ceramic fiber insulation. Nichrome heating elements. Air cooled heat exchanger. Includes pressure gauges, SSOV, Waukee DA flowmeter. Includes operating manual and drawings. Very good condition. Unit is complete and guaranteed operational.

Asking Price \$11,500.00 USD.



ITEM # G196

SURFACE COMBUSTION 5000 CFH ENDO GENERATOR

Surface Combustion 5000 CFH Endo Generator. Serial number AC 42332-1A. Maximum temperature 1950F. Barber-Coleman controls with digital recorder and over temp. Air cooled. Shipping dimensions of 8'5" W X 10'1" high X 8'11" long. Very good condition. Included is a new pump.

Asking \$31,500.00 USD.



ITEM # G189

SURFACE COMBUSTION 2400 CFH ENDO GENERATOR

Surface Combustion 2400 CFH Endo Generator. Two retort "multi-bottle" configuration allowing one retort to operate while the other is shut down for maintenance. New in 1995. S/N AC-43349-1. 2400 CFH capacity. Casemate controls, air cooling. Good condition. Currently installed and in operation but will be available shortly.

Asking \$59,000 USD.



ITEM # G178

AMMONIA DISSOCIATORS (4 AVAILABLE)

Ammonia Dissociators (4 available). Built by Sargeant & Wilbur, 4 electrically heated Ammonia Dissociators. Model GAD3000E. 3,000 CFH capacity. Maximum temperature 1759F. Voltage 480/3/60/60 kW. External dimensions of 5'W x 6'H x

8'L. **Controls:** Mounted and wired in a free standing panel includes the following:

- Yokogawa UT 350 digital control for dissociator undertemp.
- Yokogawa UT 350 digital control for dissociator overtemp.
- Yokogawa UT 350 digital control for dissociator temperature control.
- Two(2)Yokogawa UT 350 digital controls for vaporizer lower/upper zone.
- Yokogawa UT 350 digital control for vaporizer overtemp.
- All necessary signal lights, timers etc.

Mounted in the same control cabinet are three (3) SCR's. Two (2) "Halmar Robicon" and one (1). "Ametek". One is for dissociator heating elements and the other two are for vaporizer lower/upper zone heaters.

Description: Electrically heated Ammonia Dissociator suitable for supplying up to 3000 CFH of atmosphere with a composition of 75% Hydrogen and 25% Nitrogen. This atmosphere is obtained by cracking anhydrous ammonia vapor in a catalyst filled vessel maintained at a temperature of 1700°F to 1850°F. Incoming ammonia pressure is reduced before retort entry. At the outlet of the retort the hot dissociated ammonia passes through a dry cooler where the gas is cooled to near room temperature. It then passes through a flowmeter and on to the consuming device. This dissociator includes a Sargeant & Wilbur Ammonia vaporizer. This dissociator is provided with two (2)catalyst filled heat resisting alloy retorts. The retorts are mounted within the insulated dissociator heating chamber. The heating chamber consists of heavy Mullite T-Slot tiles. Retorts are heated with Sinuous-wound Nichrome Ribbon Heating elements which are mounted in the tile slots. The element tails and studs extend through the rear wall of the dissociator. Elements can be removed through the rear wall without having to unpack furnace insulation etc. A step-down transformer (480V to 240V 112.5 KVA) is included. Manuals and drawings are also included. Very good condition.

Asking \$29,500.00 USD each.



ITEM # G176

SURFACE "MULTI-BOTTLE" ENDO GENERATORS

Surface "Multi-Bottle" Endo Generators. Manufactured by Surface Combustion. Natural gas heated 675 CFH/HR. Model # RX 35-75-3V. Maximum temperature 1950F. 7500 CFH

capacity. Controls are complete, water cooled. SSi atmosphere controls and Atmosphere Engineering "Endo Injector". Very good condition, ready to go.

Asking \$75,000 USD.



ITEM # G173

LINDBERG ENDO GENERATOR

Lindberg Endo Generator. 4500 CFH, gas fired. Retorts and brickwork are in excellent condition however it requires temperature controls and an air cooler (vendor has partially completed changing from water cooling to air).

Asking \$17,500.00 USD.



ITEM # G169

GASBARRE/SINTERITE FURNACE DIVISION ENDO GENERATOR

Gasbarre/Sinterite Furnace Division Endo Generator. 3000 CFH, electrically heated 460/3/60/63 Amps/50kW. New in 2006. External dimensions of 106" wide x 75" deep x 116" high. Controls are enclosed in a panel attached to the side of the generator. Honeywell UDC 3200 digital temperature controller and Honeywell UDC 2500 digital high limit safety. Control switches with indicating lights are flush mounted in the enclosure. Flange mounted fused disconnect switch for control power. Separate non fused disconnect for the main power. Waukee flow meters are manifold mounted for incoming and outgoing gases. Flow

meters include: Natural Gas 0-1000 CFH, Air 0- 2500 CFH, (3) Mixed Gas 0-1500 CFH and Endo 0- 3500 CFH. Step down transformer for reduced voltage to the heating elements. Electrically heated 3 retort generator. Refractory lined shell with vertically mounted retorts. Total of twelve (12) silicon carbide heating elements, 6 on each side are mounted through the chamber for good uniform heating of the alloy retorts. The natural gas and air pass through a Waukee "mixer" valve then into the Waukee gas pump. Mixed gas enters the 3 "mixed gas" flow meters, through the Sela fire checks and enters the top of the retorts. The gas travels through the catalyst filled heated retorts and exits at the bottom. The exiting Endothermic gas passes through water cooled chambers then finned cooled air heat exchangers then through the Endothermic flow meter. A pressure regulator is supplied on the exiting gas piping. Good condition.

Asking \$29,500.00 USD.



INDUCTION FOR SALE

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, let us know.

[Contact Us](#)

Quick Jump To Items:

Item # I178 Inductoheat Pick & Place Induction System 100kW

Item # I177 2 Station 24" Single Spindle Scanners

Item # I175 Inductoheat /Lepel Induction Power Supply

Item # I174 Ajax/Tocco Induction Heating Power Supply & Heat Station

ITEM # I178

INDUCTOHEAT PICK & PLACE INDUCTION SYSTEM 100KW

Inductoheat Pick & Place Induction System 100kW. Used Inductoheat Automated 100kW, 400 khz pick and place heat treating machine. This machine has been taken out of production due to completion of a contract. It is in good working condition and is still connected to power. It can be run for the buyer prior to shipping. It was used to harden a gear part 45" in dia. Could possibly be retooled for different part processing within the limits of the machine capabilities. This machine includes a SOLID STATE TRANSISTOR (Thermatool) power supply. These are very heavy-duty power supplies which are generally made by Thermatool for tube welding operations that usually run 24/7. This machine includes:

- Input conveyor with gating and part pickoff locator.
- Three arm Pick and Place mechanism that picks one part from the infeed position, one part from the heating position and one part from the cooldown station. All are transferred at the same time.
- Head Position includes placement into the heating coil, air operated part hold down, rotation, heating and quenching. Quick Change Coil Adapter is also included.
- Cooldown/Exit Idle position includes cooling quench flow.
- Exit position with push off onto exit conveyor with reject station
- Auto Lube System • Quench cooling and recirculating system with bag filter
- Water cooling and recirculating system.
- PLC Control with Panelmate interface

- Most Drawings and DVD Manual Included.
- Optional 6 Ton Chiller available.



ITEM # I177

2 STATION 24" SINGLE SPINDLE SCANNERS

This is an integrated **Ajax 2 Station** (single spindle per station) 150 kW, 10 kHz Scanner System. It has a single SCR type power supply with a transfer switch to send power to station A or B. It has a single shared Quench Recirculating System with bag filter, single shared Water Recirculating System. Each station has a PLC Control and servo control. PLC is A/B SLC 5/03, Pacific Scientific Servos, and Nematron MMI. Also has Quick Change Coild Adapters (would cost about 4-5k today). This was built in 1998 but appears to have been well maintained and contains currently serviceable components.

Asking Price: \$99,500 USD



ITEM # I175

INDUCTOHEAT /LEPEL INDUCTION POWER SUPPLY

Inductoheat /Lepel Induction Power Supply. This is a Lepel/ Inductoheat SP5-40 kW, 3/10 kHz SCR type induction heating power supply with a separate Heat Station (I believe this could be operated at 3 kHz but the heat station is currently arranged for 10 kHz). This is an "HS-3" Heat Station with 3 capacitors and a Jackson Transformer with ratios of 5-3 to 17-3. The Inductoheat SP5 has been a proven reliable power supply for heating and heat treating for many years. It can be used for short heat times as it has fast and consistent ramp up to set power. There is no warranty but it is sold with the assurance it is in good working order. It has recently been connected and tested in our facility. I can supply a video of the unit in operation. Start up and Training service is available at extra cost by an experienced induction heating service engineer. Excellent condition.

Asking \$19,500.00 USD



ITEM # I174

AJAX/TOCCO INDUCTION HEATING POWER SUPPLY & HEAT STATION

Ajax/Tocco Induction Heating Power Supply & Heat Station. Manufactured by Ajax/Tocco in August 2005. 480V three phase input is rated to be 1.2MW (1200KW). 660V three phase input is rated to be 2.2MW (2200KW). Unit requires three phase input of 480V, 2500A. System is designed to work at 2.5 kHz in frequency. Requires 65 GPM of cooling. Buyer must have a dedicated transformer at the three phase input for this machine. Buyer must provide their own coils, bus, and water-cooled cables to attach power supply to heat station and heat station to coils. Limited warranty available. Note: Currently set up to work at 480V input voltage. In order to switch to 660V, buyer needs to change the input breaker. Excellent condition.

Asking \$129,000 USD.

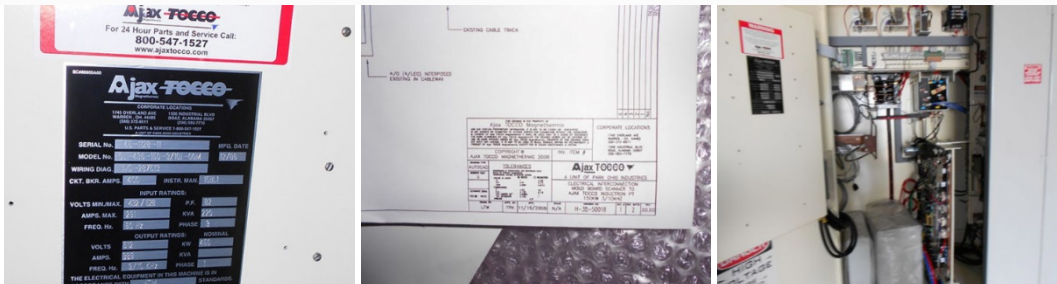


ITEM # I164

AJAX TOCCO INDUCTION POWER SUPPLY

Ajax Tocco Induction Power Supply. Model #OL-426-150-3/10-00M. Manufactured 12/06. Serial Number: 46-1128-11. Wiring Diag.: WD-287513. CKT.BKR. AMPS. : 400. Input Ratings: Volts Min./Max. : 432/528 P.F. : 82 Amps.Max. : 291 KVA : 220 Freq.Hz. : 60Hz Phase : 3 Output Ratings: Volts : 512 KW : 150 Amps. : 389 Freq.Hz. : 3/10 KHz Phase : 1 This unit was sold new to Caterpillar in 2006 and never installed and never used. Excellent condition.

Asking \$33,000 USD.



ITEM # I160

AJAX TOCCO POWER SUPPLY (UN-USED)

Ajax Tocco Power Supply (un-used). Ajax Tocco Inductron PT power supply, capacity: 450kW. Frequency: 3-10 kHz. Output Voltage: 400 *. Year of manufacture: 2006. This unit was never installed and is unused. *Price quoted from Ajax Tocco to convert output voltage from 400 to 800 including parts and labor is \$15,230. New this unit was \$86,000 USD, http://www.ajaxtocco.com/applications/documentlibrary/Inductron%20PT_092003.pdf

Asking \$39,000.00 USD.

LAB EQUIPMENT FOR SALE

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, let us know.

[Contact Us](#)

Quick Jump To Items:

Item # L8 Tensile Testing Machine

Item # L7 Leco Micro Hardness Tester

Item # L3 Laser Diffraction Particle Size Analyzer

Item # L1 Detroit Testing Brinell Hardness Tester

ITEM #L7

LECO MICRO HARDNESS TESTER

Leco Micro Hardness Tester. Complete and in good condition. Unit has become surplus to the vendors organization.

Asking \$7,000.00 USD.



ITEM #L3

LASER DIFFRACTION PARTICLE SIZE ANALYZER

Laser Diffraction Particle Size Analyzer. Manufactured by Microtrac, Model S3500. Measurement capability from 0.02 to 2800 microns. Wet and dry measurements. Complete and in very good shape.

Asking \$20,000 for complete system.

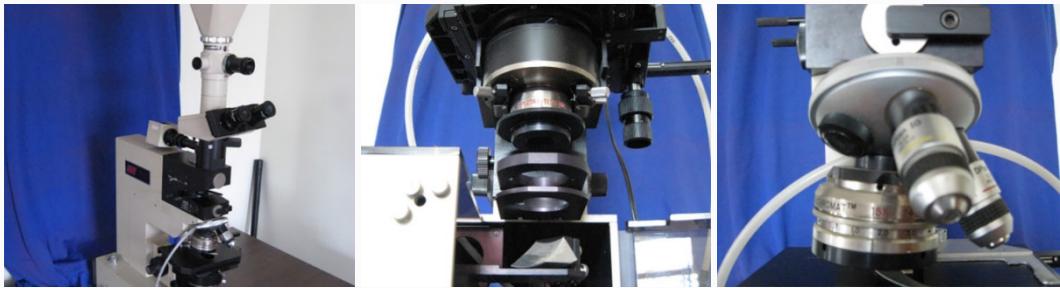


ITEM # L1

SPECTRA-TECH 0044-003 INFRARED MICROSCOPE

Spectra-Tech 0044-003 Infrared Microscope. Model WHK 10X 201, Reflected & Transmitted light, multiple objectives, Polaroid 4×5 attachment.

\$6,500.00 USD.



MISCELLANEOUS FOR SALE

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, let us know.

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Quick Jump To Items:

- Item #M422** Dunk/Spray Washer
- Item #M421** Berg Chiller
- Item #M420** SBS "Quench Airs", (9 available)
- Item #M417** Soluble Oil Dunk Tank
- Item #M416** Wheelabrator 6' Diameter
- Item #M415** Surface Combustion Parts Washer
- Item #M414** Vacuum Residual Gas Analyzer (3 available)
- Item #M412** Atmosphere Engineering "Endoinjector"
- Item #M411** SBS Quench Oil Coolers (2 available)
- Item #M408** Surface Combustion Power Loading Table 30" Wide
- Item #M406** Surface Combustion Parts Washer
- Item #M400** Nitrogen Generating System 99.999 Purity
- Item #M396** Surplus Cast Link Belt HT Material
- Item #M381** Water Cooling System
- Item #M380** Bronco Wheelabrator 36" Meshbelt
- Item #M366** Wheelabrator Rubber Belt Tumblast
- Item #M363** SBS Large 3 Fan Unit
- Item #M348** Ipsen Dunk/Spray Washer 36" x 48" x 24"
- Item #M346** SBS Quench Air Single Fan Unit
- Item #M341** AFC Charge Car 36" x 48" Tray
- Item #M334** Berg Water Chiller Nearly New
- Item #M314** Holcroft Dunk/Spray Washer 24" x 24" x 36"

ITEM #M422

DUNK/SPRAY WASHER 36" X 48" X 36"

Dunk/Spray Washer 36" X 48" X 36". Manufactured by Surface Combustion this is a Dunk/Spray batch IQ washer with working dimensions of 36" X 48" X 36". Electrically heated.

Asking \$22,500 USD.



ITEM #M421

BERG CHILLER

Berg Chiller. Brand: Sterling. Model: GPAC-20 (2014 mfg. year). Capacity: 5 ton. Voltage: 460V/3/60. In good condition.

Asking Price: \$8000.00 obo



ITEM #M420

SBS "QUENCH AIRS", (9 AVAILABLE)

SBS "Quench Airs", (9 available). We have available 9 SBS air to oil quench oil coolers "Quench Air". These are all in good condition and range in size from 2' long up to 10' long with a total of 5 different models. All are 460V. Asking from **\$1,000 USD** for the 2' units up to **\$5,000 USD** for the 10' long model.



ITEM #M417

SOLUBLE OIL DUNK TANK

Soluble Oil Dunk Tank

Working dimensions of 30" X 48" X 30". Tank has a capacity of 2500 pounds. Includes chart recorder, cooler, recirculation pump, and controls. This could easily be modified or used to water quench aluminum. Good condition.

Asking \$8,000 USD.



ITEM #M416

WHEELABRATOR 6' DIAMETER

Wheelabrator 6' Diameter. 6" Diameter table blast wheelabrator. 30 HP belt drive. Installed and in use until March 2018. Recently reconditioned with rebuilt auger. Brand New wheel and wheel housing. Good controls with pneumatic operated control and timer to shut down wheel and notify operator when cycle is complete. Very reliable machine in excellent condition. Table is mounted on the door with full access for overhead crane.

Asking \$75000.00 USD.



ITEM #M415

SURFACE COMBUSTION PARTS WASHER

Surface Combustion Parts Washer. Manufactured by Surface Combustion of Ohio this is a spray washer with working dimensions of 30" X 48" X 30" high. Radiant tube gas heat and rotary drum oil skimmer and separate skim tank located on back of wash. This is partially reconditioned . It is in overall good condition.

BEST OFFER



ITEM #M414

VACUUM RESIDUAL GAS ANALYZER (3 AVAILABLE)

Vacuum Residual Gas Analyzer (3 available). Pfeiffer Vacuum PrismaPlus QMG220 Compact Mass Spectrometer, Mass Range 1-200 amu, Catalog # PT M06 211 111, Residual Gas Analyzer. Unused these were new in Dec. 2015 and are still in original factory packaging. Warranty expired, but still factory supported. Each set consists of the following;

1. 1 Each, Quadrupole electronics QME220, P/N PTM28612
2. 1 Each, Quadrupole analyzer QMA200, P/N PTM25253
3. 1 Set, QMS220, Accessories & Spare Parts
4. 1 Each, SP 220, (033-0038 43202) Power Supply 90-264VAC, 2.1mm R/A (24 V Output)
5. 1 Each, 45-0007 43024 UTP-Patch-Cable, 3m, Crossed, Red
6. 1 Each, B4564309YX Inficon Mains Cable (USA) LNPE, AWG 18, 2.5m
7. 1 Each, 45-0006 UTP-Patch-Cable, 3m, 1:1, grey 43024

8. 1 Each, PT882400-T Quadera-software, Version 4.61 12/10/2015 for Windows 7 or XP (32-bit Pro)
9. 2 Each, PrismaPlus QMG220 Operating Instructions (1-English & 1-German)
10. 1 Each, Test Reports and Configuration
11. 1 Each, PT R 26 002 Compact Full Range Vacuum Gauge PKR 251, DN 40 CF F
12. 1 Each, PT 448 250-T Sensor Cable

Price: \$8,800/Set (3 Available) Free Shipping included in price



ITEM #M412

ATMOSPHERE ENGINEERING "ENDOINJECTOR"

Atmosphere Engineering "Endoinjector" 3 year old Atmosphere Engineering Endoinjector for controlling output on an endothermic generator. S/N 0601-DP1, Endo Output 600-3000 CFH. Includes PLC. Good condition and less than a third of the price of new.

Asking \$6,500.00 USD.



ITEM #M411

SBS QUENCH OIL COOLERS (2 AVAILABLE)

SBS Quench Oil Coolers (2 available). Air to oil quench oil coolers manufactured by SBS Corporation. 480V/6/60. External dimensions of 6' wide X 5' high X 21' long. This unit has three (3) NEMA type disconnect switches mounted on side of unit. Standard "SBS Quench

Air" air cooled heat exchanger with removable tube manifold, propeller fans for moving air across the tube bundle, flanged inlet & outlets, three (3) NEMA type disconnect switches mounted on the side of the heat exchanger. This unit has a removable top that has louvers for directing the air horizontally instead of vertically. Good condition.

Asking \$13,500.00 USD Each.



ITEM #M408

SURFACE COMBUSTION POWER LOADING TABLE 30" WIDE

Surface Combustion Power Loading Table (stationary), 30" wide.

Asking Price: \$1,000 USD



ITEM #M406

SURFACE COMBUSTION PARTS WASHER

Surface Combustion Parts Washer. Manufactured by Surface Combustion this is a Spray washer with working dimensions of 30" wide X 48" deep X 30" high. Gas fired with an operating temperature of 200F. Good overall condition.

Asking price of \$12,500 USD

ITEM #M400

NITROGEN GENERATING SYSTEM

Nitrogen Generating System. Manufactured by South Tek Systems in 2013 this system is in "like new" condition. The unit includes; STS N2-GEN 200S with Oxygen Analyzer, 1,060 Nitrogen Storage Tank, Kaeser ASD40T Complete Air Compressor package with Refrigerant Dryer and 240 Gallon Air Receiver Tank, Connection Package. Performance Capabilities: Nitrogen Purity Ranging from 95% – 99.999%, Nitrogen Hourly Flow Rate Ranging from: 473 SCFH – 5,371 SCFH *depending on purity setting, Nitrogen Outlet Pressure Range: 0 – 80 PSI. Excellent condition, available the end of June.

Asking \$82,500.00 USD.



ITEM #M396

SURPLUS CAST LINK BELT

Surplus Cast Link Belt. Used Omega HT Cast Link belt with HR 120 connecting rods. 4" pitch, 78" wide X 130' long. Weight 26,741 pounds. Also available is a porcupine drive roll, 11' long, 700 pounds. A tail roll 11' long X 11" diameter, 700 pounds, entry and exit hearth rolls 10.5' long X 6" diameter and a return roll 10.5' long X 14.4" diameter. Good condition. Buyer can inspect condition upon request.

Please call for pricing – Gord: 905.271.0033



ITEM #M381

WATER COOLING SYSTEM

Water Cooling System. VFC 500 gallon, 10HP 150 GPM pump, 3500 rpm motor. Plate heat exchanger, Graham model VFX-18, s/n 93-10058-1. This unit was used on 5,000 lb. loads.

Asking \$7,500.00 USD.



ITEM #M380

WHEELABRATOR – BRONCO

Wheelabrator – Bronco. Model# SLC500. 36" Mesh Belt –VFD drive. 8 – 20hp Blasting Wheels – VFD drive. Media separator, Torrit dust collector. Some spare parts are also included. Well maintained and works well. Footprint – 30' long, 16' high, aprox. 12' wide.

Asking Price: \$39,900 USD. (Includes loading at the facility)



ITEM #M366

WHEELABRATOR RUBBER BELT TUMBLAST

Wheelabrator Rubber Belt Tumbblast. Model # TBR-12, Serial # A142403, Voltage 480/3/60, 12 cubic feet, Controls – complete. Available Immediately, very good condition.

Asking: \$55, 000.00 USD.



ITEM #M363

SBS UNIT

SBS Unit. Specs: S/N: 4926. Year: 2007. Three (3) Fans with side mounted disconnects. Overall Size: 6'w x 6'h x 21'l. W-RES, MAWP 75 psi @ 450°F, MBMT -20°F, 75 psi.

Price: \$15,500.00.



ITEM #M348

IPSEN AUTOMATIC DUNK/SPRAY WASHER

Ipsen Automatic Dunk/Spray Washer. Model #WRD-11, Serial Number 57690. Working dimensions of 36" wide X 48" deep X 24"+ high, 2200 pound capacity. Electrically heated, 72KW. Companion washer-In/Out or straight through design. Door each end, Cal Rod element bundle. 12" wide belt oil skimmer, air operated-full width elevator rack for submerged oscillation, overhead spray rinse. Overall dimensions of 7' 5" wide X 5' 4" long X 11' 8" high. Rebuilt,

Excellent condition asking \$35,000 USD.



ITEM #M346

SBS "QUENCHAIR"

SBS "QuenchAir". SBS Corporation air/oil quench oil cooler. Single fan unit model 5084-Q4. Serial number: 2365, 230/460 voltage, overall size: 74" wide X 104" long X 55" high. Comes with disconnects. Very good condition.

Asking \$5,500.00 USD.



ITEM #M341

AFC CHARGE CAR

AFC Charge Car. Drawing # MT-237014. Voltage 480/3/60. Suited for a 36" wide X 48" tray. External dimensions of 100" wide X 84" deep X 84" high. Side mounted control panel with Allen Bradley SLC 500 PLC Logic Control. Double ended chain driven powered charge car with roller rail top. Excellent condition.

Asking \$28,500.00 USD.



ITEM #M334

BERG WATER CHILLER

Berg Water Chiller. This is a BERG Air Cooled portable Chiller, Model PA-1.5-1P capable of supplying 1.5 tons of cooling capacity at 15 degrees F leaving and 95 degrees F ambient temperature. Used for only 3 days (low hours), and is in nearly new condition. Electrics are 460/3/60 and it comes with a 575-460 transformer.

Asking \$5,500.00.



ITEM #M314

HOLCROFT DUNK/SPRAY WASHER

Holcroft Dunk/Spray Washer. Model GPWS 24-36-24. Electrically heated, 480/3/60/50 amps. Working dimensions of 24" wide X 24" high X 36" deep. External dimensions of 96"W X 143" high X 124" long (91" without skimmer attached). This is a standard dunk/spray washer with 4 Warren Electric immersion heaters. Spray nozzles are arranged over and all sides of the wash area. Load height is 51" from floor to top of rollers. Wheel centres are 14-1/2". Controls are mounted and wired on the right hand side of the washer and includes all necessary pushbuttons and signal lights. There is a dunk cycle timer and spray cycle timer. A Honeywell UDC 2000 digital temperature controller controls wash temperature. Good condition.

Asking \$18,500.00 USD.



VACUUMS FURNACES FOR SALE

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, let us know.

[Contact Us](#)

Quick Jump To Items:

Item # VF342 Ipsen Bottom Load Vacuum Furnace 48" X 54"

Item # VF341 Ipsen VFC-424-R Vacuum Furnace

Item # VF340 Vac Aero 2 Bar Vacuum Furnace

Item # VF339 Centorr Vacuum Furnace

Item # VF337 Oil Quench Vacuum Furnace

Item # VF336 C.I. Hayes Vacuum Furnace

Item # VF335 ALD Vacuum Carburizing Furnace

Item # VF334 Degussa Vacuum Hardening Furnace

Item # VF333 Low Temperature Vacuum Tempering Furnace

Item # VF332 IVA Vacuum Furnace 6 Bar

Item # VF331 High Temperature Vacuum Furnace 2300°

Item # VF330 Surface 2-Bar Quench Vacuum Furnace

Item # VF328 Abar Ipsen Model HS-26 Vacuum Furnace

Item # VF327 Surface Combustion Vacuum Temper Furnace

Item # VF326 Ipsen 924 Vacuum Furnace

Item # VF321 Ipsen Vacuum Furnace

Item # VF320 High Temperature Vacuum Furnace

Item # VF319 Vacuum Induction Melting System

Item # VF317 Twin High Temperature Vacuum HT Sintering Furnaces

Item # VF316 AVS Vacuum Furnace 24" x 24" x 48"

Item # VF315 AVS Vacuum Furnace (Rebuilt)

Item # VF314 Ipsen Bottom Load Furnace 60" x 96"

Item # VF313 Top Loading Vacuum Furnaces 2100 C

Item # VF312 Vacuum Furnace 2400 C

Item # VF299 Sunbeam Vacuum Furnace 36" x 120"

Item # VF294 Vacuum Annealing Furnace 8" x 90"

Item # VF289 Ipsen Vacuum Temper 12" x 16" x 24"

Item # VF282 AVS Vacuum Debinding/Sintering Furnace

Item # VF271 Sintering/De-Wax Furnace 1400 C

Item # VF267 Semi-Continuous Titanium Diffusion Bonding Hot Press

Item # VF266 Kinney 75 CFM Vacuum Pump

Item # VF243 35" Diffusion Pump

Item # VF242 35" Diffusion Pump

ITEM # VF342

IPSEN BOTTOM LOAD VACUUM FURNACE 48" X 54"

Ipsen Bottom Load Vacuum Furnace 48" X 54". Completely Re-Manufactured IPSEN 48" Dia x 54" High Vertical Bottom Loading Vacuum Furnace for your Heat Treating and Brazing requirements. This furnace complies and meets the SAE Aerospace Material Specification AMS2750 Latest Revision E (AMS2750E) and NADCAP. Operating temperature from 800°F (427°C) to 2400°F (1315°C). Temperature uniformity ±10°F (±6°C) between 1004°F (540°C) to 2400°F (1315°C). Equivalent to Class 2 Furnace in AMS2750E standards. Circular one-piece gas plenum/hot zone support structure provides strong, uniformly expanding support for elements Work Zone Dimensions are 48" (1219 mm) Diameter x 54" (1372 mm) High. Hot Zone Insulation is composed of the following layers:

Hot Face

First Layer

Second Layer

- 0.060" Thick Graphite Foil with CFC Sheet at ends
- 1.00" Thick High Purity Graphite Felt
- 1.00" Thick High Purity Graphite Felt

Hearth gross load weight capacity of 3000 lbs (1361 kilograms) at 2400°F (1316°C). Ultimate Vacuum (nominal) 10-5 Torr Range. Re-manufactured Stokes 412H-11, 300 C.F.M. (8,500 litres per minute) mechanical roughing pump. Re-manufactured Stokes 900-615, 2,000 C.F.M. (56,600 litres per minute) as blower pump. Re-manufactured Varian NHS-35" Diffusion pump, pumping speed 50,000 litres per second. Comes with Safety Guard against hot body surfaces. New Leybold Trivac 8B, 5.7 C.F.M. (161 litres per minute) Rotary Vane Vacuum pump as holding pump. New Oil Mist Filter System for pumping system exhaust. One (1) Re-manufactured External 4400 CFM 50HP Spencer Turbine Co. Gas Fan Cooling Motor and heat exchanger system. One (1) Re-manufactured step-up transformer for Gas Fan Motor. One (1) Backfill Reservoir Gas Tank @ 120 p.s.i.g of 5,000 litres capacity. Argon

Quenching To Maximum 2 Bar. Consider this basically a new furnace with a 12 month warrantee. Asking \$525,000 USD with start up and training included. Half the price of new.

Asking Price \$525,000 USD



ITEM # VF341

IPSEN VFC-424-R VACUUM FURNACE

Manufactured by **Ipsen this is a Model VFC-424-R vacuum furnace**. Serial number 59089, built 8-83. Working dimensions of 24" x 36" x 18". 460 Volts, 3 PH, 60HZ. 142 Amps Max PWR Current. 112.5 KW Max PWR Input. Stokes vacuum pump Model 212-11, S/N 0086100. Loader and base tray included. Unit is complete, installed and under power but not currently being used. Only item missing is the data recorder. Hot zone like new. Diffusion pump. Overall in very good condition.

Asking Price \$35,000 USD



ITEM # VF340

VAC AERO 2 BAR VACUUM FURNACE

Vac Aero Model VAH 4848 HV-2. Working dimensions of 48" X 48" X 48".Furnace includes controls, vacuum pumps (Stokes 412 roughing, 615booster, 20" diffusion, holding), furnace quench system (gas blower, heat exchanger, gas accumulator), water cooling system (cooling tower, similar to EVAPCO LRWB).

Asking Price \$220, 000 USD



ITEM # VF339

CENTORR VACUUM FURNACE

Centorr Vacuum Furnace. Working dimensions of 12" X 12" X 36". Operating temperature of 2000C. All stainless steel construction (outer and inner wall) Graphite hot zone. No quench blower. Leybold mechanical pump, S/N L981300832. Ultimate vacuum of 1 micron. 1991 vintage. Good condition.

Asking Price \$25,000 USD



ITEM # VF337

OIL QUENCH VACUUM FURNACE

Oil Quench Vacuum Furnace (with gas quench capability at 1000 m bar). Manufactured in 2004 with working dimensions of 500 mm W x 420 mm H x 710 mm L. Loading Capacity : 280 kg. Max. Temperature : 1250 deg C. Heating Power : 100 kW. Vacuum Level : 10exp-1 mbar range.

Price : 120.000 Euros. (quench oil and loading truck included, located in Turkey)



ITEM # VF336

C.I. HAYES VACUUM FURNACE

C.I. Hayes Vacuum Sealed Quench Furnace Model: VSQ-182436; S/N: 16007. Working Dimensions: 18" High x 24" Wide x 36" Long. Graphite Heating Elements. Max Operation Temp: 2400°F (1093°C). Temperature Uniformity: 25°F Total Spread. Connected Load: 90 KVA. Total Load: 120 KVA. Gas Backfill Requirements: 160 SCF. Typical Loading and Quenching Capacity: 500 lbs. at 1600°F. Quench Tank Capacity: 685 Gallons. Compressed Air Requirements: Small Demand at 100 psig. (must be maintained at $\pm 10\%$). Sight Port: 5" Dia. Hearth Level: 25-1/4". Cooling Water: 5-15 GPM (60°F). Quenching Speed: <10 Seconds (heating chamber into quench tank). Furnace needs work in order to run parts. System was originally installed with a Stokes 412 vacuum roughing pump.

Asking Price: \$20,000



ITEM # VF335

ALD VACUUM CARBURIZING FURNACE

ALD Vacuum Carburizing Furnace. Loading Dimensions : Width 400 x Length 400 x Height 400 mm. Loading Capacity : 80 kg max. Cooling Fan Motor : 75 kW, 3000 rpm for 10 bar N₂. Vacuum System : Leybold SV100 Mechanical Pump. Leybold WA501 Roots Pump. Leybold E250 Mechanical Pump. Leybold WA1001 Roots Pump. Vacuum Level : <5x10⁻² mbar. Leak Rate : <5x10⁻³ mbar l/s. Heating Zone : 120 kW, 2 zones. Plasma Chamber : 60 kW, 1 zone. Diffusion Zone : 180 kW, 3 zones. Max. Temperature : 1250 °C (Heating chamber). Operating Temperature : 800-1100°C. Process Gases : Nitrogen,

Methan, Argon, Hydrogen. Installed Power : 700 kVA, 3x400V 50 Hz. Manufacturing Year : 2002.

Price: FOT/Germany : 75.000. Euro



ITEM # VF334

DEGUSSA VACUUM HARDENING FURNACE

Degussa Vacuum Hardening Furnace. Year of construction 1990. The furnace name is VKSQ 80/80/120. The maximum temperature is 1350 °C, the max. The load is 1500Kg gross, the heating capacity is 250kW, the working space is 800x1200x800mm, the permissible pressure of the system is 6bar absolute and the furnace has the possibility of convective heating. The furnace control was renewed a few years ago (Demig). Located in Germany.

Price : FOT / Germany Euro 60.000



ITEM # VF333

LOW TEMPERATURE VACUUM TEMPERING FURNACE

Low Temperature Vacuum Tempering Furnace. Maximum temperature is 500 C. Located in Turkey.

Price : FOT/Germany Euro 28.000



ITEM # VF332

IVA VACUUM FURNACE 6 BAR

IVA Vacuum Hardening Furnace. Useful Dimensions: W300xL500xH300 mm. Capacity: 100 kg. Max. Temperature: 1300 C. Temperature Uniformity: +/- 5 C. Heating Power: 50 kW. Vacuum Level: 10^{-2} mbar. Cooling Pressure: 6 bar. Year of Manufacturing: 1993. Located in Turkey.

Price : FOT/Germany Euro 28.000.



ITEM # VF331

HIGH TEMPERATURE VACUUM FURNACE 2300

High Temperature Vacuum Furnace 2300. Manufactured by Elnik this is a MODEL T-3000 unit, built in 1993. The vacuum furnace consists of a watercooled cylindrical chamber, a molybdenum hot zone with tungsten heaters, a roughing pump, a holding pump, a diffusion pump, a heat exchanger assembly, and all associated valving.

- The furnace runs on 480 volts
- Stokes roughing pump Model 148 H-9
- Holding pump (Walsh) 1402
- Varian diffusion pump – VHS-6
- Water system – Model WCS 305-ET with a 300 gallon stainless steel recirculating tower model 1CT4-64
- 2300F operating temperature

- Ut35 temperature controller controls the temperature of the furnace as programmed by the operator via the computer's profiler utility
- Complete and in Good Condition

Asking \$19,950.00 USD



ITEM # VF330

SURFACE 2-BAR QUENCH VACUUM FURNACE

Surface 2-Bar Quench Vacuum Furnace. Model# HVPI 484824. Maximum Temperature: 2400F. Power requirements: 460/3/60, 275 KW. Hot Zone Dimensions: 48" Wide x 48" Deep x 24" High. External Dimensions: 12' Wide x 12' Deep x 11' High. Features: Horizontally Loaded Vacuum Furnace complete with 412 Stokes Vacuum Pump, Roots 615 Booster Pump, 2 Bar Quenching, Graphite Heating Elements, "Autoclave" Style Swing-Out Front Door, and Powered Big Joe Loader. Also Included is (1) Crate of New Spare Heating Elements and Connectors. Controls: Free-Standing Control Panel complete with Marathon Monitors Digital Temperature Controller, Honeywell Digital High Limit, and Honeywell Round Chart Recorder. Condition: Very good – Operational. Approx. Weight: 25,000 lbs

Asking Price: \$119,000



ITEM # VF328

ABAR IPSEN MODEL HS-26 VACUUM FURNACE

Abar Ipsen Model HS-26 Vacuum Furnace. Model HS-26 Abar Ipsen vacuum furnace. Working dimensions of 24" wide X 18" high X 36" deep. Working capacity of 750 pounds. Stocks vacuum pumps and Varian Diffusion pump. 1 zone of temperature control. Honeywell controllers with Honeywell paper chart recorder. MKS vacuum instruments. Operating temperature of 2400F. 480 volts. Was used in an aerospace facility before it was very recently removed. Complete. Please ask for pricing and more details.

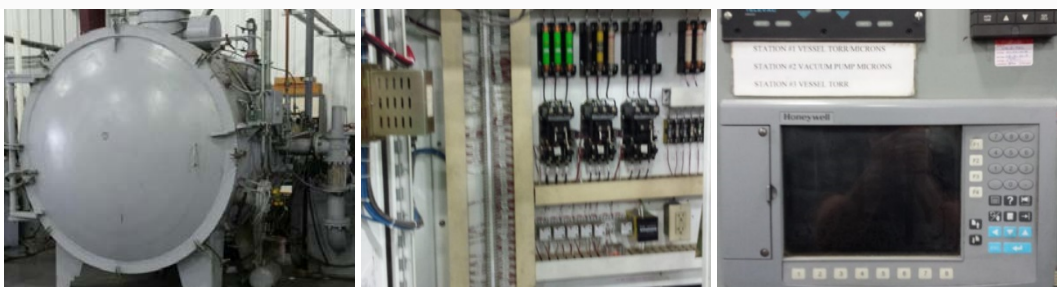


ITEM # VF327

SURFACE COMBUSTION VACUUM TEMPER FURNACE

Surface Combustion Vacuum Temper Furnace. Working dimensions of 36" x 48" x 24" and is approximately 23 years old. The equipment is in good condition with Honeywell HC900 Controls, Telvac Vacuum Control & Sensors, Honeywell UDC 2000 overtemp control, Stokes 412 Vacuum Pump, Controls Concepts SCR, McLeen Cabinet Cooler. Brand New Heating Elements ready to be installed. Internal Fan Circulation. This unit was pulled from service to make room for a new Vacuum furnace just recently. Max Temp 1500° F, 480 Volt / Three Phase.

Asking Price: \$50,000 USD



ITEM # VF326

IPSEN 924 VACUUM FURNACE

Ipsen 924 Vacuum Furnace. Ipsen VFC-924-R Vacuum Furnace. Working dimensions of 32" wide X 53" deep X 26" high. Maximum operating temperature of 2400F, recently

surveyed from 1400-2000F at +-25F. Stokes vacuum pumps and Varian Diffusion pump. One zone of control. Honeywell controllers. Good operating condition, currently installed but not in use. 480 Volts.

More details and asking price available upon request.



ITEM # VF321

IPSEN VACUUM FURNACE

Ipsen Vacuum Furnace:

- Manufacturer: Ipsen
- Model: VFC-524
- Temperature: 2400F
- Moly-faced hot zone
- Graphite heating elements
- 18" Ipsen Diffusion Pump
- Stokes 412H-10 (old style) mechanical pump
- 50 kVA power transformer
- Top-mounted cooling fan with 15 HP Motor
- Had a new control Panel with Athena AT25 Digital Temp Control, Hastings Series 310 Digital Vacuum Controller, and L&N strip chart recorder.
- Currently in storage in San Diego, CA area

Price: \$58,000 USD.



ITEM # VF320

HIGH TEMPERATURE VACUUM FURNACE

High Temperature Vacuum Furnace. Manufactured by Thermal Technologies LLC, Model 121224G. Working dimensions of 12" wide X 12" high X 24" deep. Maximum load weight of 200 pounds. Operating temperature of 1565C, maximum temperature of 2000C. Operating vacuum level 10-2 torr range. Ultimate vacuum level 10-3 torr. Process gas argon. Front and rear doors. Graphite heating elements with rigid fibrous graphite insulation panels (hot zone is NOT installed but virtually all the components are included) 125jVA power supply. Rotary vane pump , Trivac B Leybold Model D65B (53CFM). Eurotherm Model 2704 high performance controller/programmer with SpecView software. Furnace comes complete with chiller and parts washer.

Asking \$100,000 USD for everything.



ITEM # VF319

VACUUM INDUCTION MELTING SYSTEM

Vacuum Induction Melting System. Manufactured by Ionex, Model 260 LB VIM, S/N 93978. Electrically heated 480/3/60/200 KVA. Work area 150 kW, 3 kHz, 260 Pound. External dimensions of 10' wide X 10' high X 15' long. Controls; Complete with PLC and touchscreen HMI interface. 260 pound horizontal front loading VIM with water cooled stainless steel vacuum chamber. Pumping system includes a BOC/Edwards 1722 package with mechanical pump/booster and a stainless steel 20" T-M Vacuum diffusion pump. Induction power supply consists of a Pillar 150 kW, 3 kHz and includes water cooled power leads. This furnace has automatic tilt and includes two (2) crucibles. Also included with this VIM is a rotating load table that moves up and down for accurate pouring. Lot of misc. spare parts and molds are included. Excellent condition.

Asking \$285,000 USD.

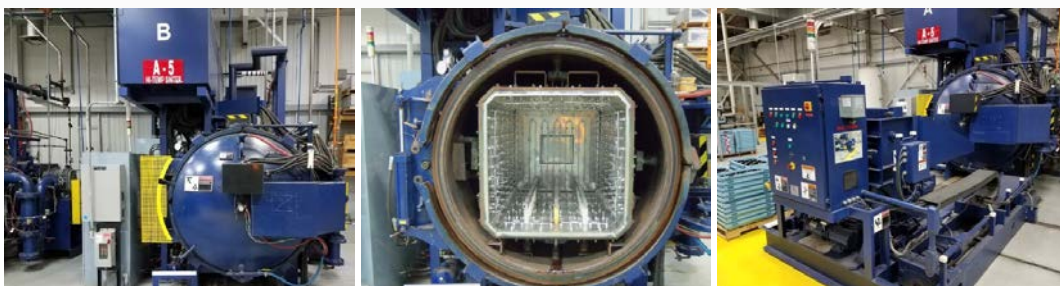


ITEM # VF317

TWIN HIGH TEMPERATURE VACUUM HT & SINTERING FURNACES

Twin High Temperature Vacuum HT & Sintering Furnaces. Two each Seco/Warwick Model V40-35/48 Vacuum Furnaces, 1500C (2732 F) Max. operating temperature, 1600C (2912F) burn-out temperature, Work Zones: 600mm x 650mm x 1200mm (23.6" x 25.6" x 47.2"), Design uniformity +/- 10C, but with elements on all 6 sides we would expect much better uniformity, One furnace hot zone is in excellent condition and the other is nearing time for replacement, All-Metal Hot Zones (Layers: 1 Tungsten, 7 Moly, 1 Stainless Steel), Low voltage Tungsten Heating Elements, Moly hearth, Load Rating: 2850 lb. (1300 Kg), Power: 480V/3Ph/60Hz, 390 kW SCR Heating Input with 3-zone control, 420 kVA total power, Stainless steel chamber, water jacket and hot zone plenum, Controls are CompactLogix PLC with computer, touch screen and SCADA software, Leybold TTR91 pirani vacuum sensor, Edwards (Stokes) 212J mechanical pump with Edwards 607 booster pump, Gases set up for Argon cooling and hydrogen purge, Hydrogen mass flow controller, Gas quench pressure rating is 1.05 Bar absolute. Mezzanine-mounted power supplies for minimal floor space requirement. Both furnaces (2), factory loader and existing spare parts are included at this price. Disassembly and Loading: Buyer's responsibility. Built in 2010 these furnaces were only used for 1 year. Excellent condition!

Asking \$275,000 USD for Both.



ITEM # VF316

AVS VACUUM FURNACE

AVS Vacuum Furnace. Model HMF-24-24-48-1100. Hot Zone: 24" x 24" x 48" deep, Moly with moly elements. Eurotherm controls 2704 & 2116i, Turbopump controller needs to be replaced. Operating temperature of 2400F. Cryotorr high vacuum pump; Turbopump may need rebuild. Additional Port for 20" Diffusion Pump. Current footprint: 15' Deep x 15' Wide x 11' High (8'H without power supply). Power: 250KVA, 440-480V, 3Ph, 60Hz. 2-Tier Moly Fixture. VFD on blower. Rear Access Door. Needs new hot zone. May need turbopump and turbopump controller.

As is or Asking \$195,000 USD with COMPLETE Rebuild.



ITEM # VF315

AVS VACUUM FURNACE (REBUILT)

AVS Vacuum Furnace (Rebuilt). Model HMF-24-24-48-1100, Hot Zone: 24" x 24" x 48" deep, Moly with moly elements. Controls new in 2015. Operating temperature of 2400F. Pumps: Cryotorr high vacuum pump; Turbovac MAG Integra roughing pump; New turbopumps and valving in 2015. Additional Port for 20" Diffusion Pump. (GVT has 20" D.P. & right angle valve available). CTI-Cryogenics 9600 compressor. Current footprint: 15' Deep x 15' Wide x 11' High (8'H without power supply). Power: 250KVA, 440-480V, 3Ph, 60Hz. Loader Included as well as a 2-Tier Moly Fixture. VFD on blower. Rear Access Door. EXCELLENT condition. Rebuilt July 2015.

Asking \$195,000 USD.



ITEM # VF314

IPSEN BOTTOM LOAD VACUUM FURNACE

Ipsen Bottom Load Vacuum Furnace. Work Zone: 60" Diameter x 96" Tall with a Temperature of 2400F. Diffusion pump: 35" diffusion pump, with port and right angle valve. Manufactured in the 1980's with a Power of 480V/3Ph/60Hz; 600kW. Hot Zone: 2008 reline, graphite elements. Cooling Gas: Was running Argon; capable of 1-Bar cooling. Top mounted cooling fan. Water Cooling: Includes Dry Cooler closed-loop AquaVent water cooling system; 2005, 200 GPM, Plate & Frame Heat Exchanger with Thermacare fiberglass Tower.

Asking Price: \$325,000 USD.



ITEM # VF313

TOP LOADING VACUUM FURNACES (6 AVAILABLE)

Top Loading Vacuum Furnaces (6 available). Manufactured by GT Technologies, Model # AMPF-4836HP – 2015. Working dimensions of 1200mm diameter x 900mm High. Operating temperature of 2100C. Controls by Loy Instruments (Honeywell graphic touchscreen). This unique ultra high temperature furnace is high vacuum, has resistance heating with all graphite hot zone and graphite felt insulation for high efficiency operation. 480 volt 3PH 50/60 HZ, 160 KVA. Maximum load 1,000 KG. Double Wall Stainless Steel Vessel construction. Platform with Stairs included. Halogen Gas Purge equipped, Dry Vacuum Pumping System with Blower. Graphite Purity levels to less than 5ppm. Cycle time 72 – 84 hours. 10 – 3 Torr vacuum level achievable. Options: Exhaust Scrubber System, Overhead Crane. Very good condition.

Asking \$175,000 USD each.



ITEM # VF312

2400C VACUUM FURNACE

2400C Vacuum Furnace. Capable of 2400C (4320F). Working dimensions of 10" high x 22" wide x 36" deep element-to-element. External dimensions of 86" high x 76" wide x 85" deep. 480 volts, 3 phase, 225 kw. This unit is capable of both vacuum and atmosphere operation. Graphite rigid board insulations, graphite heating elements on all 4 sides, graphite hearth plate, 6 channel digital chart recorder, Yokogawa UP 550 digital programmable controller. High accuracy Raytek digital optical pyrometer. All New Vacuum Chamber – Tested and Certified and new graphite hot zone. Very good condition.

Asking \$149,000 USD.



ITEM # VF299

SUNBEAM VACUUM FURNACE

Sunbeam Vacuum Furnace. Model # 40236, Serial Number F-170-82. Working dimensions of 36" wide X 120" long X 36" high. Maximum operating temperature of 2552F (1400C). 460 volts, 400Kw, 3 phase. Honeywell digital program control, Honeywell digital overtemperature control, Honeywell strip chart (inoperative) and Granville-Phillips 375 Convectron vacuum controller in enclosed panel. Double walled water cooled horizontal load vessel. Interior has a molybdenum liner with graphite heating elements on both walls, roof and floor. 20 HP cooling fan mounted in rear. Pumping system consists of a Stokes

412-11 mechanical pump with Roots booster. Power to the heating elements is through VRT's. A battery powered loader is included. Some of the heating elements were damaged during shipment and will need to be replaced by buyer.

Asking Price: \$95,000 USD.



ITEM # VF294

VACUUM ANNEALING FURNACE

Vacuum Annealing Furnace. Manufactured by Thermionics this is a custom designed vacuum annealing furnace designed to heat treat wire up to 210 cm long. The vacuum chamber has an 8" Dia. X 90" effective working length. The operating temperature was developed for a maximum operating temp of 1200° F, The vacuum nominal level (continuous) duty was developed as 1×10^{-6} Torr. Maximum vacuum level to operate in continuous duty is 5×10^{-8} Torr. The unit was designed to use N₂ gas. The unit was an R & D unit that was built in 1998, but has had little to no use. Excellent condition. New this was \$90,000 USD.

Asking Price: \$29,000.00 USD.



ITEM # VF289

IPSEN VACUUM TEMPER FURNACE

Ipsen Vacuum Temper Furnace. Built in 1981. Working dimensions of 280 mm high X 420 mm wide X 590 mm deep (11" X 16.5" X 23.2"). Maximum load 100kg (220 pounds).

Minimum operating temperature 150C, maximum operating temperature 700C. Input power 94 KVA, heating 71Kw, 575 volts, 60Hz. Type K T/C's, Honeywell controls. Vacuum contact point 1.0 X 10⁻¹ mbar, operating pressure 1000 mbar. Maximum vacuum level 5.0 X 10⁻² mbar. Circulated nitrogen atmosphere gas. Elements Cr-Ni Steel. Stokes model 149H vacuum pump. SS hot zone. Class 3 furnace with a temperature uniformity of +/- 8C. Used in an aerospace heat treat facility until it was replaced with a new furnace. Complete although missing the temperature recorder. Included are a manual loader and 3 baskets. Excellent condition.

Asking Price: \$59,500 USD.



ITEM # VF282

AVS VACUUM DEBINDING/SINTERING FURNACE

AVS Vacuum Debinding/Sintering Furnace. This is a horizontal graphite vacuum debinding sintering furnace for steel MIM parts completely rebuilt from top to bottom by AVS in 2010. Working volume – approximately 18 cubic feet, 28" wide x 26" high x 42" long graphite retort, 1500# capacity. Temperature – rated for continuous operation at 1400°C ±10°C in vacuum, 1450°C burn-out. 50μ ultimate vacuum; leak rate <10μ / hour, CEDORT (Clean, Empty, Dry, Outgassed, Room Temperature). De-bind system - nitrogen or argon sweep gas, 0 - 100 torr differential pressure controlled by PLC and automatic I-to-P modulating vacuum valve, binder trap, condenser assembly; options available for hydrogen gas and burn-off. De-bind lines heated to keep vapor from condensing in vacuum lines. Fast cooling with circulation fan and automatic gas re-circulation ports. Control system - AVS ACE™ control/data acquisition system. Estimated cold-to-cold cycle time of 16 to 20 hours with AVS "Fast Cool" option. Horizontal jacketed chamber - 60" dia. x 80" long, nominal dimensions, flanged, on legs. SA-516-70 mild steel construction on water jackets and door + body flanges. Stainless Steel inner jacket & dished head plus all power ports Front-loading chamber with 2 doors - both doors on adjustable hinges, with buna o-rings, manual clamps, for operation from 50 millitorr vacuum to 3 psig positive pressure; rear door opens for service. Ports - rough line on side of chamber, delube line from bottom, fan housing flange on rear door Additional PORTS added to the system to accommodate future system modifications for processing 'sinter-hard' P/M materials – a total of up to 7 additional ports ranging from 18" in diameter down to 1" in diameter will be added. Further details available upon request. Currently installed and in excellent condition.

Asking Price: \$169,000 USD.



ITEM # VF271

SINTERING / DE-WAXING FURNACE

Sintering / De-Waxing Furnace. Horizontal sintering furnace with wax condenser 1470°C operating temperature. Water cooled 304 stainless steel chamber with mild steel flanges. Graphite hot zone – 24" wide x 18" high x 36" deep, with hearth rails. Graphite retort – 4 to 5 cubic foot work space, shelves, graphite rollers, de-wax tube and -cooling. 5 HP recirculation cooling fan system – cooling flaps in insulation and retort. Wax condenser assembly with hot water circulation system and removable wax receiver pot. Power supply – transformer-type, low voltage secondary, nominal 250 kW. Vacuum pumps – Stokes 212-H, 150 cfm rough pump, Roots 615, 1600 cfm booster. Dynamic partial pressure gas system. Unit can be seen in operation and is available for immediate delivery.

Asking Price: \$299,000 USD.

ITEM # VF267

SEMI-CONTINUOUS TITANIUM DIFFUSION BONDING HOT PRESS

Semi-Continuous Titanium Diffusion Bonding Hot Press. System consists of; Load Chamber. Rated for 2720 kg load Moly Pin walking system rated for 2720 kg load 44" w x 54" d x 6.5" high product size in semi continuous mode Stokes 612/300 pump/blower Mounted on roll out frame for easy maintenance

Preheat Chamber. 35" diffusion pump / 100 CFM holding pump Moly Pin walking system rated for 2720 kg load 44" w x 54" d x 6.5" high product size in semi continuous mode Stokes 300 CFM mechanical pump 5 x 10⁻⁵ Torr in 20 minutes 300 kW heater power (Hunterdon) Moly Hot Zone Mounted on roll out frame

Bonding Chamber. 20" diffusion pump / 100 CFM holding pump Moly Pin walking system rated for 2720 kg load 44" w x 54" d x 20" high product size in batch mode 44" w x 54" d x

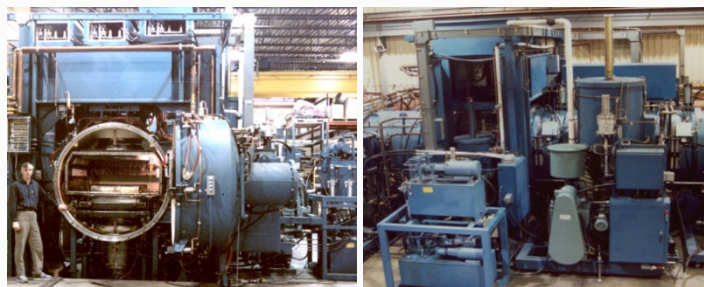
6.5" high product size in semi continuous mode Constant 1100°C Heated Platens, Moly pressing surface 1000 tons of force, up pressing ram 300 kW heater power (Hunterdon) Moly Hot Zone Mounted on roll out frame

Cooling Chamber. 20" diffusion pump. Stokes 612/300 pump/blower Moly Pin walking system rated for 2720 kg load 44" w x 54" d x 6.5" high product size in semi continuous mode Fast Cool 60°F /min argon. 1750F to 1200F. 25°F variation over part 5 x 10⁻⁵ Torr in 20 minutes Fast Backfill Port Mounted on roll out frame

This system is ideal for any company wanting to develop process for diffusion bonding of any materials which are capable of being processed within the specifications of the furnace. The system is available as a batch or semi-continuous, as the system can be set up in Batch mode for development purposes and semi continuous mode for production. The system is available for inspection as warehoused in the Northeastern USA. New Price for this system is over USD \$16,000,000. This system is available in almost any configuration.

cash and carry with support available from the original manufacturer at a reduced rate, or reconfigured to match your specific requirement at a price TBD. Immediate delivery.

As is \$890,000.00 USD

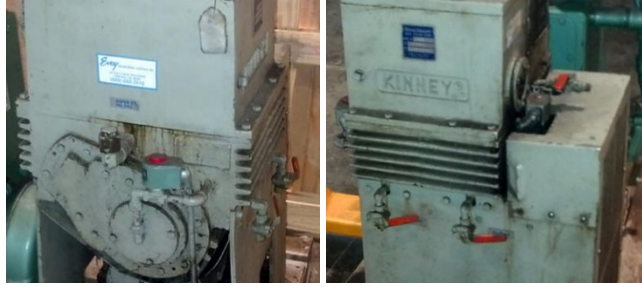


ITEM # VF266

KINNEY 75 CFM VACUUM PUMP

Kinney 75 CFM Vacuum Pump. Warranty Rebuilt Kinney Model KTC-75, Part No. 804982-D, S/N 1105-Y 7710-5 mechanical vacuum pump. 12 Month warranty on rebuild. Will be repainted at rebuilders' shop. Running without problems when removed from service.

Asking Price: \$ 5,700 USD F.O.B. West Coast U.S.



ITEM # VF243

35" DIFFUSION PUMP

35" Diffusion Pump. CVC Model PMC-32C, 35" Diffusion Pumps (Today this is the Varian HS-35. Varian purchased CVC rights to this pump.) Rebuilt condition with a 12 Month warranty. 35" Throat Diameter. Bolt Circle is approx. 38-3/4" with 14 Holes on approx. 8-9/16" Centers. Flange O.D. is 41-3/4". O-Ring Center Diameter is 36-1/8". Approx. 72-3/4" Overall Height (79" on 48" x 48" shipping pallet). Note: Mating 35" Cryo-Baffle is also available for improved low-range vacuum and elimination of backstreaming (See Item# 3161 Below). 6" Foreline with approx. 9-1/2" Bolt Circle with 8 Holes on approx. 3-5/8" Centers. 1/4" dia. O-ring is approx. 8-7/8" diameter to center. Shipping Wt. with pallet approx. 2050 lb. Price in Warranty Rebuilt Condition, Painted:

\$ 12,250.00 (with existing working elements. Add \$6,000 if you want brand new elements.)



ITEM # VF242

35" DIFFUSION PUMP

35" Diffusion Pump. CVC Model PMC-32C, 35" Diffusion Pumps (Today this is the Varian HS-35. Varian purchased CVC rights to this pump.) Can be purchased either in As-Is condition or in Rebuilt condition with a warranty. 35" Throat Diameter. Bolt Circle is approx. 38-3/4" with 14 Holes on approx. 8-9/16" Centers. Flange O.D. is 41-3/4". O-Ring Center Diameter is 36-1/8". Approx. 72-3/4" Overall Height (79" on 48" x 48" shipping

pallet). Note: Mating 35" Cryo-Baffle is also available for improved low-range vacuum and elimination of backstreaming (See Item# 3161 Below). 6" Foreline with approx. 9-1/2" Bolt Circle with 8 Holes on approx. 3-5/8" Centers. 1/4" dia. O-ring is approx. 8-7/8" diameter to center. Shipping Wt. with pallet approx. 2050 lb.

Price in As-Is Condition: \$ 6,400.00 USD

Price in Warranty Rebuilt Condition, Painted: \$ 12,250.00(with existing working elements. Add \$4,500 if you want brand new elements.)



HEAT TREAT CENTRAL

- High Quality Low Cost Base Trays
- **Investment cast only**
- Fast Delivery for in-stock trays¹
- **Surface Combustion Allcase Tray**
- UBQ Furnace Tray
- **Site-specific custom trays**
- Based on existing castings
- **No setup or pattern fees²**
- Industrial alloy grades available
- **HU, HT, Super NA22H, ...**

Please send your enquiries to:

Jordan Montgomery
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905-271-0033

¹While supplies last

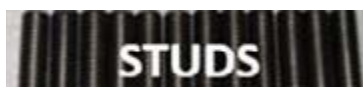
²Applies to standard design trays only. Some restrictions apply.

©Heat Treat Central

Moly

At “**The Moly Store**” we offer extremely competitive pricing on all your molybdenum requirements including wire, round bar, nuts, washers, studs, all thread, sheet, plate even designed and assembled grids! This is combined with unsurpassed quality and a large inventory in the USA available for immediate delivery. The links below will take you to our current inventory all of which can be shipped almost immediately.

Bob and Ben Grammer welcome the opportunity to help with your requirements Sales@gvtinc.com Phone: 208 765-6854



NEW EQUIPMENT

As most of you are aware our background is as Manufacturers Representatives selling Heat Treating Equipment. The alphabetical list below shows the companies which we represent with a brief description of what each does.

AFC-Holcroft



AFC-Holcroft of Wixom, Michigan manufactures heat treat furnaces, including batch integral quench, continuous austempering lines, mesh belt furnaces, pusher lines, endothermic generators and continuous solution heat treat for aluminum parts. The Process Master division of AFC/Holcroft offers complete control systems for the HT Industry.

<https://afc-holcroft.com/en/>

ALD Vacuum Systems



ALD Vacuum Systems of Wixom, Michigan provides *'The Solution'* to your high volume, vacuum based heat-treating equipment requirements. We provide process capabilities such as Low Pressure Carburizing (LPC) and high pressure gas quenching (HPGQ) as well as vacuum oil quenching, neutral hardening and on and on. Automated processing of heat treat is the most economical means to gaining the most from your capital investment.

<https://www.ald-web.de/en/>

Cooley Wire Products



Cooley Wire Products: When it comes to fabricated 330 SS baskets we are unbeatable! A quality manufacturer of heat treating and corrosion resistant fabrications. We manufacture industry standard and custom designed baskets and fixtures. We can manufacture to your drawing, or design something based on your submitted part or part drawing.

<http://www.cooleywire.com/>

Custom Electric Manufacturing



Custom Electric Manufacturing (Electric Heating Elements): The Custom Electric engineering team has more than 75 years of heating element design experience. Working with original equipment manufacturers and end users, they design elements for new and unusual applications in addition to replacement elements that ensure production efficiency. Phone Number: 248-305-7700.

<https://custom-electric.com/>

Dry Coolers



Dry Coolers Inc. of Oxford, Michigan makes closed loop process water cooling systems either Air Cooled, Evaporative Cooled, or Mechanically Refrigerated. Dry Coolers also offers quench oil coolers, filtration systems, and a unique outdoor mechanical room "Tower Shed". They are industry leaders in vacuum furnace cooling packages.

<http://drycoolers.com/>

Grammer Vacuum Technologies, Inc. (Molybdenum)

Grammer Vacuum Technologies, Inc. (Molybdenum): Molybdenum Mill Products, Custom Moly Fixtures and Grids, & Custom Moly Mill Products. All of these are stocked in the USA. Phone Number: 208-765-6854, Sales@gvtinc.com.

<http://www.gvtinc.com/pages/MolybdenumProducts.htm>

Graphite Materials



Graphite Materials is your reliable partner for carbon and CFC (Carbon Fibre Composite) components for high temperature applications. We have years of experience designing, manufacturing and testing fixturing for high temperature applications such as vacuum furnaces and vacuum carburizing systems. Carbon and CFC components offers you a product which is light, precise and will offer years of service with no cracking or distortion. More and more heat treaters around the world are considering carbon and CFC fixtures as an alternative to fabricated and cast fixturing.

<http://www.graphite-materials.com/en/>

Heat Treat Central



Based in Michigan HTC is your supplier for high quality, low cost investment cast base trays. Investment cast trays offer you a longer service life, less porosity and tighter tolerances than standard sand cast base trays at a substantially lower cost. Standard trays available within 1 week.

<http://www.heattreatcentral.com/>

Idemitsu



Idemitsu is one of the largest suppliers in the world of Quench Oils and Polymer Quenchs. Cold, Semi-Hot or Hot quench oils- we have a product that will work for you. We are able to ship typically in less than 5 days from multiple locations around the world. You will find us fast, responsive, cost competitive and we offer free analysis of your current quench oils.

<http://www.idemitsu.com/products/lubricants/index.html>

South-Tek



South-Tek. South-Tek manufactures a variety of Nitrogen Generators, from those designed to output a few liters per minute of Nitrogen flow rate for table top laboratory applications, to designs capable of producing 75,000 cubic feet per hour to meet the demands of some of the largest industrial plants. Our systems are capable of producing Nitrogen purities of up to 99.9995% (5 PPM and lower). Whether you are using nitrogen for vacuum quenching, inerting atmosphere furnaces or for required safety purge South-Tek Systems has your solution. For more information on PSA Nitrogen Generators and heat treating applications, please visit:

<http://www.southteksystems.com/>

Super Systems



Super Systems Inc. develops and manufactures products for the thermal processing industry. Our products include probes, analyzers, controllers, software solutions, flow control and engineered systems. We have extensive experience in addressing industry demands with technology to help our customers be more efficient and produce better quality products. Our state-of-the-art manufacturing facility in Cincinnati, Ohio, and offices around the globe give us the resources to address the instrumentation, software and technical needs of the industry.

<http://www.supersystems.com/>

EMPLOYMENT OPPORTUNITIES

ADVERTISING

The cost is \$150.00 USD per month for a minimum of two months. Payment can be made by Visa or Check. Opportunities should be in the form of a “Word” document and e-mailed to jordan@themonty.com All “Employment Opportunity” ads can include your company logo and will automatically appear both on the website and in the monthly newsletter “The Monty”.

Employment Opportunities

Quick Jump To Items:

Item # 0353 Controls Engineer

Item # 0352 Sales Positions

Item # 0351 Metallurgical Engineer Wanted

Item # 0350 Sales Agents Wanted

Item # 0349 Heat Treat Engineer

Item # 0348 1st. Shift Maintenance Technician / Supervisor

Item # 0346 Heat Treat Technician

Item # 0345 Multiple Positions Available

ITEM # 0353

CONTROLS ENGINEER

Controls Engineer. About Super Systems Inc.: Super Systems Inc. is a light manufacturing company located in northern Cincinnati, Ohio with 65 employees. We are a leading integrator in the thermal processing industry with a dynamic workplace that includes manufacturing, software development, field service engineers and a robust research and development department. Company website: <http://www.supersystems.com>
Company address: 7205 Edington Drive, Cincinnati OH 45249

JOIN OUR TEAM! SIGN ON BONUS!! Exciting opportunity with Excellent Benefit Package including 401K match on day one! Super Systems Inc. is a growing industrial automation systems integrator looking for full time Controls Engineer. We are a leading integrator in the metal treating industry with a dynamic workplace that includes manufacturing, software development and field service engineers. Positions for field service/project

engineers are currently available in Cincinnati Ohio. We are looking for talented people with a good work ethic, enthusiasm and a customer centric attitude. We offer exciting opportunities to work on challenging projects that encompass a variety of technologies. Super Systems Inc. offers a complete package of benefits including Health, Dental, Long Term disability, 401K, paid vacation and holidays.

Project Engineer to design and retrofit control systems and for thermal processing equipment. Our customers are heat treating facilities across the United States. Candidate will be responsible for analyzing customer requirements, designing and commissioning controls and SCADA equipment. FSE will be responsible for PLC programming, instrument configuration and setup, SCADA screen design, customer support, project management and end user training. This job will require 75% travel, but always home on weekends. Knowledge / Studies / Experience:

- Electrical/electronics
- PLC programming a must; Allen Bradley a plus
- Ladder logic
- PID control
- SCADA software
- Field wiring
- Control system integration
- Familiarity with industrial atmosphere and vacuum furnaces a plus
- SQL

Education and Experience:

- Required: 4-year Electrical or Electro-Mechanical Engineering Degree
- Required: 5 years experience

Other:

- Ability to travel required, approximately 50-75% U.S. travel. Always home on weekends/holidays
- Company car
- Will pay to relocate to Cincinnati
- Sign-on Bonus!

ITEM # 0352 SALES POSITIONS

Mountain Rep, (www.mtnrep.net), a Manufacturer's Representative Firm, since 1983, is looking to open multiple offices in the United States, concentrating in the Thermal Processing Industry. Searching to mentor younger persons who want to take a stab at sales and/or looking for that retired person who is bored and wants to get back in the industry. Management and Ownership opportunities available. Please call Rosanne Brunello at 216 217-7769 or email her at rosanne@mtnrep.net

ITEM # 0351

METALLURGICAL ENGINEER

Plymouth Tube is a privately held manufacturing leader in alloy, carbon, stainless steel tubing and engineered shaped tubing. We are committed to providing extraordinary service and value to our customers. We have 8 mills across the United States and have been in business since 1924.

We are currently seeking a **Metallurgical Engineer** to be our Subject Matter Expert in our furnace operations.

POSITION SUMMARY

This position will develop the technical deliverables for industrial process systems that will be focused on furnaces. A successful candidate will have strong metallurgical or material science expertise, the desire to get their hands dirty and to work with mill manufacturing teams to develop best standards practice for furnaces.

ESSENTIAL RESPONSIBILITIES

SME Functions (50-75%)

- Coordinate Capital project development to improve furnace expertise and improvement of process control, simplifying jobs (automation) and expanding technical capabilities.
- Helps to improve and audits standard work for furnace processes.
- Brings thought leadership to the table for 'next generation' technologies on furnace processes.
- Ability to understand customer requirements.
- Assist mills in technical capabilities.
- Assist in development of training tools and guides that are universal across all mills.

Additional engineering functions (25-50%)

- Provide engineering support to all tube production and finishing facilities.
- Aide in solving equipment, quality, safety, infrastructure and environmental problems and issues
- Assist with the creation of functional specifications to conform to production and manufacturing requirements.
- Uses computer assisted engineering and design software and equipment to perform engineering tasks.
- Communicates and interfaces with all levels of the manufacturing sector to coordinate projects, achieve goals and conform to production requirements.

QUALIFICATIONS and EDUCATION REQUIREMENTS

- Bachelor's Degree in Metallurgical or Material Science Engineering.
- 5 – 10 years of strong industry experience in manufacturing and steel heat treatment; tubing and metals experience a plus.
- Solid understanding of heat treating both carbon and stainless steel alloys.
- Experience with metallurgical lab equipment and procedures.
- Field Work: Ability to perform furnace system accuracy tests (SAT) and temperature uniformity surveys (TUS).

- Solid understanding of NADCAP, CQ-I9 and AMS 2750.
- Experience working with data acquisition systems.
- Experience with industry specification review.
- Background in maintenance, helpful.
- Big picture understanding of machines.
- Design Tools: Experienced with AutoCAD® and Windows Office Suite. Solidworks experience a plus
- Willingness to travel 40% of the time

Plymouth Tube provides a total compensation package including competitive salary, annual incentive, medical, dental, vision, HSA (Health Savings Account), FSA (Flexible Spending Account), short-term & long-term disability, life insurance, vacation, paid holidays, 401K Retirement savings program, education assistance, and wellness programs.

To apply: please click on the link below or go to our careers page at www.plymouth.com and apply to job: Subject Matter Expert – Furnace

<https://usr54.dayforcehcm.com/CandidatePortal/en-US/Plymouth/Posting/View/979>

ITEM # 0350 SALES AGENTS WANTED

Sales Agents Wanted. Hi-Temp Products Corporation; an enduring 25+ year Supplier of high temperature heating elements, furnace hardware, controls and an aftermarket furnace rebuilder within the thermal processing industries is looking to recruit commission based sales agents throughout North America. Please submit queries or line cards to info@hi-tempproducts.com Phone: 1.800.822.4335 or Hi-Temp Products Corporation. Address: 88 Taylor Street. Danbury, CT 06810, www.hitempproducts.com, info@hi-tempproducts.com

ITEM # 0349 HEAT TREAT ENGINEER

AAM is a premier, global leader in design, engineering, validation and manufacturing with over 25,000 associates operating at more than 90 facilities in 17 countries.

We're hiring a **Heat Treat Engineer** who will be based out of our world headquarters in Detroit, MI. The ideal candidate has:

- A degree in Mechanical, Electrical or Metallurgy Engineering
- A minimum of 5 years experience with heat treat processes and equipment
- Detailed knowledge of carburizing and induction equipment operation and process controls
- Basic knowledge of facilities operations
- The ability to use AutoCAD
- Familiarity with PLC controlled equipment

Responsibilities include, but aren't limited to:

- Planning, designing and writing specifications for the purchase of heat treat furnaces and tooling or retrofitting of equipment
- Troubleshooting and supporting all heat treat processes, including carburizing, induction and other heat treat furnace operations
- Leading new capital projects to implement the inspection, installation and PPAP of heat treat equipment
- Monitoring and assisting the maintenance organization to develop and/or maintain a detailed preventative maintenance program
- Working on new alloy designs and testing new alloy material for material performance improvements
- Traveling: 50% minimum, U.S. and International

We offer competitive wages and employer-paid benefits, including medical, dental, 401(k), annual profit sharing, annual pay rate increases, and much more. For more information or to apply, [visit aam.com/join-us/careers](http://aam.com/join-us/careers). AAM is an equal opportunity employer.

ITEM # 0348

1ST. SHIFT MAINTENANCE TECHNICIAN / SUPERVISOR

1st. Shift Maintenance Technician / Supervisor. Rockford Heat Treaters is a family owned business, we have been in business for 50 years. We are looking for a person who would like to join our team. We offer health, dental, vision, life and disability insurance. We also offer 401K plan with a company match, paid bonus, vacations and holidays.

Qualifications: Education: High School diploma or equivalent. 5 years in the heat treating industry. Must be able to interact and work with co-workers, and be a self-starter. Must be able to read blue prints for both electrical and mechanical equipment. Must be able to trouble shoot equipment (PLC and Relay Logic) and make repairs as needed. Must understand the basic operation of Vacuum, Atmosphere, Pusher, Gas Nitride furnaces ect. Good communications skills. Job Duties: Perform general maintenance duties on all building and equipment as needed. Basic machining and welding skills would be a plus, but not required. Must be able to lift 50 lbs. and be able to climb, bend and stand for long periods. Work with electrical, pneumatics, water and hydraulic systems as they relate to the heat treating industry. Work independently and with co-workers as required. 40-50 hour work weeks – some weekends as needed. Compensation: We offer competitive wages that will be based off of your knowledge and experience. Please email resume to tom@rockfordheattreaters.com

ITEM # 0347

HEAT TREATING MANAGER/METALLURGIST/MATERIALS ENGINEER

Heat Treating Manager/Metallurgist/Materials Engineer. Reports To: Director of Manufacturing. Essential Function: NY based Aerospace components manufacturer is seeking an experienced Aerospace Heat Treating Engineer/Manager. This is a new position

for the company that is starting an in-house heat treating operation. Qualifications required are a degree in Metallurgy or Material Science and five-plus years' experience in heat treating aerospace alloys. Must be proficient in Pyrometry procedures, have a working knowledge of ASM –H-6875 AMS 2959 1, 2, 3, 4, 5, 8A, 11 and be able to procure and manage a metallurgical lab using the appropriate ASTM procedures.

Primary Responsibilities:

- Procure and establish a metallurgical lab to support the heat treating operation. The initial in-house processes will be normalizing, quench and tempering and Ion Nitriding.
- Establish work procedure for each process in accordance with customer specification or specific ASM specifications.
- Develop procedures in accordance with AMS 2750E for SAT and TUS for each equipment and train personnel to perform these tests as required.
- Hire qualified heat treat operators and also establish a training program for new hires using the guidelines of customer specifications and SAE ARP 162 (Training of Heat Treat Personnel).
- Coordinate and work closely with the quality manager to insure all procedures are followed.
- Insure that lot integrity is adhered to and that materials are segregated and identified until the metallurgical results confirm compliance.
- Establish rework procedures for heat treating when allowed.

Knowledge, Skills and Abilities:

- Must be able to achieve NADCAP certification for the in house processes.
- Must be able to establish an audit plan for outside heat treating services to insure compliance with written procedures.
- Manage and train Lab personnel in preparing metallurgical mounts to examine carburized and nitrided case depths and train personnel in using hardness testing equipment.
- Organize calibration services for all lab equipment as required by customer specifications or ASTM requirements.
- Establish a plan for continuous process improvement.
- Insure outside suppliers; gases, thermocouples, etchants and others meet the requirements established by the customer and or AMS or ASTM specifications.
- Provide leadership and team building to the department.

PRECISION GEAR INCORPORATED

Education and Experience

- College diploma or equivalent is required.

- A minimum of 5 years' experience in a manufacturing plant is required
- Strong supervisory and management skills
- Strong knowledge of plant and manufacturing operations required
- Good training skills
- Ability to read blueprints and parts lists and to apply the metric system
- Ability to work independently and as part of a team in a fast paced environment with little direction
- Knowledge of machines and tools, including their designs, uses, repair, and maintenance a plus

REQUIREMENTS

- Must be a U.S. citizen or lawful permanent resident

Please send resumes to Pelay Tran hr@precisiongearinc.com.

ITEM # 0346 HEAT TREAT TECHNICIAN

Heat Treat Technician 2nd and 3rd Shifts. Ability to work weekend overtime. McGard LLC is a well-established progressive WNY company & a world leader in specialized precision mechanical security devices. Our proprietary products are in high demand and & manufactured right here at our WNY facility. McGard offers a competitive salary & comprehensive benefits package: health, dental, life insurance, paid personal days, vacations, holidays, quarterly profit sharing, a 401(k) plan, plus more!

A Heat Treat Technician is responsible for controlling heat treating furnaces to alter the properties of selected materials. This individual will operate the furnaces, draw ovens, pit draws, and any other related equipment. A Heat Treat Technician is also responsible for performing hardness checks according to work instructions. The parts are quenched in oil/gas within the furnace and then removed after prescribed time.

We are looking for an individual with 3 years' experience in Heat Treat Operations and with a strong mechanical aptitude and leadership qualities. This self-motivated, team player will gain experience in a fast-paced production environment, possess the ability to multitask, have problem solving skills and the ability to work well under pressure. A high school diploma is required.

You may send resumes to: Human Resources, McGard LLC, 3875 California Road, Orchard Park, NY 14127.

Click to apply

online: https://workforcenow.adp.com/mascsr/default/mdf/recruitment/recruitment.html?cid=e5aca532-3921-4cac-89e4-2780a5d9cb9f&jobId=148107&lang=en_US&source=CC2&ccId=19000101_000001

"We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status or other characteristic protected by law."



ITEM # 0345
MULTIPLE POSITIONS AVAILABLE

Vesco-McLaughlin located in East Windsor, CT and McLaughlin Services located in Avilla, IN are looking to expand and hire people in the industry with any of the following experience:

- Hot Zone Design
- Vacuum and Atmosphere Furnace Design
- Vacuum and Atmosphere Furnace Service Experience
- Vacuum and Atmosphere Furnace Manufacturing Experience
- Electrical and Controls Experience

Please send all resumes and questions regarding positions to Ben Tackett, btackett@vacuumengineering.com, Main: (860) 627-7015, Fax: (860) 627-9964.

SEEKING EMPLOYMENT ADVERTISING

If you are looking for a job position ads are completely free! Simply send us a brief summary of your skills along with what you are looking for in a "Word" Document and e-mail to jordan@themonty.com Your ad will appear both on the website themonty.wpengine.com and in our monthly newsletter "**The Monty**".

Sales Position

Seeking employment as a direct hire for **sales**. Mechanical Engineering degree with 20+ years experience in consultative outside sales roles to all industries utilizing thermal processing equipment. Varying experience with design, sizing, sales, support and commissioning of combustion systems, electrical resistance heating, controls, furnaces, ovens, air heaters, refractories, mineral/aggregate drying/processing equipment, pyrometry, temperature uniformity surveying equipment, polymer & oil quenchants, and furnace alloy fixturing, baskets, grids, radiant tubes & related furnace parts. Please contact me at reply12345@yahoo.com

Metallurgical Engineer Looking For a Position

Metallurgical Engineer Looking for a fulltime, part time or contract position in the Heat Treating industry. Skilled in metallurgical processes with more than 20 years of experience as a Heat-Treating Manager/Metallurgist/Material engineer with strong knowledge of heat treating, forging, and metal castings for manufacturing industries.

-Advanced Knowledge and experience of heat treating processes (gas and plasma nitriding, vacuum heat treating, flame and induction hardening of gears, controlled atmosphere, carburizing and carbo-nitriding, salt baths, precipitation hardening, cryogenic treatments, corrosion protection, etc.).

-Achieved certification for in house heat treating processes of Nuclear Plant products - Manage and train Lab personnel in preparing metallurgical coupons to examine heat treated (carburizing, nitriding, induction hardening and other processes) parts as per AGMA, ASTM or ASM standards.

-Establish TUS procedure as per AMS 2759 for temperature survey.

Please Email: Dan Jelescu, d.jelescu@gmail.com

In Parting

We always enjoy comments, feedback and constructive criticism. Thanks for your feedback and don't hesitate to let us know your thoughts. Don't forget to visit us daily at www.themonty.com.

Gord Montgomery,

W.G. Montgomery Limited

Phone: 905 271-0033

Fax: 905 271-9324

Email: gord@themonty.com
