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HEAT TREAT NEWSLETTER

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INTRODUCTION

We welcome you to the July 2017 issue of “**The Monty**” the world-wide publication for the heat treating industry. In this issue you will find the latest news and trends about the industry combined with a very complete list of used equipment and employment opportunities.

Best regards,
Gord

the **vital** link...

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HEAT TREAT NEWS

Vacuum Nitriding/Low Pressure Nitriding

A fellow we hold in high regard, Mr. Paul Oleszkiewicz of UPC Group provided us with these thoughts about Vacuum Nitriding as opposed to Low Pressure Nitriding in response to some thoughts we recently offered about vacuum nitriding. We very much appreciate what he sent us. June 30, 2017

“Recently 2 posts on vacuum nitriding caught my attention, and I would like this opportunity to shed some light on the differences in the nomenclature. Vacuum nitriding or actually Low-Pressure nitriding (LPN) is a treatment that takes place at nitriding temperatures (400-600°C) but below atmospheric pressure, hence the term low-pressure. Typically, the pressure ranges between 200-300 mbar absolute and is maintained throughout the nitriding stages. The term Vacuum-Purged Nitriding is entirely different from LPN. In this case, the furnace operates throughout the nitriding stages at positive pressure, slightly higher than atmospheric, and a vacuum system is used solely to purge air from the vessel, which is then backfilled with an inert gas (typically nitrogen) or with the nitriding atmosphere.

The key benefit of vacuum purging is the shorter time before any nitriding atmosphere can be admitted into the vessel, and particularly when compared to a purge executed by exchanging 5 furnace volumes with an inert gas (mandatory NFPA requirement). While some may argue that a vacuum purge may be well suited for short nitriding cycles where a 5-volume purge is a very significant part of the floor-to-floor process time, in longer nitriding cycles, however, time savings are not significant enough to offset the increased cost of a special retort capable of withstanding vacuum, plus the added cost of a vacuum system and its maintenance expenses.

Many companies that sell gas nitriding systems, including Nitrex Metal, also offer vacuum-purge option in their product arsenal. However, only a very few promote low-pressure nitriding. And while LPN has been known for years, its commercial viability and success are lackluster due to the cost and the complexity of the systems with no technological advantages of the process itself. I hope this description has provided a better understanding of the two terms. Regards, Paul”

Rubig Heat Treating Adds Furnaces

Rubig of Wels, Austria who is probably best known for their plasma nitriding and vacuum furnace manufacturing division also has a large substantial commercial heat treating division which they are expanding as you can see in this news item. June 30, 2017

“In order to fulfill the growing requirements concerning heat treatment processes of metal and aluminum and to boost RÜBIG’s technological leadership, new heat treatment furnaces have been acquired in the Heat Treatment division in Marchtrenk. This increases RÜBIG’s capacity and guarantees RÜBIG’s high quality standards. The purchase of a new vacuum hardening and a vacuum tempering oven shows that customer requirements have increased in this sector. Distortion-prone components, moldings and tools where high requirements for a clean, bare surface exist, can be heat-treated quickly with the R.VAC+® vacuum hardening processes while delivering premium quality.”



Bodycote Silao, Mexico/GM Quality Excellence Award

“MACCLESFIELD (U.K.) — Bodycote, the world’s largest thermal processing services provider, is pleased to announce that its plant in Silao, Mexico is proud to have been awarded the General Motors Supplier Quality Excellence Award for the 2016 award year. This is the fifth year that GM’s Global Supplier Quality & Development has honored suppliers with this prestigious recognition award. The award is given to specific manufacturing locations and only General Motors’ top performing suppliers are eligible to receive it. Suppliers who receive this award have met or exceeded a very stringent set of quality performance criteria as determined by cross-functional teams across the entire GM organization. Bodycote’s Silao facility provides Low Pressure Carburising (LPC) and nitriding services to General Motors’ Silao Transmission Operations for transmission gears. Gary West, Executive Director of GM Global Supplier Quality & Development, commented: “Congratulations on an exceptional team effort that helped your facility to win this award. Thank you for all you do to make our products great for GM, for you, and ultimately for our customers.” Dan McCurdy, President of Bodycote’s North America & Asia Automotive & General Industrial division, noted that this award reflects the hard work and attention to detail of Bodycote’s team: “Consistency in high levels of quality and service is our aim, every day. That we achieve this consistency in quality and service is evidenced by this recognition as a top performing supplier. This means a lot to our Silao team and we are proud of their achievement.” In 2016, Bodycote’s Livonia, Michigan plant received the General Motors Supplier Quality Excellence Award for the 2015 award year.” June 29, 2017



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. June 29, 2017

Item # O330 Plant Managers

Item # O329 Sales Engineers

Item # O328 Process Metallurgist Wanted

Item # O327 Outside Sales Representative

Item # O326 Straightener / Quality Inspector / Furnace Operator



A3TS Conference, Nice, France

A3TS. The ongoing 24th IFHTSE Congress 2017 would appear to be a success, very well organized, in a great location (Nice, France) and with reasonable attendance. This is a very French event but with a substantial German presence and with little North American participation. . As a matter of fact the only North American based exhibitors that we came across are nitriding experts Nitrex, controls company SSI, and AFC-Holcroft who are under the Aichelin umbrella after being acquired last year. We have these photos of the event with more to come. June 29, 2017



Super Systems Inc.; from left to right we have James Cross, Dale Montgomery, Steve Thompson and the local SSI rep, Jean-Yves Cousseau.



The Oerlikon Balzers Team with Smail Aazis, Engineering on the left-very nice fellow who knows his stuff.



Jack Kalucki, Nitrex Metal Inc.



The team from Schunk (graphite fixturing) rarely miss a show in North America, Europe or Asia and this was no exception.

United Process Controls, Marty Keylon

“United Process Controls (UPC) is pleased to announce the addition of Keylon Thermal Consulting as the newest manufacturer representative of its USA sales network, covering California, Oregon, and Washington. Marty Keylon has a 40-year history with the heat treat industry, beginning his career at Bodycote, where he held key positions in maintenance, plant management, and quality control, before becoming a manufacturer’s representative in 2009. “Marty has learned the heat treating business from the bottom up with his many and diverse roles. His hands-on understanding of operations and operation requirements, as well as his keen knowledge of the industry make him an ideal fit for our company. I am pleased that Marty has joined UPC and believe he’ll make a strong push in the west coast market with our portfolio of probes, controllers, Waukee flow controls, and process control solutions.”, stated Mr. Patrick Torok, Vice President, Heat Treat North America.”



“ABOUT UPC; UPC provides process control, flow control, and automation solutions to furnace OEMs and customers with thermal processing equipment and operations. The company is comprised of 4 brands – Furnace

Control Corp, Marathon Monitors, Process-Electronic, and Waukee Engineering – with products ranging from probes, analyzers, flow meters, programmable controllers, generator mixing control systems, SCADA to complete turnkey systems.” June 28, 2017

Thermtech Expands Ipsen Batch IQ Line

The only thing we can add to this press release is that Thermtech in Wisconsin, USA is one of the largest commercial heat treaters in the US Midwest and a very impressive operation. June 28, 2017

“ThermTech runs its equipment 24/6, 360 days a year. As the economy continues to pick up, they needed to expand their existing Ipsen atmosphere line to keep up with increased demand. Having received strong performance from the ATLAS atmosphere furnace and ancillary equipment installed in 2015, ThermTech recently purchased another ATLAS integral quench batch furnace from Ipsen. ThermTech will use the ATLAS for carburizing, carbonitriding and neutral hardening while supporting business from the Oil & Gas and Heavy Equipment industries.

“We have worked with several major providers of heat treatment equipment, but Ipsen is among the best for providing support after equipment is purchased,” said Mary Springer, Vice President of ThermTech. Supported by Ipsen’s global ICS (Ipsen Customer Service) Team, ThermTech has received installation and startup assistance, as well as dedicated local support for any of their equipment, regardless of the manufacturer. In a shop where every furnace matters and uptime is critical to their success, being able to receive the furnace in a short time-frame was also important. Ipsen is able to offer companies significant time savings with reduced lead time on the ATLAS, one of their modular platforms. Overall, Ipsen’s ATLAS atmosphere line provides users with repeatable quality results. This includes achieving consistent, uniform case depth and uniform quench hardness due to the advanced quench system design.

About ThermTech; ThermTech is a privately held commercial heat-treating company that offers a wide range of heat-treating services in support of a diverse customer and manufacturing base. It prides itself on offering exceptional value-added services to the Forging, Foundry, Heavy Equipment, Machining, Oil & Gas and Tool & Die markets. Located in Waukesha, WI, the company is currently ISO 9001:2000 certified. Learn more at www.ThermTech.net.

About Ipsen; Ipsen designs and manufactures industrial vacuum and atmosphere heat-treating systems, supervisory controls systems and predictive maintenance software platforms for a wide variety of industries, including Aerospace, Automotive, Commercial Heat Treating, Energy and Medical. With an extensive network of global locations and partnerships in America, Europe and Asia, along with representation in 34 countries, we continue to provide expert-driven solutions that strengthen heat treatment throughout the world. Learn more at www.IpsenUSA.com.

A3TS Show, Nice France

As we speak we are attending the 24th IFHTSE Congress in Nice, France and here are our thoughts; with 120 exhibitors this is a large exhibition but rather different from the large shows in the US or Germany in that it is far more focused on lectures and learning as opposed to being what most would consider a “trade show”. Attendance we understand is somewhere under 400 for actual heat treaters which combined with exhibitors makes for a rather large gathering-more when the event concludes tomorrow. In the meantime we present several photos with more to come. June 28, 2017



SECO/WARWICK. In this photo we have from left to right: Stephane Texier, Managing Director, SECO/WARWICK, France, Phillipe Cazenave, Chairman and Andrea Schienbein who has a long history in the heat treating industry. Stephane very recently became Director for France and seems like a very competent fellow.



UPC. We always get a real kick out of the guys at controls company UPC as they are always happy. Here we see from the left Jens Baumann, Emmanuel Jeanguyot and Michael Winter.



Rubig. Speaking of happy people we have this picture from the Rubig booth where we see Sabine Kreuzmayr and Kai Heusler



Phoenix TM. In this photo we see the Phoenix TM team who are in attendance.

American Axle & Manufacturing

In reality this press release should be called “Why Auto Makers Are Not Investing in Heat Treating But Their Suppliers Are” Many years ago the largest captive heat treaters around (at least in North America) were the “Big Three”, GM, Ford and Chrysler”. Times have changed and with the exceptions of GM in Saginaw, Michigan, Ford, Lima, Ohio, Chrysler, Kokomo, Indiana and a few others the auto companies have largely abandoned in house heat treating in favor of their suppliers which is where this story from the President of American Axle and Manufacturing comes in. AAM has invested enormous sums of money in their heat treating departments over the past few years and it would appear to be paying off. June 27, 2017

“While the auto industry hotly pursues new technologies, some suppliers are picking up lucrative business from staunchly 20th-century hardware. Internal combustion engine parts and other precision metal components are offering new rewards – even as the industry plots a shift from the metal-heavy internal combustion engine, ac-



According to Michael Simonte, president of American Axle & Manufacturing. "The OEMs are spending an increasing amount of their energy and attention and capital dollars on newer technologies," Simonte told an audience of financial analysts earlier this month at the Citi Industrials Conference in Boston. "And they're looking to the more established, capable supply base to take over some of the more traditional activities."

Simonte said automakers and large parts suppliers are off-loading parts business they historically considered high-value-added core activity — including precision part machining and other capital-intensive metalwork. He said Detroit-based American Axle and some of its competitors have been taking over a growing list of tasks that used to be in-house work at auto companies, such as engine-part machining, heat treating and powertrain module subassembly. He said American Axle is picking up incremental content in transmissions as those systems grow increasingly complex. That is occurring as part of the industry trend toward more fuel-efficient transmissions with additional gears requiring precision work. The automakers and their transmission suppliers are not keen to invest in the added work. "Look at the content per vehicle that we enjoy on the four- and six-speed transmissions of the past, and then compare that to what we're doing on the eight-, nine- and 10-speed transmissions," Simonte said. "We are taking five, 10, 15, 20 bucks a vehicle and turning it into 30, 40, 50 bucks a vehicle — in some cases more. "You're seeing this with a couple of our competitors and you clearly see it in our business," Simonte told the audience. The trend represents "major opportunities to expand our role in those value streams."



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Used Equipment

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- Item # B432 Atmosphere Box Furnace 36" X 48" X 24"
- Item # C328 Mesh Belt Brazing Furnace, Like New \$50 000 USD
- Item #T343 Batch Temper 36"W X 36"H X 96"L
- Item #T342 Recirculating Walk In Oven 72" X 48" X 120"
- Item # VF323 150 Ton Vacuum Hot Press (2 Available)

Inauguration of Rohde Gmbh's New Plant

Furnace builder Rohde GmbH sent us this press release and photo about the grand opening ceremony of their new plant in Hanau, Germany. "On June 20th 2017 Rohde GmbH inaugurated their new plant in Hanau, Germany with more than 100 invited guests. The new buildings have more than 2725 square meters of office- and manufacturing space and there is the same area available for a future expansion. The production conditions are optimized for furnace construction and testing and has an excellent transport connection. Owner Joern Rohde sees in Hanau the perfect location that offers everything he needs for a successful future of his family business, which he manages as the second generation together with his wife Natasha. The company succession is also secured as the couple is expecting their second son in October."



KGO GmbH



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In the picture below we have from left to right: Dr. Gunther Quidde (Managing Director of the Chamber of Commerce in Hanau), Ruth Neri (Managing Director of DKMS Life), Natasha Rohde, Joern Rohde, Claus Kaminsky (Mayor of the city of Hanau), Thorsten Stolz (Head of District Authority of the Main-Kinzig-Area). June 27, 2017

A3TS Conference, Nice, France

While we can't say we are a big fan of the name of this heat treating conference we are rather excited about it. The entire correct name would be "24th IFHTSE Congress 2017, European Conference on Heat Treatment and Surface Engineering". It will include three days of very interesting seminars, and a two day exhibition of industry suppliers including over 120 suppliers to the industry. We at "The Monty" will be attendance and will have a number of photos starting tomorrow. June 27, 2017

Monday Morning Briefing

We start off in Canada where long, long time heat treater **Moe Price** just retired at the age of 77. Moe spent his entire life in the industry, the past 30 at commercial heat treater **Allied Heat Treat** in Mississauga. Moe is a perfect example of a looming crisis in our industry-very experienced individuals who are retiring with few following in their footsteps. Controls company **SSI** held a heat treating seminar in Mississauga which proved to be a very successful event with almost 50 captive and commercial heat treaters in attendance. Seminars such as these whether hosted by SSI or others is in our opinion an excellent way of reaching heat treaters. We have two photos below, one shows Gord Montgomery and **Mitchell Russo** who is following in his father's footsteps at **A & M Heat Treat** (yes we realize the contradiction in that we just said not many people are entering the industry-we will correct it and say not enough are entering the industry).



From Canada we move to China for this picture from **Mr. Andy Chen of Powermax Furnaces**, China (which was recently acquired by **Fengdong Furnaces**, the largest furnace builder in China). In it we see Andy, **Mr. Nobuo Suzuki** of Oriental Engineering, a shareholder of Fengdong and **Mr. Zhu**, General Manager of Fengdong. Mr. Suzuki is General Manager of the heat treat equipment division of Oriental Engineering.



June 28th they will be auctioning off a bunch of equipment at **Goltra Castings in Golden, Colorado** which includes some gas fired box furnaces and Induction melting equipment. Nothing fancy but it will probably find a home. **Expanite A/S** based in Denmark claims to have a surface hardening process for stainless steel which puts everything else out there to shame. Quite frankly we don't know enough about the process to comment but the company certainly seems to be growing, most recently into China-this press release tells the story.

“Expanite has signed-on yet another license customer – and this time in China. Due to the fact, that Continental, one of the world’s largest automotive parts supplier, has qualified ExpaniteHigh-T hardening on parts in their fuel pumps, Expanite has been asked to make its processes available for Continental’s supplier base in China. A leading German manufacturer of precision products to the automotive industry will install Expanite processes at their facility close to Shanghai. Furnaces are being installed during Q3 2017 and the first serial production parts are to be hardened towards the end of 2017.”

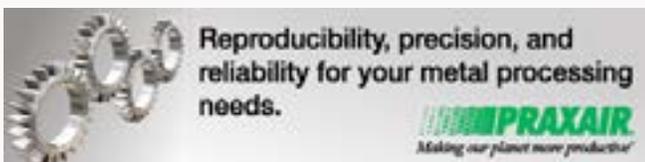
Commercial heat treater **Heat Treating Services** in Michigan must be feeling pretty pleased these days after receiving an award from one of their customers, **American Axle & Manufacturing**. More later this week about how AAM has been so successful partly by making very large investments in their captive heat treating departments. The photo below shows one of the owners of Heat Treating Services, Mr. Steve Hynes.

“American Axle & Manufacturing (AAM), (NYSE: AXL) presented Supplier Excellence Awards to key supplier partners at the company’s 23rd Annual Supplier Day. Epic Equipment & Engineering, Heat Treating Services Corp. of America and Webco Industries were honored for their contributions to helping AAM achieve its overall business objectives while providing customers with the latest driveline and powertrain innovations. Heat Treating Services serves the ferrous metal industries with thermal process and clean capabilities. Supplying AAM for more than 20 years, Heat Treating Services provides heat treatment services across multiple product and OEM platforms to 14 AAM facilities. As of June 1, Heat Treating Services has provided more than 38 consecutive months of perfect quality and delivery.”



Our friends at ThermoFusion in California sent us this press release about surcharges for heat treating. Yes it is certainly a sales pitch but we have never been a big fan of surcharges either. *“Starting immediately, ThermoFusion, supplier of heat treating and brazing services, is eliminating all its surcharges to all its customers according to President Dave Buttner. Surcharges and fees often show up as percentages, with names like “fuel surcharge”, “energy fee”, “hazardous material charge”, “recycling fee”, and other euphemisms for unquoted extra charges. ThermoFusion has not charged hidden fees and surcharges in the past few years, and Dave re-affirms that they won’t for the foreseeable future.”*

Hinderliter Heat Treating. Long before commercial heat treating giant Bodycote came to North America there were amongst others Hinderliter Heat Treating which had several locations in the US and one in Canada. One of the top managers was a fellow by the name of **Marty Keylon** who remains in the industry to this day. He sent us this photo from the early 1980’s with a brief caption to go with it. *“I used to give tours to customers from China and I had a bus load come over back in the Hinderliter Heat Treating days. Long before Bodycote bought them... I guess I make them look pretty small too!!! That’s me 180 lb more than I weigh now!! Black hair and in the red if you don’t know... LOL”* June 26, 2017



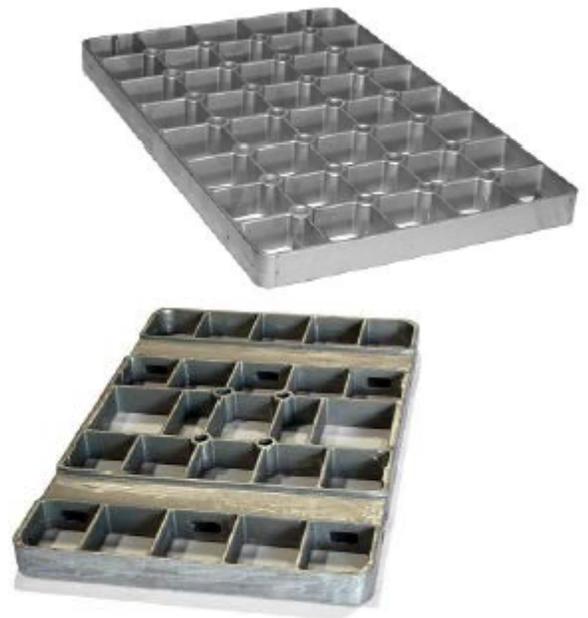
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Picture Time

From time to time we dig through our archive of old photos and select a few of the movers and shakers in the worldwide heat treating industry. If you have interesting photos of the heat treating industry or the people in it that you would like to share we are interested. June 23, 2017



Dale Montgomery at Rubig in Wels, Austria 10 years ago.



Bill and Steve Thompson, SSI, Jeff Pritchard, Vac Aero, Dale Montgomery, Scott Rush. This picture brings back sad memories as Jeff passed away at a young age many years ago. Scott Rush is now President of Vac Aero a very large commercial heat treater and vacuum furnace manufacturer.



Back in 2007 we took this photo of the Tru-Cal (Nate Wright's calibration company) booth at a heat treat show, although we are not sure where this show took place.



You can certainly be forgiven for not recognizing this individual. Colin Denis was President of commercial heat treater H & S in Port Robinson, Canada for a number of years until one day he gave it up and moved to Northern Canada to sell real estate.



In this photo we have Scott Johnstone, Engineering Manager for SSI and Kyle Favors of HTSU at a 4 wheeling event for heat treaters in West Virginia back in 2006.

Queretaro Heat Treat Show

June 14th there was a small heat treat show in Queretaro, Mexico which we mentioned earlier this week mainly because we heard attendance was very poor. We now have another viewpoint from a top notch fellow we know, **Mr. Harald Roth** of furnace builder **KGO**. While Harald certainly agreed it was a small show he thought it was well worthwhile; June 22, 2017

“Last week Mr. Thomas Kreuzaler from TECPROPRO Brazil and Mr. Frank Theisen from STANGE Germany at the booth last week at the JORNADA DE TRATAMIENTOS TERMICOS 2017 (type of smaller Mexican Heat Treatment Congress) in Queretaro. I had a chance to visit the show after finishing an KGO nitriding installation just the day before nearby. The show is a small but well attended come-together opportunity in Mexico. Some really interesting lectures were given by different leading heat treatment suppliers.”



Mexican Auto Parts Maker Buys Austemper Line

“Can-Eng Furnaces International Ltd has recently been awarded a contract to design and build a 1,500 lb/hr mesh belt furnace system for the austenitizing and molten salt quenching of unique components used in the manufacture of the client's world class drivetrain systems. This contract was awarded by a repeat client who has favoured CAN-ENG for several, multi-facility heat treatment lines. Incorporating several technological advancements for continuous atmosphere processing of products requiring carbon diffusion and quenching via a molten salt system, known as Austempering, the new system includes: automated bin-dumping loading, mesh belt atmosphere hardening furnace, salt quench, post quench wash and rinse system, mesh belt temper oven, and endothermic gas generator. The project is scheduled to be commissioned early 2018 in Mexico's centralized automotive manufacturing corridor.” June 22, 2017

An advertisement for DRYVAC SYSTEMS. It features the company name in red and black text. Below the name, it says "Clean No oil emissions" and "Green 30% Less Energy Consumption". There is a small image of a furnace component. At the bottom, it says "SHOP NOW - 24/7" and "Leybold".

An advertisement for Gears. It features a gear icon and the word "Gears" in white text on an orange background. Below this, there is a photograph of a large industrial furnace system. At the bottom, it says "Learn More" and "NITREN".

The logo for McLAUGHLIN SERVICES, LLC. It features the company name in a large, bold, serif font. Below the name is a stylized eagle with its wings spread. To the left of the eagle, it says "AMERICA'S FASTEST GROWING FURNACE BUILDER". To the right, it says "AMERICA'S LARGEST FURNACE REBUILDER". Below the eagle, it says "SERVICES, LLC" and "SERVING THE HEAT TREATING INDUSTRY".



L & L Special Furnace Company

This press release from L & L could apply to a number of industry suppliers many of whom are seeing a far more buoyant market. June 21, 2017

"As we reach the halfway point of 2017, L&L Special Furnace Company, Inc., has been very busy in sales, service and parts. The company has seen monthly increases in sales quotes and orders as we approach the summer months. The summer is typically a slower time as requests for quotes for capital equipment and corresponding purchases tend to tail off, but that may not be the case in 2017. L&L has landed several large orders for ongoing industrial projects. These projects also carry customer commitments for longer-term repeat orders. This steady flow of business allows for balancing production capacity to customer demand, and provides the ability to offer reasonable delivery dates for ongoing and custom projects. The company has received orders from businesses in a variety of industries. These include general heat treating/tool room, aerospace, military, automotive, research and development, ceramics, motor laminations, precious metal recovery, medical fields as well as others. Sales continue to be strong in the aerospace industry. L&L has received orders for a large car bottom furnace along with four smaller units and one large debinding retort furnace as well as several other orders from aerospace component suppliers and manufacturers. The car bottom furnace has a work envelope of 48" x 48" x 72"."

Solar Atmospheres Adds A New Climate Controlled Room

After surviving one of the hottest and most humid summer seasons on record, Solar Atmospheres of Western PA decided to construct a climate-controlled environment for the daily operation of its brand new all-metal hot zoned vacuum furnace. The critical climate within this room is controlled utilizing a high quality HVAC system and is equipped with dehumidifiers and customizable thermostats. A heavy duty insulation package was installed, which ultimately helps to manage and stabilize temperature and humidity around the clock. The space also was constructed to produce a slight positive pressure environment, which will help eliminate dust and debris from entering the set-up and fixturing areas.

Kevin Bekelja, Vice President of Operations, states, "With the new third party accreditation programs such as MedAccred gaining momentum, and knowing how detrimental high levels of humidity can be in the vacuum thermal processing of certain critical materials, we believe this venture is well worth the investment." Both medical and aerospace contractors are continuing to demand that environmental conditions be controlled, processes validated, and the risk of foreign object debris (FOD) be totally eliminated. This newly constructed environmentally controlled room will enable Solar Atmospheres of Western PA to pristinely thermally process critical components, which in turn will add even more value to the customer's operations. For additional information about Solar Atmospheres of Western PA, contact Mike Johnson at 866.982.0660, ext. 2223, or mike@solarwpa.com, and visit www.solaratm.com. June 21, 2017





Metalspain, Queretaro, Mexico

Metalspain is a Spanish company who for a number of years has been hosting small heat treat shows all over the world. We know little about them having never attended one of their shows. We were surprised to learn that June 14th they hosted a small show in Queretaro, surprised because nobody seems to have heard about this show before hand. We asked around and the only company that we could find who attended was a company in Mexico who said there was a grand total of one furnace company exhibiting and that in their opinion it was not a worthwhile event. Rather a shame since the Mexican heat treating market is growing at such a fast pace. June 20, 2017

SSI Sales Meeting

Just last week controls company SSI had a sales meeting in Cincinnati, Ohio. We took a few photos at the event and in our humble opinion a couple are worth sharing. In the first one below you see 3 generations of Thompsons, the founding family of SSI. From Left to right we have Bill Thompson, Steve Thompson and Will Thompson. In the second picture we have part of the SSI sales team from Mexico, Israel Bobadilla, Gord Montgomery, Damian Bratcher and Salvador Alvarado Murillo. June 20, 2017



McLaughlin Services, ASM

Earlier this month the Los Angeles Chapter of ASM hosted the "Scholarship Golf Tournament" and one of the senior sponsors was McLaughlin Services of Avilla, Indiana. The company sent us this photo of Team McLaughlin which consisted of (left to Right) Marc Walters, Ryan McLaughlin, Trisha McLaughlin and Jeff McLaughlin. June 20, 2017



Monday Morning Briefing

Remember not too long ago we suggested a growing technology was Vacuum Nitriding? This press release backs up our comments; **ALD Vacuum Systems, Inc.**, Wixom, MI, has received a purchase order for two (2) Nitro-Therm® Vacuum Purged Gas Nitriding furnaces for deployment into the North American automotive drivetrain market. These NitroTherm systems will be the first deployed in the NAFTA region. The expert control systems provided enable multiple processes including Nitriding, Nitro-Carburizing, Oxi-nitriding, Pre-oxidation, Post Oxidation and Vacuum Tempering. These are stand-alone, horizontally oriented units which are loaded/unloaded via a fork loader. This configuration eliminates the disruption and additional capital investments for floor pits and overhead cranes. These systems take advantage of the largest standard VPGN configuration of 1200mm x 1200mm x 1800mm (48"x48"x72") and include a hearth rating of 2500 kg (5500 lbs). ALD's product line expanded late in 2016 with the North American introduction of NitroTherm which includes both Vacuum Purged Gas Nitriding (VPGN) and Active Screen Plasma Nitriding (ASPN). Both are offered in a variety of standard configuration but can also be provided for custom applications based on a customer's specific needs. About ALD Vacuum Systems Inc. – ALD Vacuum Systems Inc. is located in Wixom, MI and focuses on the NAFTA region for the ALD Vacuum Technologies group of companies. ALD brings high performance vacuum carburizing, vacuum nitriding, plasma nitriding and vacuum furnace automation to the vacuum furnace market. ALD offers the world's leading technology in high pressure gas quenching capabilities and is prepared to meet your specific vacuum heat treat equipment requirements. For additional information on our vacuum based product offerings call ALD Vacuum Systems, Inc. at (248) 956-7612 or visit their website at www.aldvac.com. "

Furnace builder **Can Eng** also has an order they want to announce. "CAN-ENG Furnaces International Ltd was recently awarded a contract to design and supply a mesh belt heat treat system with a production capacity of 4,000 lb/hr of high quality automotive fasteners. CAN-ENG was entrusted with the contract from this new European based client based on proven reliability, efficiency, and soft-part-handling features; hallmarks of CAN-ENG's Mesh Belt Furnace Systems. The new, high-volume fastener system features: an atmosphere controlled mesh belt hardening system, oil quench, post wash system, temper furnace, soluble oil system, bi-directional conveyor discharge, and CAN-ENG's PETTM Level 2 SCADA system."



Might as well mention another new furnace order this one from **Premier Furnace Specialists**; "Premier Furnace Specialists/BeaverMatic received an order for a complete (IQF) furnace line for a repeat BeaverMatic customer in the oil field related industry. This order consists of a new Internal Quench Furnace, Temper Furnace, Spray/Dunk Washer, Low Temperature Industrial Oven, 1,500 CFH Endothermic Generator, and Manual Load Cart. All new equipment is designed to match existing equipment with 30" x 48" x 26" loads weighing 1,500 lbs. while utilizing standard "Beaver" baskets. Control system is configured to allow for automated and manual sequencing, recipe management, and digital data collection. Current design meets AMS 2750 E, NEC, and current NFPA guidelines. This design allows for updates to existing equipment for installation of the future SCADA system. Construction will be complete in August 2017." Where are they now? **Tim McCain**. Tim is a pretty experienced heat treater who for



a number of years ran a commercial heat treat in Texas by the name of TBM. TBM was purchased by Texas Heat Treat a little while back and we lost track of Tim, however as it turns out he is still very much involved in the heat treat industry as General Manager at Aremac Heat Treating East, LLC.

We see that **Paulo** has a new Sales Manager-why is his name so familiar? *“Paulo’s newest team member is **Benjamin Crawford**; he joins Paulo as a Regional Sales Manager. He will be responsible for growing new business in Michigan, Indiana, Ohio, Kentucky, and Pennsylvania. In this role he will report to William Rassieur, Vice President Sales. Benjamin graduated from Indiana University with a BA in Economics. He previously worked in the banking industry facilitating SBA loans from both a compliance and client relations perspective. His experience working with small business leaders will be valuable when working with Paulo’s customers to identify partnership opportunities. Benjamin added, “The Paulo team has given me an open-armed welcome and I am thrilled to work with my team members to drive the future of Paulo forward.” William Rassieur commented, “If you have been in the industry long enough some might recognize the name. Benjamin grew up around the metal treating industry. His father is our Vice President Operations. Benjamin joins our team with experience dealing with owners and business professionals. This type of background will serve our customer base well. He understands financials and what keep businesses running. This meshes very well with our ultimate goal of helping our customer succeed. Benjamin is energetic and customer focused. We couldn’t be happier to have him on our team.”*

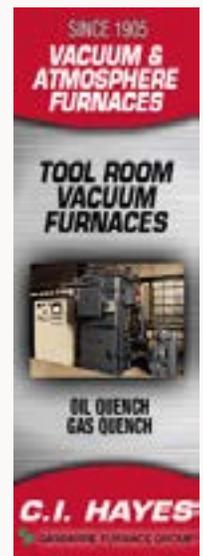
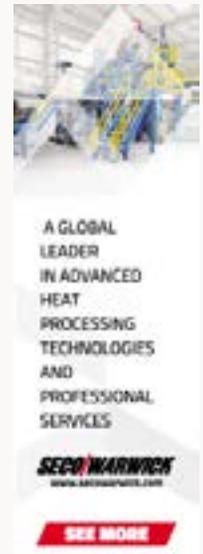


Auction people Maynards has been marketing this **Holcroft vacuum furnace** for a few months now with no success. Holcroft always makes good stuff but they were never well known in the vacuum industry which is perhaps why it is still available. June 19, 2017



VESCo Engineering Services Co.

In May of this year we had this little note about Vacuum Engineering Services being sold; *“Vaccum Engineering Services Co., Inc (VESCo) located in East Windsor CT, USA was formed in 1983 to provide support services to the vacuum processing industry. Since that time, VESCo has specialized in the repair, modification, and reconditioning of vacuum heat treating equipment and along the line built up a good little business in the process. With the owner getting older and looking forward to retirement the company went on the market a few months back and as a result of a mention on “The Monty” the company has found a new owner, an owner which we will mention within the next week*



or so. The new owner has some ambitious plans so we believe we will be hearing a lot more about the company in the future.”

We can now announce that the new owner is Jeff McLaughlin of McLaughlin Services in Fort Wayne, Indiana. McLaughlin Services (whose banner ad can be found on this page) is a rapidly expanding company which now has 3 locations in the US including one in California. In this photo you can see Jeff (5th from the right) in front of the VESCO Building. June 16, 2017



Who The Heck is Diablo Furnaces?

“MACHESNEY PARK, ILLINOIS – June 14, 2017 – A company that built a niche servicing and refurbishing million dollar machines in the gear industry launched a spinoff company to build a new line of heat treating furnaces for those same customers. The new operation, Diablo Furnaces, saved five employees from the unemployment lines and Diablo is looking to add more. Machine Tool Builders was founded in 1995 to rebuild and re-control – add new controls to modernize machinery – large machines that make gears or work on gears. The company does this work for large national conglomerates such as Boeing and Caterpillar but also for local firms including Forest City Gear and Rockford Toolcraft. MTB eventually diversified into selling foreign brands as well, such as Germany-based Burri Grinding and Dressing Machines, Switzerland’s Donner+Pfister and HERA Hobbing Machines from South Korea.

Several years ago, MTB saw an opportunity to break into a related industry. When a gear is finished it has to be baked in a furnace to make it harder. Without the heat treating, the soft metal would wear down in a day. Machine Tool Builders began servicing and refurbishing heat treating furnaces. Many of those furnaces were built by a decades-old Rockford, Illinois firm. When that company closed suddenly and its assets sold to a Michigan company, MTB added key personnel from that firm and began using that institutional knowledge to design and build new furnaces under the name Diablo Furnaces. Diablo builds internal quench, temper/draw, box and car bottom furnaces that are custom built for each customer, based on material, temperature range, volume and available floor space. Diablo launched in February with five employees and a goal to do \$6 million in sales this year. The company was 50 percent to that goal by the end of April. Diablo now needs more workers to keep up with market demand.” June 16, 2017

Atlas Copco, Grand Prairie, Texas

Back in may of 2016 it was announced that Atlas Copco would close two plants in the US associated with their Rock Drilling tools division one being In Grand Prairie, Texas. The production was slated to move to a plant in Pennsylvania with a lot of the heat treating being outsourced. Sure enough the Grand Prairie location is closing and the equipment is being sold or moved. All of this brings us to their fairly large in house heat treating department which consists of a total of 6 Batch IQ furnaces 36 x 48 x 32 in reasonable shape with fairly new UPC controls. We were just told that all of the equipment has been sold to a company in the US southeast, possibly the Carolinas who will be using it in a captive heat treat department. Who this buyer is, is unknown to us but this is a lot of heat treating capacity to be dropped into a manufacturing plant. June 14, 2017



Super Systems Inc., Sales Meeting

As we speak furnace controls company SSI is holding their annual two day sales meeting in Cincinnati, Ohio. In the photos below you see the entire sales team and SSI team along with a photo from inside the SSI warehouse. June 14, 2017



Valley Forge Bolt & Manufacturing Adds Furnace Capacity

Out in Phoenix, Arizona bolt manufacturer and captive heat treater Valley Forge has added some furnace capacity as we can see here. It's interesting the furnace capacity-at 1,000 pounds this is a small furnace, the size you only see at captive heat treats with small loads or at commercial shops in areas with no automotive work such as California. June 13, 2017

"Valley Forge Bolt & Manufacturing has added some additional heat treating capacity! The Heat Treating Department has added the services of an additional Integral Quench Furnace and a gas-fired Tempering Furnace to meet the increasing production demands.

Both the new Integral Quench furnace and gas-fired tempering furnace are certified to AMS 2750. The Integral Quench Furnace has current capabilities of processing 800-1000 pounds per load at temperatures up to 1750 degrees Fahrenheit. With the ability to load over quenched loads, greater efficiencies are realized providing maximum throughput and the ability to meet the increasing demands of production schedules and the needs of our customers! The gas-fired tempering furnace supports the new Integral Quench Furnace providing the tempering capabilities with temperatures up to 1250 degrees Fahrenheit. The ability to rapidly achieve tempering temper set points has provided additional maximization of throughput.

All charting is documented utilizing our ssi digital tracking system and program recipes control the processing within each furnace to assure a repeatable process to the correct parameters. We have increased our capabilities in order to better serve our customers with shorter lead times and the ability to rapidly meet those expedited needs! We invite you to join us here at Valley Forge Bolt & Manufacturing for your bolting needs!"



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Stay Lean and Maximize Profits with
Visual Shop
Management Software for Heat Treaters

Monday Morning Briefing

We start off the week with an announcement about some changes in management at commercial heat treater **Solar Atmospheres**;

*“William and Myrtle Jones, primary owners of the **Solar Atmospheres Family of Companies**, are pleased to announce a few organization changes within the Solar companies. Roger Jones, has been appointed CEO for the Solar Atmospheres four vacuum heat treating locations: Solar Atmospheres, Souderton, PA; Solar Atmospheres, Hermitage, PA; Solar Atmospheres, Fontana, CA; Solar Atmospheres, Greenville, SC. Roger previously held the position of Corporate President of Solar Atmospheres. Roger started the Solar Atmospheres vacuum heat treating business with his father, William Jones back in 1983. Also, Jamie Jones has been promoted to President for the Solar Atmospheres Souderton location. Jamie previously served as the Vice President of Operations at the Souderton location, and has been with the company for over 20 years. Similarly, Trevor Jones has been promoted to CEO for Solar Manufacturing, Magnetic Specialties, and the newly developed Vacuum Pump Services Corp. Trevor has been active in the furnace operations and R&D department at Solar since 2004, and he previously held the position of Principal Engineer at Solar Atmospheres.”*

Andrew Bassett/Accurate Steel Treating. Andrew Bassett, President of Aerospace Testing & Pyrometry sent us these two photos from the recent ASM annual Scholarship Golf Tournament in California. We will let Andrew tell the story in his own words; *“The gentlemen from Accurate Steel Treating invited me to join them in their annual ASM Scholarship Golf Tournament. Although our golfing skills were much to be desired, we all had a great time. The outing raised quite a bit of money for two recipients to further their education. In the First Picture we have (Left to Right) Chris Hall (GM, AST) Jimmy Hollman (Sales AST), Andrew Bassett (ATP) & Krishna Cherukuri (VP, AST). In the second we have (Left to Right) Krishna Cherukuri, Jimmy Hollman, & Chris Hall.”*



Vacuum furnace builder **BMI** of France is getting set to ship a new furnace to OSG Yana in Japan which is mildly interesting, what is more interesting though is the very unusual door design-one which we would describe as a “guillotine” style. Anybody care to guess as to the purpose of this design? The fellow in the first row with this answer is correct; “The customer’s production line being fully automatic, the furnace was equipped with an automatic up/down sliding door, allowing the automation of transfer operations from one machine to the next”. Interesting idea, we would be curious to know how it turns out.



In people news we see that **Mike Grande** who was Sales Manager at **Wisconsin Oven** has been promoted to Vice President of Sales and Engineering. **Tim Lackey** who has over 25 years in the heat treating industry with companies such as Sona Precision Forge, Al-Fe HeatTreating, and American Roller Bearing recently became Heat Treat/ Finishing Production Leader for the Schaeffler Group in the US. **“Scott Grabner joins Paulo as the Cleveland Division’s Key Account Manager. In this role Scott is responsible for fostering customer relationships and identifying ways to support our customer’s needs . A Cleveland native, Scott’s previous experience includes industrial recycling sales. He has hit the ground running and says, “Everyone at Paulo has been incredibly welcoming since I started, and I am thrilled to join the Paulo team. I look forward to collaborating with my team members and developing strong relationships with our customers.”**



How big is the worldwide heat treating market? We ran across this summary on the website of **Specialty Steel Treating** of Michigan. While some of the numbers such as the ones presented by IHEA make sense and others are plausible one particular part threw us for a loop, namely where we are quoted about the growing African heat treating market. To the best of our knowledge we have never made any predictions about the heat treating market in Africa and our personal opinion is that we have absolutely no desire to know more about heat treating in Ghana or Nigeria.

“The heat treatment industry has become a huge market all around the world. Globally, industries are making major advancements in the operations involving the heating and cooling process of metal. This is due to the wide number of benefits heat treatment offers steel when it comes to certain desirable mechanical and physical characteristics. According to IHEA, heat treatment consumes 17 percent of U.S. Industrial Energy usage and consists of 2 to 15 percent of the total production cost. Globally, the sheer volume of the heat treatment industry is in the range of \$65 to \$75 billion—with the sale of heat treatment equipment alone being between \$4.375 and \$5.5 billion. Looking at just the numbers, it’s safe to say that the heat treatment industry has a huge impact on the economy all over the world. Many countries have considered the heat treatment process to be a strategic part of their developing economies and living standards. Countries like Poland and China even have significant subsidies and grants provided to manufacturers that develop technologies or modernize their facilities for such processes.

North America alone is a \$22 billion industry—with the European Union coming in second (\$18 billion) and China (\$11 billion) coming in third. Looking at these statistics, it’s clear that the U.S. is a dominant player in the heat treatment market. Largely due to the high volume of automotive parts and processes that are built and handled within the country. On average, 70 percent of a vehicle’s weight is metal. This high percentage of metal has a profound influence over the demand for heat treatment within the industry.

It seems like other countries are starting to catch on too. According to TheMonty.com, “Fast growing Asian/African markets create opportunities for heat treatment services and equipment, particularly in India, Thailand and Indonesia and, in time, Vietnam and the Philippines. This manufacturing shift depends on population size, education (income) and the steel availability in the country or region. We can predict with some degree of accuracy that within the next 10 to 20 years, the highest growth will be in Africa. Egypt, Nigeria, Ethiopia and Ghana will have the fastest growth potential in the heat treatment industry.”

Globally, a number of different industries besides the automotive sector use heat treatment in their everyday processes as well—industries like heavy construction machinery, aerospace, mining, metalworking, and the tool and die sectors to name a few.

The heat treatment market only seems to be getting bigger and better as the years go on. One of the greatest statistics regarding the heat treatment industry is that a majority of industry operators are smaller businesses that serve local and regional markets. According to U.S. Census data, 96.4 percent of heat treatment companies employ less than 100 workers, and 68.3 percent employ fewer than 20.

Meaning that the industry is made up of thousands of companies that all specialize in a particular segment of the industry—showing just how diverse and how much depth there is to what we do. Trends in the heat treatment sectors are also on the rise. Digitalization and a globalized standard of heat treatment have both played a big part in the industry's growth. Automation and manufacturing technologies and processes are constantly becoming more digitalized and streamlined, making our sector even more efficient and lowering the cost of overall production. Looking at these industry market statistics, analyses and trends makes one thing abundantly clear. The heat treatment industry is a huge player in our global economy, and it's definitely one that's here to stay." June 12, 2017

HTSU Acquires Furnace Mechanix. Expanding Refractory and Repair Services

"GREENVILLE, S.C. – Heat Treating Services Unlimited Inc., a global field services and accredited testing and calibration laboratory, specializing in the Thermal Processing Industry, announced today they have acquired Furnace Mechanix, Inc out of Denver, North Carolina. The acquisition of assets and personnel will enhance their refractory services they currently are offering to a wide variety customers. The investment in equipment and personnel bolsters HTSU's comprehensive portfolio of maintenance, calibration, repair and testing services in North America. This division will continue to operate as a division of HTSU under the direction of Kevin Ruff, Vice President along with newly appointed Division Manager, Gene Corneau.

"With HTSU acquiring Furnace Mechcanix we gain additional expertise in our expanding refractory division. Gene Corneau, founder of Furnace Mechcanix, will be the new Division Manager for all the Refractory Services we offer. Gene has been in the furnace rebuild business, specializing in refractory, since 1985. We will continue to offer a complete turn-key solution to our clients at a stronger level," said HTSU President Kyle Favors.

"We are excited to have Gene join our team. Gene brings his 30+ years in refractory to our already knowledgeable staff, which will only enhance the quality of work that HTSU is known for. This is an exciting time for us, as we continue to expand our position in the Thermal Processing Industry." With 26 employees over 4 locations, HTSU offers customers the ability to single source their equipment needs. Pyrometry, Repairs, Consulting and Refractory in one place!

About Heat Treating Services Unlimited (HTSU). Heat Treating Services Unlimited Inc. provides pyrometry, preventative/repairs, refractory, and consulting services. HTSU testing and calibration activities are in compliance with ISO/IEC: 17025:2005. The privately held company is headquartered in Simpsonville, S.C., and has offices in Detroit, Asheville, N.C., and Wichita, Kan. Visit www.htsu.com." June 9, 2017

Northstar Aerospace Closing

Aerospace parts supplier and captive heat treater Northstar Aerospace is closing their facility in Milton, Canada. The press release goes back a couple of months but as usual we at "The Monty" can fill in the rest of the details. The actual closing will be 3 weeks from now and the heat treat department consists of an AFC-Holcroft rotary hearth furnace, an older Surface batch IQ with no quench and a few pit furnaces along with some other odds and ends. June 9, 2017

"Nearly 200 people will lose their jobs later this year after Northstar Aerospace announced it's closing production at its Milton facility." The majority of employees are part of the Uni-for Local 112. The closure will affect 200 highly-skilled workers at the plant, 50 of whom were to retire this year. They were notified on the eve of contract talks that Northstar Aerospace, which developed and makes face gears for Boeing, is scheduled to cease



operations by September 30. According to the company, it lost the contract for the gears, forcing it into closure. Employees received a special bulletin from the company's vice-president and general manager Thomas Smith on January 9. Smith stated that the plant would close by the end of the third quarter.

"This facility closure is the result of market factors, not the facility's performance," he said. "The closing of the Milton facility is the result of the loss of content on the Boeing AH-64E Apache program. There is not sufficient additional new work to make up for the drastic loss of content on the Apache program for the operation to remain open." The facility, which was purchased by Wynnchurch Capital in 2012, when Northstar went into bankruptcy, employs skilled tradesmen, technicians, machinists, general labourers, and shipper/receivers. The plant operates around the clock with both eight- and 10-hour rotating shifts. The plant specializes in manufacturing high-precision metal products used by aircraft and helicopters, including specialized gears for transmissions used on Boeing's Apache helicopter. Used by the U.S. army, the Apache serves as an attack helicopter. The company has locations in Windsor, Chicago, Phoenix and its corporate headquarters is in Illinois."



Where Are They Now? Ernie Lackner

For over 20 years Ernie toiled away at Alfe Heat Treating, one of the largest commercial heat treaters in North America ending up as Vice President of Heat Treating Operations with a special focus on the plants in Charlotte, NC and Wadsworth, Ohio (by the way the Charlotte facility was sold to a competitor, Braddock Metallurgical back in June of 2015). Ernie parted ways with Alfe back in January 2016 and took a bit of a break until recently when he became Director of Sales and Marketing for a company by the name of "The Pipe Line Development Company" in Westlake, Ohio. We've always had a very high opinion of Ernie and certainly the industry misses his experience. June 8, 2017

SECO/WARWICK Systems & Services (INDIA) Pvt. Ltd.

"SECO/WARWICK is proud to announce the creation of SECO/WARWICK Systems & Services (INDIA) Pvt. Ltd., a new company that will concentrate on sales and service activities of Vacuum, Vacuum Melting and Aluminum business segments in India, delivering the best quality, service and support to Indian customers. Manoranjan Patra, who has been appointed as a Managing Director of the newly formed organization, commented "SECO/WARWICK Systems & Services (INDIA) Pvt. Ltd is positioned to deliver technologically advanced products with top quality, competitive price and local, fast and competent service to fully meet the customers expectation on the Indian market." In 2008, a joint venture was formed with Allied Consulting Engineers Pvt. Ltd. (India) and the JV was then named SECO/WARWICK Allied Pvt. Ltd. In 2013, SECO/WARWICK S.A acquired a majority stake in the company. As an integral member of the SECO/WARWICK Group, SECO/WARWICK Allied Pvt. Ltd. shares engineering expertise and will stay concentrated on Thermal and Incinerators business segments, which for many years has been their core businesses. The entity will continue to develop their technologies and build the products in India and provide a full scope of services. To provide even better value to Indian customers in terms of timing, availability, pricing and quality, SECO/WARWICK Systems & Services (INDIA) Pvt. Ltd has been created



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in 2017. The aim of the newly established company is intermediation and customer service for the equipment imported from Poland.” June 8, 2017

J & M Plating, Rockford, Illinois Investing

In Rockford, Illinois, USA J & M Plating has done what few other heat treaters do which is to marry finishing, plating, sorting and heat treating all under one roof (Metex HT in Canada is another one which comes to mind), there are others but they are very definitely in the minority. We have mentioned J & M several times over the years, for example when they added a 6,000 pound/hour mesh belt line and again when they added batch IQ capacity so it is only fitting that we tell you about their latest investments. The company recently added another 5,000 feet and invested in a multimillion dollar zinc plating line. The Rockford area is the fastener capital of North America and J & M is making sure they are available to offer all the processes required to produce fasteners and small parts. June 7, 2017



Schaeffler South Carolina Expanding, Adding Heat Treat Capacity

Schaeffler Group USA is expanding their facilities in the US Southeast. Schaeffler as a bearing manufacturer does a great deal of heat treating in house (all of it “top end” heat treating with the latest technologies) and yes that includes their plant in Fort Mill, SC which will see an investment in more heat treating equipment. One of the reasons we mention this today is because this is the way of the future in North America, a rapidly growing manufacturing sector in the US Southeast which translates into more heat treating. So if you are a commercial heat treater or industry supplier this is an area which can’t be ignored. June 7, 2017

“Fresh off a \$36 million expansion that bought Schaeffler Group USA Inc.’s Fort Mill Plant 1 to close to 500 employees, the German-owned company believes that number will be closer to 550 by 2020. S.C. Gov. Henry McMaster and about 115 guests were busy Thursday celebrating that last expansion when Michael Pees, Fort Mill 1 plant manager, unveiled the number 544 on a video display. That’s the projection for employment at the factory by 2020. By 2020, the plant will also increase production of its bearings and bearing assemblies by 50% to 150 million a year. Pees says the key to that expansion — beyond a booming business for its automaker customers — is the workforce that Schaeffler has found in South Carolina. “The foundation of our plant are our employees,” he says. Schaeffler expanded its apprenticeship program that it started at its Cheraw plant in Chesterfield County to York County. During its five-hour celebration, 20 apprentices from the program at York Tech were present for pictures and questions. For the Fort Mill campus, it was a hugely important day for the approximately 1,300 employees on Schaeffler’s 60 acres off Interstate 77 in northern York County. For the first time in about 10 years, two Schaeffler family members that own about 75% of the stock in the company are visiting. Schaeffler’s S.C. employment now stands at 3,100. In the last five years alone, Schaeffler has spent \$50 million in expanding and Fort Mill 1, Pees says. At Fort Mill 1, production started about two months ago in the expanded area that includes presses with forces as large as 400 tons. That addition added 30% to the size of the factory floor. The booming



auto industry has been Schaeffler's driver for its recent expansion. The company makes bearings in Fort Mill that are used in automobiles and other industrial applications down to lawnmowers. The company also makes a "variable-cam timing system" that attaches to Ford and other engines to improve fuel economy."

Solar Atmospheres, Souderton PA

Solar Atmospheres announces that it has been reaccredited with the MedAccred certification for heat treating at the Souderton, PA facility for a third consecutive year. Solar Atmospheres in Souderton has held the MedAccred accreditation since the program's inception in 2015. Solar boasts the honor of becoming the first, globally, to achieve a MedAccred Heat Treating Accreditation and has maintained its accreditation seamlessly since the initial audit. Given the ever-changing landscape of the medical manufacturing industry and having demonstrated its ongoing commitment to quality by satisfying customer requirements and industry specifications, Solar Atmospheres is gratified to have earned the prestigious "MedAccred First" medallion of accreditation while maintaining a MedAccred Heat Treating accreditation at the Souderton location on a continuous basis. For additional information about Solar Atmospheres, please contact Mike Moyer, Director of Sales at 215-721-1502 x1207, or mikem@solaratm.com, or visit us at www.solaratm.com. June 7, 2017



Dan Kay Does Taiwan

In the brazing world few are as well known as Mr. Dan Kay of Kay & Associates in Simsbury, CT. Dan recently was invited to host a brazing-training seminar at RonJye Enterprises in Taiwan which apparently was quite a success. Some of the attendees are shown in the photo below which includes the shocking photo of Mr. Andy Chen of Marstate Industrial Corporation in a polo shirt. In the 25 years we have known Andy we have never known him to wear anything other than a blue suit. June 6, 2017



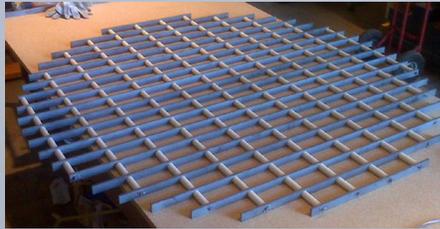
Back row (standing, left to right): Charles Tsau (Marstate Industrial Corporation), Ken Lin(RonJye), Zheng-Yi Hong (Consultant to RonJye), Richard Li (KingLai Hygienic Mat'ls), Ian Widlow (AMAT, Inc.), Sam Kim (AMAT, Inc.), Vincent Lin (KingLai Hygienic Mat'ls), and George Hsiao (RonJye)

Front row (seated, left to right): Andy Chen (Marstate Industrial Corporation), Linda Liao (AMAT, Inc.), Dan Kay (Instructor), Joe Tu (RonJye Enterprises), and John Lin(RonJye)

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Phoenix™ Supplies Temperature Profiling System to Major Brazilian Tile Manufacturer

“Phoenix™ have recently received an order from a major tile manufacturer for one of their ‘Hot Box’ systems for monitoring the product temperature during the firing process. Firing tiles is similar to heat treatment processes but with some speciality products the duration can be longer (24 hours plus), and the temperature higher (1200°C / 2200°F). The system will be used in their tunnel kilns to increase throughput and cost efficiency while maintaining product quality. Firing tiles is often carried out in high speed roller hearth kilns where firing times are short (30 to 45 minutes), but where tile size is relatively small, tunnel kilns are used and each kiln ‘car’ in the tunnel is stacked with tiles. In these kilns the firing time is greatly increased, and measuring the temperature profile (or firing curve) of a loaded car is essential to ensure products at the center and extremities of the load are subject to the same firing conditions. The main reason for the system purchase however is that temperature is critical to tile color, so being able to see the exact temperature profile of the load is vital to the product quality. For more information contact: info@phoenixtm.com □ www.phoenixtm.com“ June 6, 2017



Kiln car for tiles fired in ceramic boxes (saggers).

Can-Eng New Furnace Order

“Can-Eng Furnaces International Limited was recently awarded a contract from a leading North American manufacturer of forged aluminum suspension components. This project reflects a long list of recent projects involving Automotive Light Weighting initiatives where Can-Eng technologies have been favored in delivering the lowest cost of ownership per unit of production. Automotive manufacturers continue to pressure supply partners in developing systems and components that deliver weight reduction benefits yielding reduced vehicle fuel consumption. The furnace system will be integrated into a completely automated forging cell expansion, with a sophisticated controls & part tracking system, for heating aluminum billets prior to forging of automotive suspension components. Can-Eng’s patented rotary hearth furnace technology was utilized in this application as it provided optimal part handling and temperature profile parameter flexibility within the smallest manufacturing floor space. Can-Eng’s Rotary Furnace Systems continues to replace conventional in-line continuous belt style heating systems as they offer superior footprint, energy consumption and maintenance requirement benefits.” June 6, 2017



Ion vs; Gas Nitriding

A few weeks back we posted some comments about the relative merits of gas and ion nitriding which were provided by Dr. Edward Rolinski, of Advanced Heat Treat Corp., of Waterloo, Iowa (Dr. Glow to you and I). His comments started with this statement which provoked a response from Mark Podob of Metlab, a commercial heat treater in PA. "When plasma nitriding was first introduced, it was treated as a solution for the problems related to the nitriding process ". Marks comments can be found below. June 5, 2017

"Gord –I just love reading articles talking about the death of gas nitriding and all of the associated problems/hazards/inefficiencies. Metlab has among the largest nitriding capabilities in the United States, with our largest 15' in diameter by 12' long. We generally nitride two times a week, in either this furnace, or one of our 84" diameter by 96" tall furnaces – filling them with many customers parts. In addition to the capacity for carburizing and hardening large parts, like gears, pinion shafts and bearing races, we are also well known for nitriding as a core competency. From a commercial heat treating standpoint, the benefits of gas nitriding are numerous – we can mix and match parts in a load without localized overheating which allow us to accommodate different customers and customer products. And we have the additional advantage of simple masking with stop off paint as opposed to expensive mechanical masks which allows us to economically keep areas soft when required and also the ability to nitride blind and through holes. And in addition, we have well mastered the technique of in-situ activating stainless steel surfaces, so that processing these materials has never been an issue. Finally, white layer doesn't seem to be an issue either – in many applications it is not an engineered surface, not needed, and is simply removed. Certainly ion nitriding has its strengths – for mass nitriding many of identically sized parts where the glow can be uniform, it is probably a good technique. And using little gas, it can be economic. But quite frankly so is gas nitriding, as clearly evidenced by the demand for our services. With our 90 year history, Metlab has been nitriding since the process was commercially viable – Conrad Knerr, the son of the founder of Metlab wrote the definitive chapter in the ASM Handbook on nitriding as well as numerous technical publications on the same topic. Large parts like tank turret gear races, and 25,000 pound main propulsion drive gears for submarines are a few notable projects that are ongoing at Metlab. And as a side note, ion nitriding was tried for both of these projects and rejected. As Mark Twain so eloquently stated – "reports of my death are greatly exaggerated."

Consolidated Engineering Company T6 Order

Consolidated Engineering of Georgia sent us this press release. June 5, 2017

"CEC has been awarded a contract for a T6 Heat Treat System consisting of a solution furnace, quench tank, age oven, post-age cooler and interconnecting conveyors. The equipment will be used to heat treat wheel castings. The design is similar to the successful system previously supplied to this customer."



**HEAT TREAT
CENTRAL**

Willy Wilbur Engaged

In an interesting human interest story we see that Willy Wilbur a rising star in the heat treating industry recently got engaged. Willy has been working with the family rep firm Wm. Wright and Associates in the Chicago area for the past few years and is becoming quite well known. The company reps for firms such as AFC-Holcroft, Wirco, Tenaxol and UPC to name a few. Congratulation Willy! June 5, 2017



Kentucky Heat Treating Adding Capacity

Commercial heat treater Kentucky Heat Treating in Winchester, Kentucky is finding business good enough to warrant some more equipment. We understand that the family owned and run commercial heat treater (the Stenger family) are in the process of adding two Surface Combustion Super 30 batch IQ furnaces and companion equipment. The Kentucky Heat Treating Company was founded in 1967 in Georgetown, Kentucky to service the Lexington IBM typewriter plant and other commercial accounts in the area. It was located in a 16,000 sq ft plant and utilized batch integral quench equipment. In 1981, the company was sold. Since that time there have been many changes and considerable growth both in size and equipment. In 2004 the company relocated to Winchester Kentucky and is currently occupying a building of 65,000 sq ft. June 2, 2017



Rubig

We welcome our most recent advertiser Rubig the best known name in the world when it comes to Plasma Nitriding systems. While we think of Rubig for Plasma Nitriding systems the company offers far more than just this technology. Whether it is Vacuum Hardening furnaces, gas nitriding systems or commercial heat treating Rubig can help you with all of these. You can find out more about the company by clicking on their banner ad on this page. June 2, 2017

GVT Grammer Vacuum Technologies, Inc. Molybdenum In Stock
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APM Elements and Tubes
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Heater repair & rebuilding
Custom Electric Mfg. www.custom-electric.com

Photos From Yesteryear

From time to time we reach back in time for photos from the past and that is exactly what we are doing today with these three photos. June 2, 2017



AFC-Holcroft Sales Team 2006. Included in the photo are Gord Montgomery, Ed Boll, Bill Martin, Tom Leja and a couple of others whose names escape us.



Pete Callert of Heat-Tek and Kyle Favors at Euclid Heat Treat in 2006



Bill Disler and Bernie Parry of AFC-Holcroft flanking Don Longenette who was with Timken at the time

First-Time Heat Treater Streamlines Production, Reducing Lead Times by Nearly 85%

Wanting to streamline their production process, a manufacturer decided to purchase a TITAN[®] vacuum furnace and bring heat treatment in-house. **Discover their winning outcome.**



MOST MODERN & SPECIALIZED HEAT TREATMENT SOLUTIONS

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USED & NEW EQUIPMENT

At “**themonty.com**” you are guaranteed of finding the best priced used equipment in the industry due to the fact that we do not buy and resell and have no associated costs. Instead we put buyers and sellers together on a small commission basis meaning that at the end of the day you are paying what equipment is worth-not equipment with a huge mark up attached! In addition you generally can see the equipment installed, running and talk to the actual operator far better than seeing a used furnace in the back of a dingy warehouse.

- **LISTING USED EQUIPMENT**
- **BATCH**
- **CONTINUOUS**
- **DRAW/TEMPER**
- **GENERATOR**
- **INDUCTION**
- **LAB EQUIPMENT**
- **MISCELLANEOUS**
- **SALT**
- **VACUUM**
- **NEW EQUIPMENT**

LISTING 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 saleable 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.

Notice: 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

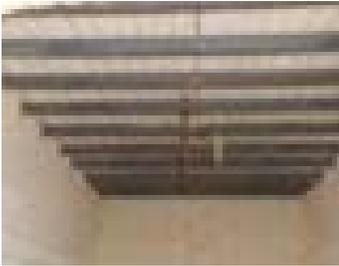
See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, fill out our [Contact Form](#).

- Item # B432 Atmosphere Box Furnace 36" X 48" X 24"
- Item # B431 Air Atmosphere Box Furnace 2,000 F
- Item # B430 Ipsen Recirculating Box Furnace
- Item # B429 Lindberg Batch IQ Installation
- Item # B428 Carbottom Furnace 1800 F
- Item # B427 SOLO Swiss Heat Treatment
- Item # B426 Plasma Nitriding Unit
- Item # B425 Box Furnace
- Item # B424 Atmosphere Box Furnace
- Item # B423 Grieve High Temperature Oven-UNUSED
- Item # B422 Ipsen Sealed Quench Line
- Item # B421 Surface Combustion "Super 36" Allcase
- Item # B418 Lindberg High Temperature Oven
- Item # B417 Fluidised Bed Furnace Line
- Item # B416 Car Bottom Furnace
- Item # B415 J.L. Becker Car Bottom
- Item # B414 Ipsen Batch IQ Installation
- Item # B406 Carbottom Furnace
- Item # B405 Surface Combustion "Super 30" Allcase
- Item # B402 Holcroft Batch IQ Furnace
- Item # B401 Carbottom Furnace Hayes High
- Item # B400 Surface Combustion Super 30 Allcase
- Item # B399 Carbottom Furnace
- Item # B398 Sauder Batch IQ Line
- Item # B397 "Lift-Off" Atmosphere Box Furnaces (2 available)
- Item # B391 Ipsen T-11 Batch IQ Furnace
- Item # B388 Hydrogen Atmosphere Furnace
- Item # B386 High Temperature Tube Atmosphere Furnace
- Item # B385 Lindberg electric pit type cyclone furnace / nitriding furnace
- Item # B374 Atmosphere Box Furnace
- Item # B371 Sauder "Auto-Tilt" Car Bottom Furnace
- Item # B367 Atmosphere Box Furnace
- Item # B352 Pacific Scientific Box Furnace

Item # B432

Atmosphere Box Furnace 36" X 48" X 24"

Lindberg Atmosphere Box Furnace. Model G-364824-A, S/N 20063. Working dimensions of 36" wide X 48" long X 24" high. Electrically heated 480/3/60 @ 95KW. Maximum operating temperature of 2500F. Air operated vertical lift door with water cooled faceplate, ceramic multipiece hearth, 20 Globar elements above and below the hearth. Tap style transformer. Digital control and overtemp. Very good condition. Asking \$49,500 USD.



ITEM # B431 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-OOA. 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 \$65,000 USD.



ITEM # B430 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: 60459. 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. Rear located combustion chamber with 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 # B429 LINDBERG BATCH IQ INSTALLATION

Lindberg Batch IQ Installation. We have available 4 gas fired Lindberg batch IQ furnaces with working dimensions of 30" X 48" X 30". Endothermic atmosphere, updated Marathon controls operating temperature of 1750F. Currently doing carburizing. All our complete, installed and in production. Condition ranges from just rebuilt and in excellent condition to operating but will need some alloy replaced within the next year. Also available are tempers, generator, charge car spare parts etc. Vendor will sell as a complete package or individually.

Best offer.



ITEM # B428 CARBOTOM FURNACE

Carbotom Furnace. Working dimensions of 30' X 10' X 9", gas fired, 15 zones of control. Manufactured by the JL Becker Company. Operating temperature of 1800F. This was completely rebuilt in 2015 and has new ICS controls and new fire brick. Complete and in good condition. Currently installed but not in use.

Asking \$150,000 USD or best offer.



Item # B427 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.**



Item # B426 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.



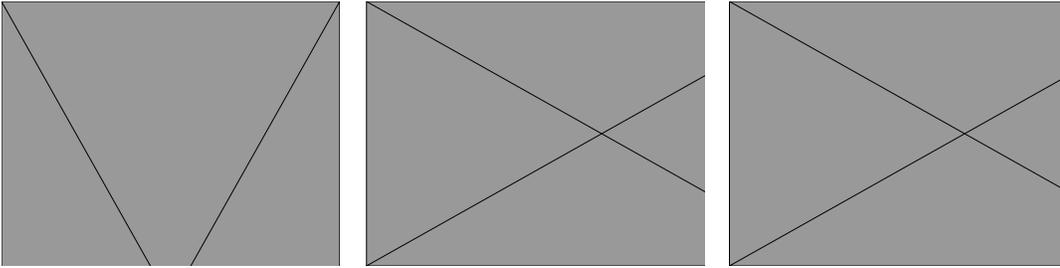
Item # B425 Box Furnace Box Furnace 42" High X 48" Wide X 14' Long. Manufactured by Lindberg. Working dimensions of 42" high x 48" wide x 14'-0" long. Electrically heated 480/3/60, 160 KW. Operating temperature of 2000F. Temperature Controls: Free standing enclosed panel with updated Honeywell controls, including circular chart recorder, SCR controls, back up contactors and step down transformers for the heating elements. Description & Features: Fiber lined. Heated by Ni-chrome 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,



Item # B424 Atmosphere Box Furnace Atmosphere Box Furnace. Manufactured by Williams Industrial Services. Natural gas, 1.8 MBTU's. Working dimensions of 80" wide x 96" high x 60" deep. Radiant Tube Box Furnace. S/N 18932. Maximum temperature of 1750F. Voltage 480/3/60. Controls; Mounted & wired in a free standing enclosure includes a Honeywell digital controller/recorder, Eurotherm high limit. Mounted in the same enclosure includes "Fireeye" flame safety. All necessary pushbuttons, signal lights, relays, motor starters etc. are included. Standard front loading box furnace with vertical lift air operated door. A water cooled roof mounted fan circulates the heated air for good temperature uniformity. There are twelve (12) vertical radiant tubes in this furnace, six (6) on each side. Each burner has spark ignition and there is a flame safety system for flame curtain. There is a Endo flowmeter to control atmosphere. Furnace also has a water cooled breast plate & a stationary powered loader for charging the furnace. Excellent condition. **Asking \$125,000 USD.**



Item # B423 Grieve High Temperature Oven-UNUSED. Grieve High Temperature Oven-UNUSED. Model HD-243624-HT-ATM. Operating temperature of 2200F. 73 Amps, 480 volts, 60 Hertz. Working dimensions of 24" X 36" x 24". Capable of nitrogen addition. 7 years old and never used or installed. Like new condition. New this was \$75,000 USD. **Best offer.**



Item # B422 Ipsen Sealed Quench Line

Ipsen Sealed Quench Line. Located in Europe this line is currently installed but shut down very recently. Used for hardening and carburizing. Condition generally good. Asking Price £95,000.00. Does not include, dismantling, export packing and delivery. Line consists of the following items:

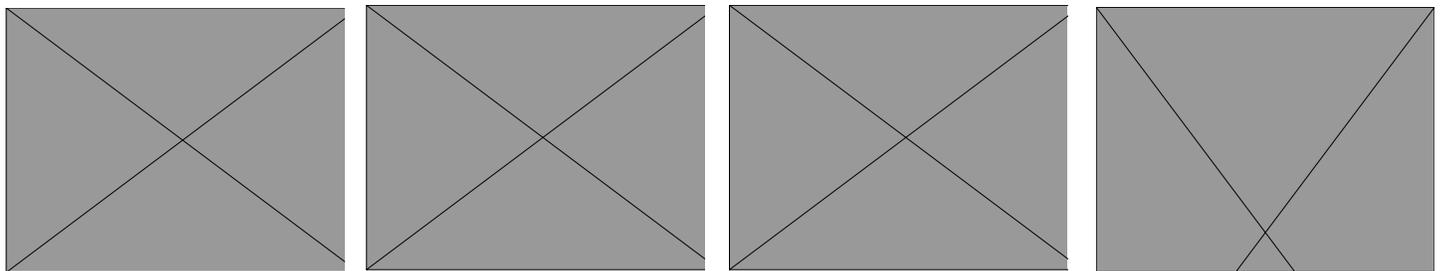
Ipsen TQF-7-EM Sealed Quench furnaces built in 1975. Electric heating. Load size 600kg. Forced cool fan in vestibule. Chamber size: 760 wide x 1220 long x 510 high mm.

Ipsen TQF-8-GRM Sealed quench furnace built in 1983. Gas heating with Recuperative burners. Load size 600kg. Forced cool fan in vestibule. Chamber size: 760 wide x 1220 long x 610 high mm.

Ipsen Tempering Furnace DAC-8-GR built in 1983 Gas heated by indirect radiant tubes. Can be used with an atmosphere with internal forced cooling. Load size 600kg: Chamber size: 760 wide x 1220 long x 610 high mm.

Ipsen Tempering Furnace DLRC-7-E built in 1976. Electrically heated with spiral wound elements. Load size 600 kg. Chamber size : 760 wide x 1220 long x 510 high mm

Ipsen Parts Washer Model WPD-4-G Gas Fired. Ipsen Loader. Ipsen Unloader. Ipsen Endo Gas Generator Model G-1500-G built in 1983. Gas fired. 1500 CFH. Can be easily upgraded to produce 2000 CFH. Dewpointer, industrial scales and portable hardness tester also included.



Item # B421 Surface Combustion "Super 36" Allcase

Surface Combustion "Super 36" Allcase. Working dimensions of 36" X 48" X 36", gas fired. Currently undergoing a rebuild and will be in "like new" combustion in 12 weeks. Gas fired, top cool option and hot oil. Vertical U tubes with safety platforms, ladders, all new motors, wiring, components and comes with new control cabinet with SSI controls and flow scopes. **Asking Price: \$353,825 USD.**

Item # B418 Lindberg High Temperature Oven.

Model 41-MT-363636-2. Serial number 949223. Working dimensions of 36Wx36Lx36H. Manufactured in 1994. Maximum operating temp of 2050F. 240V, 3-phase 60hz. Honeywell Truline round chart recorder, model DR45AT and Watlow F4 digital control. Air operated vertical lift front door. Heating is provided by Lindberg MPH heating elements. Recirculating fan is mounted in the bottom. Furnace can be used for hardening, carburizing, carbo-nitriding, normalizing, and annealing. Includes retort box measuring 34x34x32 with gas connection. Excellent condition. Only used in the jet aviation industry by 1 owner. The retort was purchased with the furnace but was not actually used. Retort is brand-new. Unit has been well taken care of. Also included is a Clark Hardness Tester, Model CPT. Asking \$29,000 USD for both.



Item # B417 Fluidised Bed Furnace Line.

A complete fluidised bed heat treatment line only 6 years old, consisting of three fluidised bed furnace, a cooling fluid bed, plus auxiliary equipment. All furnaces are sized with a 600mm diameter x 1200mm deep work space (24" diameter x 48" deep) and are electrically heated, with SCR control.

- Furnace 1 – 1080 deg C max temp, 19" colour touchscreen, with Windows based control system. Process gases include air, nitrogen, ammonia, propane, carbon dioxide. All gas flows are computer controlled through electronic flowmeters
- Furnace 2 - 1080 deg C max temp, 19" colour touchscreen, with Windows based control system. Process gases include air, nitrogen. All gas flows are computer controlled through electronic flowmeters
- Furnace 3 - 680 deg C max temp, Standard temperature controller, Process gases include air, nitrogen. Gas flows are controlled manually from the flowmeter

Auxiliary equipment included in offer - cooling fluid bed, work platform, stairs and handrails, piping and wiring, fluidising air system, water cooling system with air cooled heat exchanger, various work jigs & mesh baskets, ammonia vaporiser. Current power supply is 415V / 3 phase / 50hz, but equipment can be modified to suit any power supply. Originally manufactured by Applied Heat Technologies 2010, furnace line ceased operation in 2014, and has been in storage since. All equipment is in excellent condition. Prior to sale, the equipment will be fully tested to ensure it is operational, and any faulty parts will be replaced, and a warranty will be offered. The equipment can be packed into containers for delivery anywhere in the world. Assistance with shipping, installation, commissioning and conversion to an alternate power supply available if required. **Asking price is USD \$180,000.00.**



Item # B416 Car Bottom Furnace.

Manufactured by Sauder this is a gas fired 6-burner car bottom style furnace. Serial Number: 751546 (1975). Working dimensions of 15' D x 10' W x 7'. Completely rebuilt and relined with 4" thick fibre in 2012 by Onex Inc. Dual Blowers. 6 North American burners model 4422-5 capable of 4.5 million BTU's. Was operating at 1200F but capable of much high temperatures with additional lining. Very good overall condition although the car needs minor repairs (repair materials included). **Asking \$49,500 USD for quick sale.**



Item # B415 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: \$125,000.00 USD.**



Item # B414 Ipsen Batch IQ Installation.

This 5 year old installation consists of 2 Ipsen carburizing furnaces with working dimensions of 36" X 48" X 36", both gas fired. Four (4) gas fired Ipsen tempers 36" X 48" X 36" capable of 1400F, an Ipsen dunk/spray washer and 2 charge cars. Carburizing furnaces are a "flow through design" using endothermic atmosphere. Atmosphere control is through an oxygen probe/Siemens 3 gas IR system. The entire installation is designed for "lights out operation" meaning it is completely automated. Included is over \$100,000 worth of spare parts along with 15 base trays and baskets. The equipment has just been removed and is in immaculate condition. New the system was \$3.5 million USD, **Asking Price is \$1.25 million USD.** Vendor will consider selling individual items.



Item # B406 Carbottom Furnace.

Working dimensions of 7' wide X 7' high X 12' long. Manufactured by North American Manufacturing. Natural gas heated. Ceramic fibre lined. Very good condition. **Asking price and more details to come.**



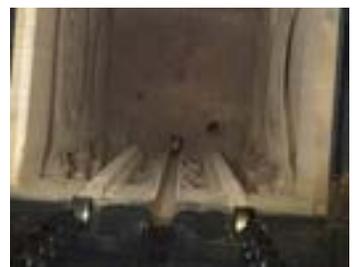
Item # B405 Surface Combustion “Super 30” Allcase.

Surface Combustion batch IQ furnace with working dimensions of 30” X 48” X 30”. 1980’s vintage with dual quench cylinders. Currently electrically heated but vendor has a complete gas combustion system and is willing to convert the furnace to gas. To convert to gas heating the vendor is willing to quote the installation of the combustion system and adding U tubes. Good overall condition. **Asking \$39,500 USD** for the furnace and combustion system.



Item # B402 Holcroft Batch IQ Furnace.

A Holcroft Model GPM batch IQ furnace with working dimensions of 36” wide X 48” deep X 30” high. Gross load capacity of 3,000 pounds. Gas fired with four 8” diameter U-Tubes and Hauck burner with recuperators. BTU input 1,350,000 BTU’s. Maximum operating temperature of 1800F. Uniformity from 950F to 1650F +/- 10F. Quench tank 3400 gallons. Quench oil temperature 160F. Nitrogen Top Cool. Allen Bradley PLC 1400. SBS quench oil cooler which has never been used. Also included is a spare pusher head. Currently set up for nitriding but capable of carburizing. Installed and in good condition. **Asking \$55,000 USD.**



Item # B401 Carbottom Furnace.

Gas fired recuperative, jet recirculating, annealing, normalizing, stress relieving car type furnace. Manufactured by Johnson, Serial number 1667. Working dimensions of 30' wide X 40' long X 15' high. Maximum operating temperature of 1800F. Utility requirements; 480volts, 3 phase, 60 hertz. Natural gas; 1000 BTU/cubic foot. 4 PSIG maximum pressure. Honeywell controls with Allen Bradley SLC 503 PLC. Krom-Schroder flame safety management. Foot print 46' wide X 50' long X 36' high. Furnace has doors at both ends, fiber lined. 4 zones of control. Self propelled car.

Please call for pricing.



Item # B400 Surface Combustion Super 30 Allcase.

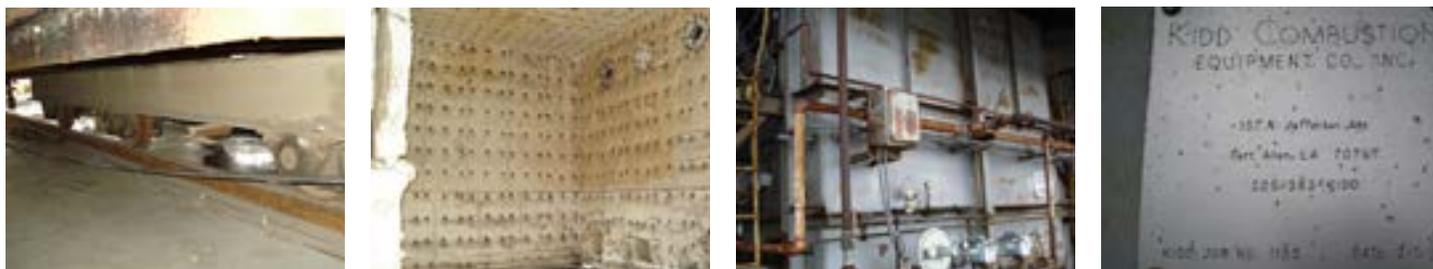
Surface Combustion Super 30 Allcase with working dimensions of 30" wide 48" deep X 24" high. S/N BC-41088-1. Electrically heated 480v/3ph/60cyle. Operating temperature 1350F to 1750F. Newer style with dual quench cylinders and top cool. Controls are in a free standing panel with Eurotherm digital controllers and over-temp. Multi-pro data logging and carbon control. Includes charge car. Good condition. **Asking \$60,000 USD.**



Item # B399 Carbottom 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.

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



Item # B397 "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 # B391 Ipsen T-11 Batch IQ Furnace.

Model T-11 gas fired batch IQ furnace with an operating temperature of 2000F. Working dimensions of 36"W x 24"H x 48". Voltage 460/3/60. External dimensions of 9'W x 14'7"H (Assembled) x 22'L – Approx. Standard T-11 Ipsen batch type atmosphere furnace with integral hot oil quench. Furnace has "Waukee" flow meters for Ammonia, Endo, Air and Natural Gas. There are a total of twelve (12) Eclipse (SER) single ended recuperative burners with Kanthal APM (Advanced Powdered Metallurgical) vertical radiant tubes. Controls mounted and wired in an enclosure attached to the right hand side of the furnace includes the following a Yokogawa digital temperature control, Yokogawa digital over temp control, Yokogawa digital oil temp control, Yokogawa digital over temp (oil) control, three (3) A.C. Amp meters, one for each quench agitator and all necessary pushbuttons, signal lights, etc. Quench tank is gas fired with an Eclipse burner package. This furnace includes a stationary loader, gas fired Dunk & Spray washer, manuals & drawings. Good condition, just moved to indoor heated storage. **Asking \$75,000 USD.**



Item # B388 Hydrogen Atmosphere Furnace.

Manufacturer: CM Furnaces. Type: Hydrogen Atmosphere Box. Work Zone Size: 12" x 12" x 12" furnace work zone with 8" x 8" x 8" inside retort work area. Max. Temperature: 2000°F. Uniformity: Full work zone, prob. +/- 50°F. Lower 6": prob. +/- 20°F. Atmosphere: Wet or Dry Hydrogen or Nitrogen Purge. Controls: PLC - Automatic with Proface touch screen. **Price: \$5,000 USD.**



ITEM # B386 HIGH TEMPERATURE TUBE ATMOSPHERE FURNACE

High Temperature Tube Atmosphere Furnace. Manufacturer: Blue-M. Type: Atmosphere Vertical Tube Furnace. Max. Temperature: 2500°F. Work Zone Size: 2" Diameter x 12"High. Heating: Electric, Globar elements. Tube: Ceramic. Atmosphere: Air or Any Suitable Purge Gas. Last Use: Thermocouple Calibration.
Price: \$2,500 USD.



Item # B385 Lindberg electric pit type cyclone furnace / nitriding furnace type:

12-ec-1620-12, 480 volts, 27 kw, 3 phase, 1-1/2 h.p. fan motor,max operating temp: 1250 f, working dimation: 16" dia. X 20" deep, aprox. Weight: 1700 lbs., heating elements: helical coil type nichrome v, this furnace is equipt with a sealed retort and fan assembly for gas nitriding. **\$9,800.00 USD.**



Item # B374 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. **SALE PRICE: \$18,000.00 USD.**



Item # B371 Sauder "Auto-Tilt" Car Bottom Furnace.

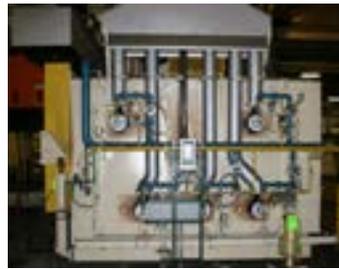
Working dimensions; ID: 8' wide x 30' long x 5' high, electric, 480/3/60, 325kw; 1400F, complete with ceramic fiber lining, 3 zones of control each with top mounted alloy recirculating fan, powered car with cast deck and 60,000# load capacity, hydraulic pump set for lifting cylinders, control panel with digital controls. Super clean and in operation.

Asking \$179,000.00 USD including disconnecting and loading onto trucks.



Item #B367 Atmosphere Box Furnace.

Manufactured by McLaughlin Services. S/N MS-11-604-01. Natural gas heated-2.8 MBTU's/hour. Maximum operating temperature of 2000F. Voltage 480/3/60/100 Amps. Work area 166"W x 20"H top of piers to door arch, 32"H opening x 120"L. External dimensions; 16"W x 13'H x 14'L - Approx. Controls; Mounted and wired in a free standing panel includes an "Super Systems, Inc." (SSi) control system with HMI touchscreen interface. Front loading box furnace with an air operated vertical lift door. Furnace lining consists of ceramic fiber modules on the walls, roof and door. The floor is insulated with "IFB" Industrial Fire Brick. The furnace hearth consists of HT alloy rails and is designed to handle 4000 pounds @ 2000°F. There are two (2) roof mounted fans in this furnace to circulate heat and atmosphere. This furnace is equipped with two (2) Waukee Flo-Tronic Nitrogen Flowmeters. There are a total of ten (10) Kromschroder pulse firing recuperative burners that fire into "P" type radiant tubes. There are four (4) zones of control in this furnace. Excellent condition-like new. **Asking \$165,000 USD.**



Item #B352 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.**



CONTINUOUS

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- **Item # C328 Mesh Belt Brazing Furnace, Like new! \$50,000 USD**
 - **Item # C327 AGF Rotary Retort Line Model 280**
 - **Item # C326 SOLO Swiss Mesh Belt Furnace**
 - **Item # C325 Sinterite Mesh Belt Conveyor Furnace**
 - **Item # C324 C.I. Hayes Mesh Belt Furnace**
 - **Item # C323 Aichelin Cast Link Furnace Line**
 - **Item # C322 Surface Combustion Rotary Hearth Furnace Line**
 - **Item # C321 Austempering System**
 - **Item # C320 Lindberg Pusher Line**
 - **Item # C319 CI Hayes High Temperature Pusher Furnace**
 - **Item # C317 CI Hayes High Temperature Pusher Furnace**
 - **Item # C314 Roller Hearth Furnace (Atmosphere)**
 - **Item # C312 Surface Combustion (Pifco) Roller Hearth Line**
 - **Item # C311 Ipsen Pusher Line P-12**
 - **Item # C308 AFC Mesh Belt Hardening Furnace**
 - **Item # C302 Mesh Belt Austemper Lines (2 available)**
 - **Item # C301 Cast Link Belt Quench and Temper Line**
 - **Item # C299 Sunbeam Rotary Hearth Furnace**
 - **Item # C296 C.I. Hayes High Temperature Tube Furnace**
 - **Item # C283 Denton Thermal Systems 2150°F Rotary Hearth Furnace**
 - **Item # C269 CI Hayes Mesh Belt Brazing/Sintering Furnace**
 - **Item # C265 Sunbeam Pusher Carburizer**
 - **Item # C219 ABBOTT**
-

Abbott Mesh Belt Brazing Furnace.

Model #4ZSCR-12-144HH4-2150, S/N AB574-16997-PHC-0305. Built by Abbott Furnace in 2007 this furnace has seen very limited use in an aerospace company. Electrically heated, 145 KW/3phase/60 HZ/480 Volts, maximum operating temperature of 2250F. Set up for hydrogen, nitrogen and Argon. 4 zones of control. Cooling Chamber: 17'ft long, Width of work zone: 12" wide, Silicon Carbide Muffles (the best). Dimensions: 14" wide x 7.5" high. Belt Speed: 2" per minute to 10" per min Allen Bradley Controls, Dew Point Meters, Programmable hydrogen meters. Flow Meters are top of the line Waukee Flo-Meters. Total Furnace dimensions: approximately 35'ft Long (includes loading and unloading) x 4.5'ft wide x 8'ft tall. Furnace includes new belt and many spare parts. Originally used with hydrogen between 1850F and 1950F. This furnace has all the bells and whistles and has been professionally uninstalled, electrical wires match marked and rigged out. Buyer is only responsible for shipping. **ASKING ONLY \$50,000 USD!**



ITEM # C327 AGF ROTARY RETORT LINE

AGF Rotary Retort Line. AGF model 280 rotary retort line. Includes lift bucket, dump and feed loader, high heat rotary retort furnace, rotary washer and temper. Set up for Neutral hardening and Carbo Nitriding with natural gas and endo atmosphere. The retort is 16" OD X 14 1/2" ID and 17' long. Total weight 2600 pounds, HW material. Spare retort included. Buyer is responsible for disconnecting and loading however there are large overheads cranes in the area making removal quite simple. Asking price for everything including the spare retort is \$95,000 USD.

Asking Price: \$95,000 USD.



Item #C326 SOLO Swiss Mesh Belt Furnace

SOLO Swiss Mesh Belt Furnace. Built in 1995 this furnace has a max temperature of 1150 C with a main voltage of 3 x 400V - 50 Hz. The power input is 40 kw and has a heating zone power of 3 x 13 kw. The heated length is 4000 mm and the cooled length is 6000 mm with a channel section of 220 x 60/100 mm. The belt width is 200 mm and the working height with the belt is 40 mm. The conveyor belt speed is 90 cm per minute. This furnace was used to anneal stainless steel parts and various other materials (Brazing, Tempering, Hardening). Located in France. **Price on request.**



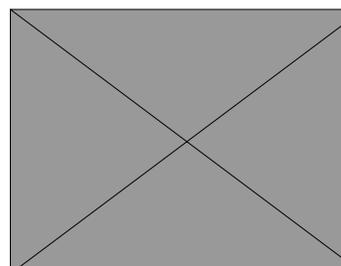
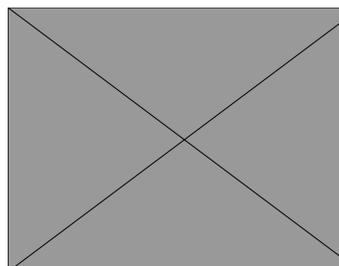
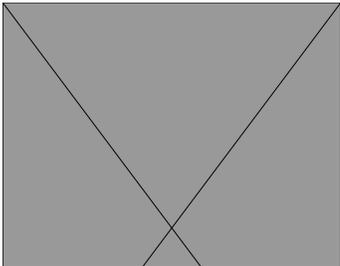
Item #C325 Sinterite Mesh Belt Conveyor Furnace

Sinterite Mesh Belt Conveyor Furnace. 120" long preheat, 2 zones, silicon carbide heating elements with metallic muffle. 180" long high heat with 3 zones of control, silicon carbide heating elements and ceramic muffle. 180 KW, 480/3/60. Belt width 12" with 4" clearance over belt. Overall dimensions 60"W X 75"H X 54'-0"L. Cooling length 282". Preheat is rated for 1100 degrees C and high heat is rated for 1180C. New in 2000 it has seen very limited production and is in excellent condition. Has pre-heat bubbler. New pre-heat muffle, new belt, and several new glo-bars. **Asking \$80,000.00 USD or best offer.**



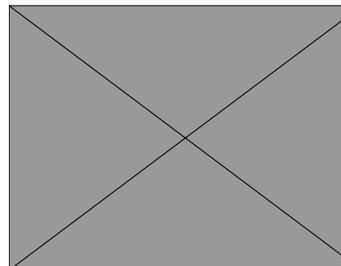
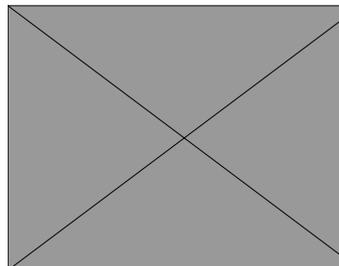
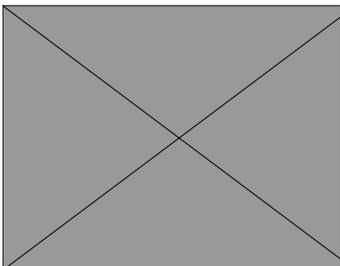
Item # C324 C.I. Hayes Mesh Belt Furnace

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. **Asking price \$50,000 USD.**



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.

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. 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 # C320 Lindberg Pusher Line.

Line consists of a 170F prewash, purge, 1500F pre-heat, 1550F high heat, 350F oil quench, air cool, 170F hot water wash, cold air quench, 375F three zone temper and 460F draw temper. Built and installed in 1976, electrically heated. Designed for martensitic heat treating of 52100 bearing steel. 10 trays in system each 46" X 28". Working height of 24". Each tray is capable of 700 pounds. Controls have been updated recently with a new SSI MCA6010 three gas analyzer. Currently installed and in production. Very well maintained and in excellent condition. **Very attractive asking price.**



Item # C319 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 KW@440/3/60, 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.

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).

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 # C312 Surface Combustion (Pifco) Roller Hearth Line.

60" x 60" Trays capable of 4000 lbs per tray. This line is gas fired and includes an SSi datalogging system. Also includes SBS Heat Exchangers and has waukeetronic flow meters. Asking Price: \$450,000 USD. **Must be removed within the next few months All Offers Considered.**



Item # C311 Ipsen Pusher Line P-12.

Rebuilt by JL Becker Company. This is a complete line which includes; a Pre-wash, Hardening Furnace, Oil Quench, Post Wash, and Temper. It's setup for endothermic atmosphere and is currently installed and operating. Hardening furnace is capable of 1750 F and has 5 zones of control. Gross load 1000 pounds. 460 Volts/3 Phase/60Hertz. 3,000,000 BTU/hr heat input, gas fired, tray size 30" x 30" x 29" overall with loading. Good overall condition. **Asking Price \$250, 000 USD. Must be removed within the next few months All Offers Considered.**



Item # C308 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 # C302 Mesh Belt Austemper Lines (2 available).

Built by AFC-Holcroft these are mesh belt, gas fired austemper lines. Parts to be processed are metered on to the variable speed, 30" wide mesh belt, travel through an 8" long high heat zone, drop into an electrically heated salt quench tank then are carried on a conveyor out of the quench tank and into a washer. A circulating fan distributes heat and atmosphere evenly though the heating area. Heat is supplied by two U shaped radiant tubes that are recuperated. SSI controls monitor and control the atmosphere gases. Furnaces were in operation until March 2015. One furnace is 1989 vintage the other is a 2000 vintage. Both are complete, in very good condition and currently in storage. **Please contact us for pricing.**



Item # C301 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 # C299 Sunbeam Rotary Hearth Furnace.

Working diameter of 6', 8 station hearth, each station is 12" wide x 18" deep x 12 " high. The door opening is 1'-6" wide X 10" high. Gas fired, 620,000 BTU's, 3 radiant tubes and an operating temperature of 1750F. Built in 1977 and used for neutral hardening. Also included is a robotic arm for loading/unloading. The furnace is installed and in running condition, brand new radiant tubes and a rebuilt fan. All manuals and drawings are included. Good overall condition. **Asking \$40,000 USD.**



Item # C296 C.I. Hayes High Temperature Tube Furnace.

Model MY-0002.528, 2-1/2" ID Tube x 28" Long Heating Chamber. Operating temperature of 1700°C, 10.5 KW, Single Zone Control with overtemp protection. Overall dimensions of 75" H x 32" W x 91"L. Hydrogen Atmosphere. Included is an automatic loader. **Asking Price \$21,000.00 OBO**



Item # C283 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, Global 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 Overtemp (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: **\$29,000.00 USD.**



Item # C269 CI Hayes Mesh Belt Brazing/Sintering 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.

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**



Item #C219 ABBOTT MODEL 6ZSCR-18-432HH6-VC-2150.

18" wide belt, 3"+ opening over the belt, 432" heating chamber (silicon carbide muffles), six zones, 36" long vari-cool with 162" of additional cooling including two curtain boxes. 2150 deg.F. max temp., piped for dissociated ammonia atmosphere and nitrogen purge, 335 kw @ 480/3/60, Honeywell UMO 800 controller/programmer, OAD: 84" w x 90" h x 720" l. Currently used for annealing knife blades but with a little effort a metallic muffle in the front half of the heating chamber could be added for debinding and sintering of PM parts. **Asking price: \$77,000 USD OBO.**



DRAW/TEMPER

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, fill out our [Contact Form](#).

- 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 #T337 Box Draw Furnace
- Item #T336 Mesh Belt Temper
- Item #T335 Batch
- Item # T333 Composite Curing Oven / Heat Treat Oven
- Item # T330 AGF Rotary Temper Furnace
- Item # T329 Guspro Heat Cleaning Oven
- Item # T327 AOV Aluminum Drop Bottom Oven System
- Item # T325 3-Station Despatch Temper Furnace
- Item # T324 Ipsen Temper Furnace
- Item # T323 Box Temper
- Item # T321 Grieve Conveyor Oven
- Item # T320 Pifco Conveyor Oven
- Item # T319 Temper 48" W X 48" D X 36" H
- Item # T318 Large Box Tempering Ovens (4 available)
- Item # T316 Grieve Model# HX-1000 Electric Oven
- Item # T315 Electric Oven
- Item # T312 Recirculating Walk-In Oven
- Item # T303 Pifco Temper Furnace
- Item # T301 Lucifer Furnace
- Item # T290 Tempering Ovens 36" X 48" X 36" (2 available)
- Item # T286 Lindberg Box Temper

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.**



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 \$55,000 USD.**



Item #T337 Box Draw Furnace 24"H X 24"W X 36" D

Box Draw Furnace 24"H X 24"W X 36" D. Recirculating box type draw furnace manufactured by Lindberg. Electrically heated 460/3/60, 42 KW. Operating temperature 1250F. Model 243624-E12, S/N 18794. Temperature Controls: Upgraded control panel with new temperature controls. Standard "Cyclone" design. Coiled Nichrome heating elements are housed in a separate chamber. A high velocity paddle wheel fan delivers the heat to the work chamber and provides good uniformity. Air cylinder operated vertical rising door. Brick lined. Roller hearth. Furnace will be cleaned and painted, checked out and test fired prior to shipment. Guaranteed operational. Note: Furnace can be reconnected to operate on 230/3/60. Very good condition. **Asking \$18,500.00 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 #T333 Composite Curing Oven / Heat Treat Oven.

Manufactured by Epcon this unit has working dimensions of 30'L x 12"W x 12'H and overall dimensions of 31'3"L x 17'4.5"W x 22'4.5"H. Electrically heated with an Inconel 900 KW heater and an operating temperature of 800F. Two recirculating fans type; Two N.Y.B. Size 40 Plug Fans, capacity: 33,000 CFM Each. Motor HP: 30 HP-Each (480V/60HZ/3PH). Exhaust fan; type N.Y.B. Series 20 GI, Size 224DH, capacity 4,000 CFM, 5 HP motor. Interior is 18 Ga. Aluminized Steel and exterior is 18 Ga. Carbon Steel. Insulation: 8# Density Mineral Wool, 7" thickness. Control Panel: NEMA-12. Power Supply: 480V/60HZ/3PH. Double swing doors. Excellent condition, virtually unused. New this was \$811,000 USD. **Asking \$130,000 USD.**



Item #T330 AGF Rotary Temper Furnace.

Model RCTP5-5D-3618 manufactured by American Gas Furnace Company. Retort diameter 36", 16' long. Gas fired capable of 1200F. Eclipse burners. Overall length 23.5', width 64.5", height 10' 11". Very good overall condition. **Asking Price: \$10,000.00 USD.**



Item #T329 Guspro Heat Cleaning Oven.

Model G0484039ED51P354N, S/N C366. Working dimensions of 54" wide X 48" deep X 45" high. Process chamber has an operating temperature of 1,000F. Oxidizer chamber has an operating temperature of 1200-1600F. Complete and installed but not in use. Reasonable condition. **\$2,000 or best offer.**



Item #T327 AOV Aluminum Drop Bottom Oven System.

Model: DBF-3X3-E. Electric Heat, 480V/3Ph/60Hz Work Zone: 3ft Dia. x 3ft H. Includes Quench tank. Temperature Rating: 1200°F. Controls are included but need to be replaced. **Asking Price: \$ 45,000 USD. Offers Considered**



Item # T325 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 # T324 Ipsen Temper Furnace.

Standard Ipsen design tempering furnace with vertical lift door, full width roller hearth and ceramic fiber board insulation. Door jambs are brick. Bottom mounted recirculating fan distributes the heated air. Gas train and combustion system is mounted to the right hand side of furnace. Manual load/unload table is included. Mounted and wired in a free standing enclosure attached to the furnace includes Honeywell UDC digital controllers and process timer etc. Heated: Natural Gas - 250,000 BTU's. Model Number:DLR-11-G. Serial Number:57904. Max. Temperature:1200°F. Voltage:230/3/60/20 Amps. Work Area:36"W x 24"H x 48"L. External Dimensions:6'W x 10'H x 8'L. **Asking Price: \$19,500 USD.**



Item # T323 Box Temper.

Manufactured by Despatch Industries this is a Model WB73, S/N 119895. Working dimensions of 42" wide X 72" long X 42" high, Overall dimensions are 97" wide X 103" long X 148" deep. Weight 11,500 pounds. Electrically heated 480V/120KW/3 Phase, maximum operating temperature 1350F. Digital temperature control and high limit control with a circular chart recorder. Air operated vertical lift door. Heated air is circulated by 2 roof mounted belt driven fans. Power to the elements is through SCR control. Air safety switches monitoring both fans will terminate power to the elements in the event of fan failure. There are provisions for two shelves, but no shelves are included. Tested and complete. **Asking Price: \$29,500 USD.**



Item # T321 Grieve Conveyor Oven.

Electrically heated 460/3/60/160kW/235 Amps. Maximum operating temperature of 650F. Working dimensions of 24" wide X 14" high X 42' long. Controls; A Barber Colman 560 digital programmable temperature controller and a Barber Colman high limit safety. All control switches with indicating lights are flush mounted in the enclosure. SCR power controllers, high limit contactors, motor starters, fuses, relays etc. are mounted and wired inside the enclosure. Main power disconnect circuit breaker with panel mounted operator handle. Standard conveyor oven design with a flat wire conveyor belt. Three foot long charge table followed by a 42 foot long heating section divided into 2 zones of control. Each zone has separate heating elements and circulating fan located above the work chamber. Heated air is circulated down over the top of the belt for good uniform heating. Exhaust vents located on the top of each chamber. Access doors on the side for entrance into each zone. 4' long discharge table is included with this oven. Very good condition. **Asking Price: \$42, 000 USD.**



Item # T320 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 # T319 Temper 48" W X 48" D X 36" H. Manufactured by Williams in 1999.

Gas fired, burner box, operating temperature of 1500F. Fan included but needs to be installed. Some misc., components missing and minor repair required. **Asking Price: \$29,000 USD.**



Item # T318 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 # T316 Grieve Model# HX-1000 Electric Oven. Max.

Temp: 1000°F, +/- 10°F Uniformity. Circulated Air: 1000 CFM, 3/4 H.P. Fan Motor. Insulation Thickness: 8". Single door. Rated Work Zone: 38"W x 20"D x 26"H (Measures 36"W x 19"D x 25"H). Power Rating: 20 kW. New Upgraded Controls: Temperature - SSI Series 7 7EK (Super Systems, Inc.) Hi-Limit - SSI 7SL. Outside Dimensions: 62"W x 40"D x 61-1/2"H (new dim.). Approx. Shipping Wt.: 2740 lb. **Asking price: \$8,900 USD.**



Item # T315 Grieve Model# HX-1250-E, Electric Oven, Max. Temp:

1250°F, +/- 10°F Uniformity. Circulated Air: 1400 CFM, 1 H.P. Fan Motor. Insulation Thickness: 10". Single door. Rated Work Zone: 38"W x 20"D x 26"H (Measures 36"W x 19"D x 25"H). Power Rating: 30 kW. New Upgraded Controls: Temperature - SSI Series 7 7EK (Super Systems, Inc.) Hi-Limit - SSI 7SL. Outside Dimensions: 66"W x 44"D x 65-1/2"H (new dim.). Approx. Shipping Wt.: 3300 lb. **Asking Price: \$ 10,900 USD.**



Item # T312 Recirculating Walk-In Oven.

Manufacturer: Despatch. Inside Dimensions: 66"high x 54"wide x 68"deep. Heated: Gas fired. DG-300 Heater. Temperature: 650 deg.F. Model Number: V-41. Serial Number: 96267. Temperature Controls: Partlow indicating controller and overtemp. Description & Features: Double swing open doors, horizontal air flow, insulated floor with tracks for a cart, powered exhaust blower, top mounted combustion and fan chamber. Atmospheric type burner system. Complete combustion controls and safeties. Oven will be cleaned and painted, checked out and test fired prior to shipment.

Asking Price: \$13,500.00 USD.



Item # T303 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 # T301 Lucifer Furnace,

Model Number 46GT-R36, Serial Number 6418, Working Dimensions of 24" w x 36" d x 24" h. Insulation and elements are in good shape. Front lift door with a foot actuator. Controls: Honeywell round chart recorder, Honeywell overtemp, No controller. Power: 460/3/60 28 Kw 35 Amps, Temperature: Max 1650° F. Nitrogen Atmosphere. **Asking Price: \$12,500.00 USD as is, where is.**



Item #T290 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. 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

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, fill out our [Contact Form](#).

- Item # G198 3,000 CFH Endothermic Generator
- Item # G197 Ammonia Dissociator
- Item # G196 Surface Combustion 5000 CFH Endo Generator
- Item # G194 Endothermic Generator 9,000 CFH
- Item # G193 Pacific Scientific Endothermic Gas Generator
- Item # G189 Surface Combustion 2400 CFH Endo Generator
- Item # G178 Ammonia Dissociators (4 available)
- Item # G176 Surface "Multi-Bottle" Endo Generators
- Item # G173 Lindberg Endo Generator
- Item # G169 Gasbarre/Sinterite Furnace Division Endo Generator

Item # G198 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.

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.

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 # G194 Endothermic Generator 9,000 CFH.

Manufactured by the JL Becker company this is a 3 retort, 9,000 CFH endothermic generator. Designed so that each retort can be shut down independent of the others. Air cooling. Control via PLC with touch screen interface. Currently installed but not in operation. Complete, in good shape and ready to operate. **Asking \$75,000 USD.**



Item # G193 Pacific Scientific Endothermic Gas Generator.

Natural gas, Model # PGF 3000-EN, Serial #416417, Max Temp 1950°F, Voltage 460/3/60, Work Area 3000 CFH, Dimensions: 42"W x 86"H x 106"L - Approx. Standard "Pacific Scientific" design Endothermic Gas Generator with water cooled shell & tube heat exchanger, Waukee vane pump, Waukee flow meters, atmospheric type ring burner. Generator just removed from service on 4/2015. Controls: Mounted and wired in an enclosure attached to the generator includes a Honeywell programmable logic controller (PLC) which controls all functions of the generator. The PLC also monitors/controls temperature, dewpoint and flow. There is a Honeywell digital high limit mounted in the same enclosure. This generator has a "Waukee" rotary vane pump and "Waukee" ratio tronic digital flow controls. This generator is also equipped with a "Nova" dewpoint system. Available immediately and in very good condition FOB East Chicago, IN. **Please call for pricing.**



Item # G189 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).

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.

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 “EndoInjector”. Very good condition, ready to go. **Asking \$75,000 USD.**



Item #G173 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.

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 Selas 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

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, fill out our [Contact Form](#).

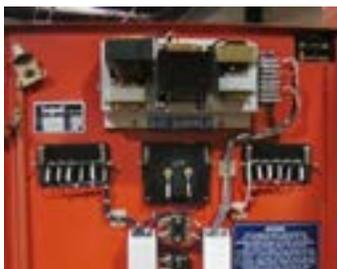
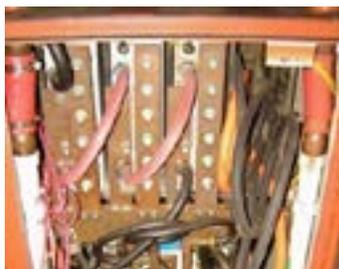
- **Item # I170 Inductoheat Induction Power Supply**
- **Item # I164 Ajax Tocco Induction Power Supply**
- **Item # I160 Ajax Tocco Power Supply (unused)**
- **Item # I158 Induction Power Supply**
- **Item # I153 Raydyne Induction System**

ITEM # I170 INDUCTOHEAT INDUCTION POWER SUPPLY

Inductoheat Induction Power Supply. This is a Lepel/ Inductoheat SP5-40 kW, 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 ratio's 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.

It appears in excellent condition and is available for \$9,500 or "Best Offer". There is no warranty but it is sold with the assurance it is in good working order. Power testing, Start up and Training service is available at extra cost by an experienced induction heating service engineer. We can also offer repairs and servicing for Lepel/Inductoheat Power Supplies. A number of other Lepel/Inductoheat SP-11 units are available in the range of 30 to 60 kW, 200 kHz.

Asking \$9,500.00 USD Or Best Offer



Item # I164 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 (unused).

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. http://www.ajaxtocco.com/applications/documentlibrary/Inductron%20PT_092003.pdf New this unit was \$86,000 USD, **asking \$39,000.00 USD.**



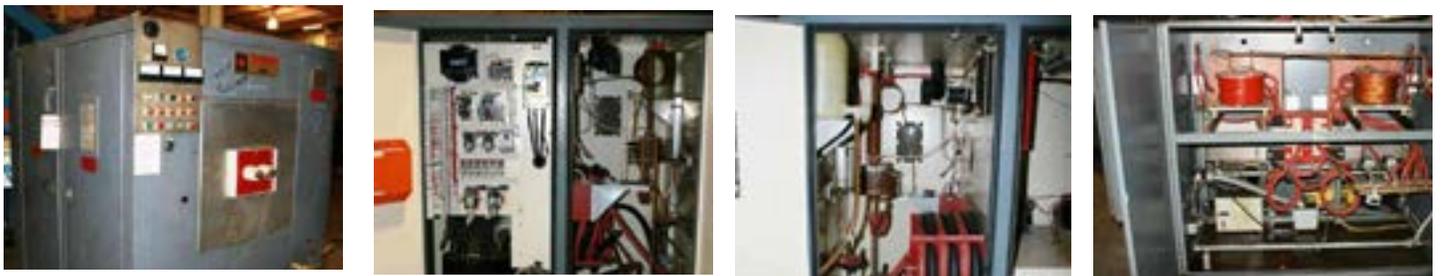
Item #1158 Induction Power Supply.

Manufacturer Inductoheat/Elphiac. Model Number: DC18T+HF08. S/N 2177DC. 335 kW, 200 kHz, 750V Output. Input Voltage: 460/3/60/448 KVA/562 Amps. Output Voltage: 335 kW/750V/200 kHz. Very good condition. **Asking \$39,500.00 USD.**



Item #1153 Raydyne Induction Heating System. I

Input Voltage: 480V/3 Phase/60 Cycles/110 Amps, Output Voltage: 40 kW, 450 kHz, Year Built: 1985, Model of Power Supply: EI-40, Serial Number of Power Supply: 41408901-B. Please note the RF Tube is missing. Includes a dual heat station with quench. Model of Heating/Quench Station: 10228201, Serial Number of Heating/Quench Station: 10228201B. This system is Government Surplus and appears to be fairly clean inside power supply cabinet. The power supply has a "Control Concepts" SCR power controller. **Asking \$7,500.00 USD.**



LAB EQUIPMENT

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, fill out our [Contact Form](#).

- Item # L8 Clark Micro Hardness Tester
- Item # L7 Leco Micro Hardness Tester
- Item # L3 Laser Diffraction Particle Size Analyzer
- Item # L1 Spectra-Tech 0044-003 Infrared Microscope

Item #L8 Clark Micro Hardness Tester.

Model DMH-2, Serial number 3388. Good operating condition. Asking \$6,500.00 USD.



Item #L7 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.

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,

Model WHK 10X 201, Reflected & Transmitted light, multiple objectives, Polaroid 4x5 attachment. **\$6,500.00 USD.**



MISCELLANEOUS

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, fill out our [Contact Form](#).

- **Item #M405 Used Transformers For Sale**
 - **Item # M403 Houghton Aqua Quench 3699 Polymer (4)**
 - **Item # M402 Closed Loop Water Cooling System**
 - **Item # M401 Tenaxol Quench Oil Accelerator**
 - **Item # M400 Nitrogen Generating System**
 - **Item # M399 Eclipse Burners, Recuperators and Spark Igniters**
 - **Item # M396 Surplus Cast Link Belt**
 - **Item # M394 Hi Tech Weighing System**
 - **Item # M393 AGF Rotary Washer**
 - **Item # M391 Cryogenic Stainless Twin Tank**
 - **Item # M385 Giant Finishing Machine**
 - **Item # M381 Water Cooling System**
 - **Item # M380 Wheelabrator**
 - **Item # M379 Georg Fischer Shot Blast System**
 - **Item # M378 1 Surface Combustion Radiant Tube and 4 supports**
 - **Item # M370 SBS Quench Aircs (2 available)**
 - **Item # M366 Wheelabrator Rubber Belt Tum-blast**
 - **Item # M365 Dual Lane Conveyor Washer**
 - **Item # M363 SBS Unit**
 - **Item # M348 Ipsen Automatic Dunk/Spray Washer**
 - **Item # M346 SBS "QuenchAir"**
 - **Item # M341 AFC Charge Car**
 - **Item # M334 Berg Water Chiller**
 - **Item # M314 Holcroft Dunk/Spray Washer**
-

ITEM #M405 USED TRANSFORMERS FOR SALE

Allis Chalmers Substation Transformer (1). Remanufactured by Jordan Transformer LLC, August 2009, Job No. 4569. 69,000 Volts. Vendor has PCB test analysis, < 1 ppm. 6.49% KVA @ 12,000 KVA

- Limited usage last 4 years
- Serial # 26311018921
- All windings are copper & circular design
- 3 Phase 60 hertz substation transformer
- 12/16/20 MVA OA/FA/FA @ 55 Deg. C
- Original Manufacturer Allis Chalmers 4/1961

Best Offer



Item #M403 Houghton Aqua Quench 3699 Polymer (4).

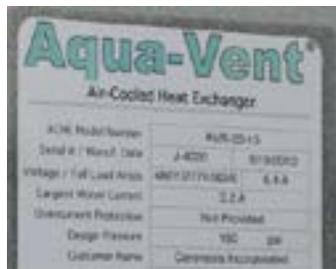
Available for sale are four (4) Totes of Houghton Aqua Quench 3699 Polymer Quenchant. Material has never been used. Total amount available is 1,000 Gallons.

Asking Price is \$2,500.00.

Item #M402 Closed Loop Water Cooling System.

Manufactured by Dry Coolers in 2010. Model #CDX-150-120-ST. 480V/227V/30/60Hz. Closed loop system with air cooled heat exchanger, model AVR-35-15. S/NJ-4720. 15GPM. Controls: Mounted and wired in an enclosure attached to the pumping system includes digital temperature control, disconnect switch etc. Excellent condition.

Asking \$7,950.00 USD.



Item #M401 Tenaxol Quench Oil Accelerator.

Available are 6 new, unopened 55 gallon drums of Tenaxol Quench Oil Accelerator for use with Park AAA quench oil. New this was \$900.00 USD/drum, asking \$450.00 USD/drum.



Item #M400 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 #M399 Eclipse Burners, Recuperators and Spark Igniters.

All of these items are in "like new" condition and still in the original boxes. Vendor will sell as a complete package or as individual items.

Recuperators; Eclipse Bayonet Ultra Recuperator, Assembly 101849-24 (5BU, 24" tube length, low pressure drop model). S/N 07-27834580-8 45 units in inventory. Asking \$1840 USD each.

TFB Burners; Eclipse Therm thief V2.3, Model TFB23.030NP04NA9NXXR. Model: 030 - Burner Model 030, Fuel Type: N - Natural Gas (CH4), Air Supply: P – Preheated Air, Burner Input: 04 - 201k-300k Btu/h (59-88 kW), Gas Piping Connection: N - NPT Gas Inlet Connections. Gas Orifice: A9 - 9.1mm. Air Pipe Connection: N - NPT Air Inlet. Air Orifice: XX - No orifice (for preheated air). Tube Length: R - 20 in. (507 mm). Cone Setting: C - 9.5mm. Flame Supervision: X - No Flame Safety. Gas Piping Orientation: 0 - Gas Inlet at 0 Degrees with Air Inlet at 0 Degrees. S/N 10S0101049-0001-6. Manufactured June/2012. 40 units in inventory. \$695 USD each.

Spark Plug Igniters. Model # 100640-11. 40 units in cardboard tubes with bubble wrap. **\$100 USD each.**



Item #M396 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.**



Item #M394 Hi Tech Weighing System.

Excellent condition Hi Tech vibratory loading system suitable for a continuous furnace. Model PC 325-2 TEEDC, 460 VAC 60Hz, S/N 0546, built 03/09/02. **Asking \$10,000 USD.**



Item #M393 AGF Rotary Washer.

Model RCW-W-R 23-2.5-4-4 gas fired rotary washer manufactured by American Gas Furnace Company. 23" diameter retort with 48" of washing and 48" of rinsing. Operating temperature of 150F-180F. Overall size is 13' long X 7.5' wide X 7' 10". Very good condition. **Asking \$10,000 USD.**



Item #M391 Cryogenic Stainless Twin Tank.

Manufactured by NDA Engineering in 2006. Operating temperature to -346F. 240 Volt. from Internal dimensions left hand side 70cm x 65cm x 80 cm deep (364 litres), right hand side 70cm x 100cm x 80cm deep (560 litres) **Asking Price \$6,500 USD.** Located in New Zealand.



Item #M385 Giant Finishing Machine.

Manufactured by "Giant", Model GB-10 Spiral bowl with Internal Separation Vibratory Deburring and Finishing Machine. 10 cubic foot process capacity with 5 hp motor. Maximum load capacity 2,000 pounds. Bowl diameter 65", unload height 39". NEMA 12 control panel including 0-6 hour process timer and lapsed time recorder. Control panel is JIC approved and U.L. listed. Standard voltage; 460/3/60 cycle. This is a brand new, unused tumbler. New this was \$45,000 USD, **asking \$30,000 USD.**



Item #M381 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.

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 #M379 Georg Fischer Shot Blast System.

This unit is currently installed and in very good condition. Included are \$10,000 worth of spare parts. **Asking \$20,000 USD.**



Item #M378 1 Surface Combustion Radiant Tube and 4 supports.

Brand New the cost was \$1,844 for the tube and \$448 each for the supports for a total of \$3,636 in 2014. The radiant tube is Surface Combustion inventory # 850628 and the support is part # 70R64/L. They are a set for a Standard Allcase furnace. One leg of the tube is 3/12 inches in diameter and 62 inches long. The other is 4 1/2 inches in diameter and 60 inches long.

Asking \$3,000 USD.



Item # M370 SBS Quench Airs (2 available).

Manufactured by SBS Corp., these are air/oil quench oil coolers. Each is a 3 fan unit with disconnect and 480 volt. Suitable for a large continuous line. Installed indoors. Very good condition. **Asking \$12,500 USD each. Must be removed within the next few months All Offers Considered.**



Item # M366 Wheelabrator Rubber Belt Tumbler.

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 # M365 Manufacturer: Grapar. Type:

Dual Lane Conveyor Washer. Heated: Natural Gas. Dual Lane Washer Serial Number: 08-010 (2008). Max Temperature: N/A. Voltage: 480/3/60. Work Area: 11"W x 7"H. Each Lane External Dimensions: 8'W x 10'6H x 30'L - approx. Controls: Mounted and wired in an enclosure attached to the washer. Includes an Allen Bradley MicroLogix 1200 PLC and an Allen Bradley "Powerflex 4" VFD to control conveyor belt speed. Description: This washer has three (3) stages, wash/rinse/blow-off. This washer is gas fired using Eclipse burner and gas train with a Honeywell UDC digital temperature control. Spray nozzles are located on top, both sides and bottom. Condition: Very Good. **Asking: \$39,500.00 USD.**



Item # M363 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.

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 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.

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.

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.

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.**



SALT

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, fill out our [Contact Form](#).

- **Item # S001 Mesh Belt Austemper Lines (2 available)**

Item # S001 Mesh Belt Austemper Lines (2 available).

Mesh Belt Austemper Lines (2 available). Built by AFC-Holcroft these are mesh belt, gas fired austemper lines. Parts to be processed are metered on to the variable speed, 30" wide mesh belt, travel through an 8" long high heat zone, drop into an electrically heated salt quench tank then are carried on a conveyor out of the quench tank and into a washer. A circulating fan distributes heat and atmosphere evenly through the heating area. Heat is supplied by two U shaped radiant tubes that are recuperated. SSI controls monitor and control the atmosphere gases. Furnaces were in operation until March 2015. One furnace is 1989 vintage the other is a 2000 vintage. Both are complete, in very good condition and currently in storage.

**Asking price for the 2000 furnace is \$95,000 USD,
the 1989 furnace asking price is \$75,000 USD.**



VACUUM

See something you need, click on the link or scroll through all the items for sale. Searching for something we don't have listed, fill out our [Contact Form](#).

- Item # VF323 150 Ton Vacuum Hot Press (2 Available)
- Item # VF322 Vacuum Sintering Furnace, 2,000 C
- 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
- Item # VF315 AVS Vacuum Furnace (Rebuilt)
- Item # VF314 Ipsen Bottom Load Vacuum Furnace
- Item # VF313 Top Loading Vacuum Furnaces (6 available)
- Item # VF312 2400C Vacuum Furnace
- Item # VF311 Vacuum Furnace 6 Bar Quenching
- Item # VF309 Abar Ipsen Vacuum Furnace
- Item # VF307 Bottom Loading Vacuum Furnace
- Item # VF306 Edwards Stokes 1722-J Skid
- Item # VF305 Vacuum Hot Press
- Item # VF303 Surface Combustion Vacuum Temper
- Item # VF301 Vac Aero 2 Bar Vacuum Furnace
- Item # VF300 Stokes Microvac Pump
- Item # VF299 Sunbeam Vacuum Furnace
- Item # VF297 Remanufactured Stokes 412H-11 Piston vacuum pump
- Item # VF296 Remanufactured Stokes 212J Piston vacuum pump
- Item # VF295 Varian/Agilent HS-20, Diffusion Vacuum Pump
- Item # VF294 Vacuum Annealing Furnace
- Item # VF289 Ipsen Vacuum Temper Furnace
- Item # VF285 20" Right Angle Poppet Valves (4 available)
- Item # VF282 AVS Vacuum Debinding/Sintering Furnace
- Item # VF281 Surface Combustion Vacuum Furnace
- Item # VF271 SINTERING/DE-WAX FURNACE
- Item # VF267 Semi-Continuous Titanium Diffusion Bonding Hot Press
- Item # VF266 Kinney 75 CFM Vacuum Pump
- Item # VF265 Stokes 149H-11 80 CFM Vacuum Pump
- Item # VF255 Roots Gas Blower
- Item # VF254 MD Blower, 350 CFM
- Item # VF243 35" Diffusion Pump
- Item # VF242 35" Diffusion Pump

ITEM # VF323

150 TON VACUUM HOT PRESS (2 AVAILABLE)

Maximum Temperature: • 2000o C / 3632o F (Optional 2200o C / 3992o F operation available)

Power Requirements: • 480 volts, 60 hertz, 3 phase (Optional 380 volt, 50 hertz operation available)□

Hot Zone Dimensions: • 16" high x 19" wide x 20" deep element-to-element (41cm x 48cm x 51cm)

External Dimensions: • 99" high x 82" wide x 74" deep (251cm x 208cm x 188cm)

Atmosphere: • High vacuum, rough vacuum, partial pressure, and atmosphere operation

Features: • Standard one-year warranty. • This is a compact, packaged, and assembled unit. • Graphite hot zone and four-sided graphite heating elements for optimum uniformity. • Upper ram is moveable with 6" stroke. Bottom ram is fixed. • 16.3" daylight between rams (41.4cm) • Fully automatic operation with PLC programmer/controller with alphanumeric display to indicate hot press processing cycles. • Programmable closed-loop temperature/pressure control. This system will consist of a Yokogawa UP750 two-loop programmable temperature/pressure controller with 300 programs and 3,000 segments. The UP750 will control the temperature and the pressure on the hydraulic ram on the same timeline. • Mechanical vacuum pump.

Asking \$450,000 USD Each



ITEM # VF322 VACUUM SINTERING FURNACE, 2,000 C

Vacuum Sintering Furnace, 2,000 C. Horizontal Vacuum Sintering Furnace System for processing graphite and ceramics. Manufactured by AVS, Model HGF-22-21-62-2000. Work zone is 22" wide x 21" high x 62" deep. 12 cubic feet, maximum load of 350 kgs. Temperature: 2000 °C maximum operating temperature. Temperatures above 1700 °C require partial pressure or positive pressure. Maximum heat rate is 10 °C/min ramp rate for room temperature to 1600 °C, ± 10 °C uniformity @ up to 1600 °C in vacuum. Rotary piston roughing pump. Evacuates chamber to 20 micron in 10-15 minutes, empty (5 X 10⁻³ Torr Ultimate vacuum) 5 μ /hr. leak rate. Process Gasses – Argon, Nitrogen, 1% Methane in Nitrogen. Controls Fully automatic operation with ACE™ control/ Data Acquisition System.

Chamber; HORIZONTAL JACKETED CHAMBER – nominal 56" diameter x 82" long flanged, on legs. All stainless-steel chamber, interior jacket and flange water-cooled. Two door containing hinges and manual door clamps. The chamber includes a 4" flanged bottom port designed for future applications and flexibility. Two site ports are included and set up with gas purged pyrometer sight port assemblies. Two load carts with battery operated hydraulic lift and roller top are provided with the furnace for use with the two hearths that are provided for the hot zone.

Hot Zone; HORIZONTAL GRAPHITE FURNACE – Furnace is heated by graphite elements (no CFC) and insulated by rigidized graphite felt faced with graphoil. Includes heart rails with rollers for easy loading.

Gas Cooling; GAS RECIRCULATION COOLING SYSTEM – 10 HP Cooling fan and heat exchanger mounted in rear door of the chamber. Includes automatically operated front and rear door shutter fans for gas circulation. System is 9 years old, installed and in excellent condition. Almost \$600,000 USD.

Asking \$180,000 USD.



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 2010 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. **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. **Asking \$115,000 USD.**



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 Intregra 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. Very good condition. Rebuilt July 2015. Asking \$200,000 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 # VF311 Vacuum Furnace 6 Bar Quenching (Located in Turkey)

Vacuum Furnace 6 Bar Quenching (Located in Turkey). Working dimensions of 600 X 900 X 600 mm. 800 KG load capacity. Maximum operating temperature of 1350C. 6 bar quenching, nitrogen. 140kW heating capacity. Temperature uniformity of +/-5C above 850C with convection. Hard graphite felt insulation hot zone. Ultimate vacuum level of 8 X 10⁻² mbar with rotary vane pump and roots pump. 380-220V-50HZ-3 phase. Excellent condition. **Asking 155.000 Euro.**



Item # VF307 Bottom Loading Vacuum Furnace.

Manufactured by Vac Aero. 4860 High Vacuum (diff pump) bottom loader Main Chamber replaced new in 2000. 50 HP Spencer Turbine gas quench blower with a .85 Bar pressure quench. Closed loop water system w/o air coil. Yokogawa paperless chart recorder. Honeywell DCP550 Set point programmer. Edwards vacuum gauge controller. Furnace is installed and presently in operation. Customer responsible for removal. Complete and in good overall condition.



Item # VF306 Edwards Stokes 1722-J Skid.

Warranty rebuilt Stokes 1722-J Skid. Stokes Model 900-412-014 Mechanical Pump (Newer Style), S/N: 069034482. Date: 2006-11. Motor: 10 H.P. Stokes 615-1 Blower. S/N: 813770X0898 Lot: 78315-38. Motor: 7.5 H.P. Skid Mounted. Interconnecting Pipe and Fittings. Stokes Demister. Immediate Availability. **Asking Price: \$ 23,500** in rebuilt condition with Rebuilder's



Item # VF305 Vacuum Hot Press. Max Temp 1000C/1830F. 6" x 6" x 15" work zone. Metal hot zone model 6615-1000 moly rod elements, moly & stainless steel shields w/ moly retainers. Three (3) sided heating. T/C control, DCP700 Honeywell two (2) channel controller. 15 KVA power supply - 208 volts/1pH/60Hz. 4" diffusion pump / 17.1 cfm mechanical pump. Granville Philips vacuum controller #91-270. Fan cooling 3/4 HP pin splitter mounted on the rear of the chamber. T/C control for overtemperature protection controllers.

Diffusion Bonding Hot Press. Series 3520 Model 6-1315 Diffusion Bonding Hot Press, stainless steel interior cold wall chamber with full opening door, water cooled rams, ram seals, power feedthru ports, thermocouples, shuttered site ports & supported on the press frame. This system is designed to deliver up to 60,000 lbs of force to a compact in the furnace. The hydraulic cylinder is mounted on the upper horizontal section of the press frame. Force from the cylinder is transferred into the vacuum chamber by two (2) water-cooled ram extensions, which pass thru sliding vacuum seals at the top and bottom of the chamber. The bottom ram is stationary. The hydraulic cylinder has a 6" bore, so that full rated force will be applied at a hydraulic pressure of 2125 psi.

Utility Requirements: 15 KVA power supply - 208 volts/1pH/60Hz. Total connected load 120 Amps. Water 8 gpm, 30-40 psi, 60-70F. Compressed air 1 scfh, filtered, lubricated and regulated at 60-80 psig. Inert gas 10 psig regulated. Hot zone almost new. Always operated on closed loop cooling water. Unit was fully operational when removed from service. Includes (2) new feedthroughs and spare parts. **Asking Price: \$49,500 USD.**



Item # VF303 Surface Combustion Vacuum Temper.

Manufactured by Surface Combustion Model HVT 36-48-24, S/N BO 40016-1. 220Volt, 3 phase, 60Hz, 220Kw. Working dimensions of 36" wide X 24" high X 48" deep with a weight capacity of 2,500 pounds. Not in use or installed. Most components are included but this unit should be regarded as a "project". **Asking Price: \$5,000 USD or best offer.**



Item # VF301 Vac Aero 2 Bar Vacuum Furnace.

Model #VAH 4848-HV2. Working dimensions of 48" X 48", rated for 1500 pound loads. Serial #BM 981, built in 1998. Stokes vacuum pump #615-1. Serial number 915240E0498. Updated Allen Bradley controls. No diffusion pump but it does have a port for one. Good condition. Currently installed and in use for approximately 6 more weeks. **Asking Price: \$150,000 USD.**



Item # VF300 Stokes Microvac Pump.

Model #212H-11 150 CFM 5HP motor. Roots Rotary Lobe Booster Pump. ID #839 697 020. Designation #38-RGS. Skid Mounted 1896 lbs. **Asking Price: \$6600 USD or best reasonable offer.**



Item # VF299 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 # VF297 Remanufactured Stokes 412H-11 Piston vacuum pump,

300CFM pumping speed, 4" ASA Inlet / 3" NPT Exhaust connection, 10HP, 230/460V, 50/60 Hz, 3-phase operation, water cooled, prepared for hydrocarbon oil. 12 Month Warranty. Part Number: ED-412H11-R. Pump Model: ED-A900412011. Price New: \$24,927.00. **Asking Price: \$14,950.00.**



Item # VF296 Remanufactured Stokes/Edwards 212J Piston vacuum pump,

150 CFM pumping speed, 3" ASA Inlet / 2" FNPT Exhaust connection, 7.5 HP, 230/460V, 60 Hz, 3-phase operation, water cooled, prepared for hydrocarbon oil. 12 month warranty. CSA marked. Part Number: ED-212J-R. Pump Model: ED-900212014. Price New: \$16,150.00. **Asking Price: \$9,750.00.**



Item # VF295 New Surplus Varian/Agilent HS-20,

Diffusion vacuum pump with ASA flanges, with a Standard Cold Cap, 17,500 l/s pumping speed, rated for 480V, 3-phase operation. 12 Month Warranty CE marked. Part Number: V84341309-R. Pump Model: V84341309. Price New: \$20,950.00.

Asking Price: \$16,500.00



Item # VF294 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.

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 # VF285 20" Right Angle Poppet Valves (4 available). 20" Right Angle Poppet Valves to mate to Varian HS-20 Diffusion Pumps. Removed from service in good operational condition by a company converting to cryo pumps. Offered in As-Is or Standard Rebuilt As-Is Price: \$ 1,800.00 (working, but no warranty, 30 Day Return). **Std. Rebuilt Price: \$ 3,150.00 (1 year warranty).** Valves are awaiting rebuild now. (2-3 weeks required ARO). Photo shows another representative RAV prior to rebuild.



Item # VF282 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: \$209,000 USD.**



Item # VF281 Surface Combustion Vacuum Furnace.

Model: IHVP-364830-2, S/N: VC-42202-1. Work Zone Size: 42”W x 60”L x 30”H. Hot Zone: All graphite, including hearth and elements. Vacuum System: Requires Stokes 1722 Skid (412H mechanical pump and Stokes 615-1 vacuum blower. Both are missing), 16” Port for diffusion pump, but no pump. Power Supply: 250 kW 460V/3Ph/60Hz. Max. Temp.: 2400F. Max. Load: 3000 lb at 1900F. Cooling Gases: Nitrogen, Argon, Helium. Gas Quench Capability: +12 PSI positive pressure. Cooling Fan: Top mounted. Controls: Honeywell DCP-7700 Temp. Controller. Eclipse EMC-560 Hi-Limit. Honeywell Strip Chart Recorder. Philips Model 316 Vacuum Controller. Control Ther-



Item #VF271 SINTERING/DE-WAX 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.

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. **As is \$890,000.00 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.



Item #VF266 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 F.O.B. West Coast U.S.



Item #VF265 Stokes 149H-11 80 CFM Vacuum Pump:

Rebuilt Stokes Model 149H-11, Lot# CD-81004 Mechanical Vacuum Pump, Rebuilt by Evey Vacuum in 2002 and stored in heated, dry area since then. **Asking Price: \$ 5,500.00 USD with 30 Day Right of Return if not satisfied.**



Item # VF255 Roots Gas Blower:

Rebuilt (per owner), Roots Model 2510J Whispair Max gas blower, 372 CFM, Roots I.D. 847-485-20, S/N 76 54846 with 5 H.P. Motor mounted on skid. Location: Pacific North-western U.S.

Asking Price: \$3,500.00 USD. 30 Day Right of Return, if unhappy.



Item # VF254 MD Blower, 350 CFM:

Rebuilt (per owner) M.D. Pneumatics 350 CFM gas blower, Model 11-3210, S/N 1735R A23, on skid but needs motor. Location: Pacific North-western U.S. **Asking Price: \$3,000.00 USD. 30 Day Right of Return, if unhappy.**



Item #VF243 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.) Location: Coeur d'Alene, Idaho 83814



Item #VF242 " 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.)



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 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.



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.



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, Sales@customelectric.com.



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.



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.



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.

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
jordan@themonty.com
905-271-0033

¹While supplies last

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

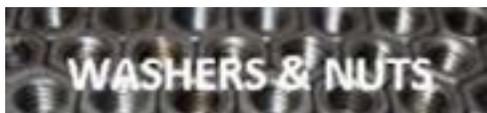
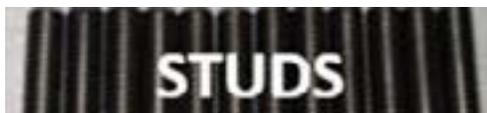
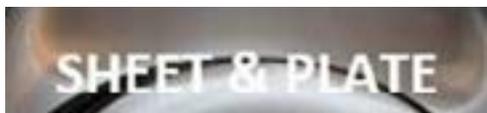
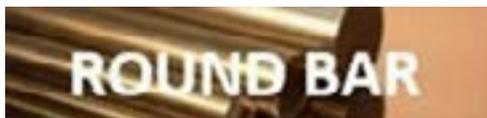
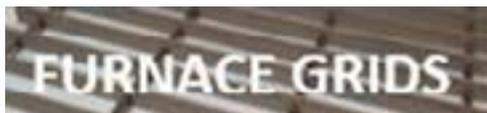
©Heat Treat Central

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@gytinc.com Phone: 208 765-6854.



BUSINESS OPPORTUNITIES

We at "[themonty.com](https://www.themonty.com)" are very proud of the fact that since 1969 we have been putting heat treaters around the world together. The links below cover several areas where we can help your company such as finding a buyer for your heat treat plant, finding a commercial heat treat company for sale, posting free ads for individuals looking for a new position within the heating industry and a listing of companies looking to hire. Remember-if it has to do with heat treating we can put you in touch with the best people!

- [EMPLOYMENT OPPORTUNITIES](#)
- [INDIVIDUALS SEEKING EMPLOYMENT](#)

EMPLOYMENT OPPORTUNITIES

ITEM # 0331 PROCESS METALLURGIST

ITEM # 0330 PLANT MANAGER

ITEM # 0329 SALES ENGINEER

ITEM # 0328 PROCESS METALLURGIST

ITEM # 0327 OUTSIDE SALES REPRESENTATIVE

ITEM # 0326 STRAIGHTENER / QUALITY INSPECTOR / FURNACE OPERATOR

ITEM # 0325 MAINTENANCE TECHNICIAN/SUPERVISOR

ITEM # 0324 SALES REP

ITEM # 0323 HEAT TREATING PLANT MANAGER

ITEM # 0322 METALLURGIST / MATERIALS ENGINEER

ITEM # 0321 HEAT TREATING MANAGER/METALLURGIST/MATERIALS ENGINEER WANTED

ITEM # 0320 SERVICE TECHNICIAN WANTED

ITEM # 0318 SALES ENGINEERS/REPRESENTATIVES WANTED

PROCESS METALLURGIST WANTED

Process Heat Treat Metallurgist Wanted. Oerlikon Fairfield has an opening for a process metallurgist in our Lafayette, IN facility. Oerlikon Drive Systems, with its brands Oerlikon Graziano and Oerlikon Fairfield, is a leading provider of gear, drive and shifting solutions. We are a global manufacturer with 10 manufacturing locations in Italy, China, US and India, and over 5000 employees. Oerlikon Drive Systems' products are used in a wide range of applications to operate machinery and equipment for agriculture, construction, energy and mining, and transportation. Our product portfolio includes solutions from 4,000,000 Nm output drives used with self-elevating marine platforms to the latest technology with dual clutch and continuously variable transmissions. Excellent manufacturing, engineering and innovative expertise have made both the brands the "Global drive systems supplier of high-tech solutions in all mobility markets," for over 90 years.

Position responsibilities include:

Manage, lead and train heat treat pyro group

Initiate and lead projects such as furnace improvements, customer requirements including TPG certification, and capital projects.

Help create and maintain process recipes.

Evaluate final heat treat results.

Qualifications include:

Degree in Metallurgy/Materials or Mechanical Engineering

History of working with atmosphere furnaces (3-5+ years preferred)

Knowledge of carburizing, nitriding, and neutral hardening processes

Willingness to work flexible hours

If interested, please submit resume to:

<https://oerlikon.clearcompany.com/careers/jobs/18be536b-5390-9c7a-2e46-4dfe033f8ae6/apply?source=571636-CS-25789>

PLANT MANAGERS

Ionbond is seeking for (two) direct "hands on" manufacturing Plant Managers to lead the plant effectively in order to maintain Safety, Quality, Compliance, On-time Delivery, employee & customer satisfaction and ensuring the plant meets production goals and standards while managing the center's costs.

Plant Location 1: Rockaway, NJ

Plant Location 2: Greensboro, NC

Your Position:

Manage the daily operations of the plant.

Help exceed operational goals.

Affinity to selling or working directly with customers.

Responsible for profit and loss at plant level.

Assist in the investigation and analysis of new business opportunities.

Maximizes staff utilization.

Hire, train and evaluate core teams at the plant level.

Responsible for 5S and Kaizen.

Enforces standards (policies, practices, safety, etc.)

Set and maintain productivity and quality standards.

Ensure Customer excellence and delivery of Quality products.

Administer inventory on a monthly basis.

Ensure maintenance and upkeep of the plant facility is effective and efficient.

Direct and schedule Daily Production meetings and Plant & Safety meetings.

Your Profile:

Bachelor's degree in Engineering and/or Business Administration.

3+ years of management experience in a high-volume, fast-paced production, industrial service or manufacturing environment.

Strong team building, decision-making and people management skills (hourly & salary).

Knowledge of safety, quality, productivity, demand creation, inventory & stewardship processes.

Experience in 5S, Kaizen and Lean Manufacturing.

Working knowledge of ISO 9000 business systems and ISO 13485.

Adequate knowledge of P&L, budgets and cost controls.

Ability to travel 10%.

We offer a generous benefits package including but not limited to; medical, dental, consumerism card, flexible spending accounts, life insurance, disability, PTO, 401(K) w/company match, etc. For more information about Ionbond, please visit our website.

Submit resume to: theresa.krieger@ionbond.com

SALES ENGINEER

Ionbond are looking for energetic Sales Engineers with a proven sales track record in b2b sales industrial services and in strategic account management and new business development. This individual will manage and expand sales for PVD, CVD and PACVD coating services to existing accounts as well as develop new customers in a variety of industries within the assigned territory:

Position 1: Territory Northeast, NH, ME, CT, MA, VT, NJ, NY, RI

Position 2: Territory Westcoast, OR, CA, WA, NV, ID AZ, UT

Your Position

- Manage and expand sales for existing customers
- Develop new customers for coating services
- Work with product management and engineering on customer tailored products
- Support tradeshows and conferences
- Provide reports and forecasts to Regional Sales Manager

Your Profile

- Bachelor's degree in Engineering or equivalent experience
- 3 – 5 years of direct sales experience for industrial services (surface treatment technologies preferred)
- Strategic Sales & Account Management experience
- Demonstrated ability to build strong customer relationships
- Strong Communication Skills (verbal and writing)
- Excellent negotiation and closing skills
- Strong work ethics, commitment to detail, organization and time management
- Resides in the assigned territory (New England area), preferably in NH
- 50-75% traveling
- Must be eligible to work in the U.S. on a permanent basis

Our Offer

Ionbond will reward your talent with an annual compensation commensurate with experience, eligible for commission based on sales growth, eligible for company annual performance bonus and a company leased vehicle. In addition, we offer a generous benefits package including medical, dental, life insurance, FSA, short term & long term disability, PTO, 401(K) retirement plan with company match and much more. For more information about Ionbond, please visit our website.

Submit resume to: theresa.krieger@ionbond.com

PROCESS METALLURGIST WANTED

Process Heat Treat Metallurgist Wanted. Oerlikon Fairfield has an opening for a process metallurgist in our Lafayette, IN facility.

Oerlikon Drive Systems, with its brands Oerlikon Graziano and Oerlikon Fairfield, is a leading provider of gear, drive and shifting solutions. We are a global manufacturer with 10 manufacturing locations in Italy, China, US and India, and over 5000 employees. Oerlikon Drive Systems' products are used in a wide range of applications to operate machinery and equipment for agriculture, construction, energy and mining, and transportation. Our product portfolio includes solutions from 4,000,000 Nm output drives used with self-elevating marine platforms to the latest technology with dual clutch and continuously variable transmissions. Excellent manufacturing, engineering and innovative expertise have made both the brands the "Global drive systems supplier of high-tech solutions in all mobility markets," for over 90 years.

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Initiate and lead projects such as furnace improvements, customer requirements including TPG certification, and capital projects.

Help create and maintain process recipes.

Evaluate final heat treat results.

Qualifications include:

Degree in Metallurgy/Materials or Mechanical Engineering

History of working with atmosphere furnaces (3-5+ years preferred)

Knowledge of carburizing, nitriding, and neutral hardening processes

Willingness to work flexible hours

If interested, please submit resume to:

<https://oerlikon.clearcompany.com/careers/jobs/18be536b-5390-9c7a-2e46-4dfe033f8ae6/apply?source=571636->

OUTSIDE SALES REPRESENTATIVE

Nature and Scope

Premier Thermal Solutions, LLC (PTS), the parent company of Atmosphere Annealing and NitroSteel, is a private-equity owned, manufacturing company providing metal heat-treating services and related products primarily to the automotive, heavy truck, industrial, energy and agriculture industries.

The company is seeking Outside Sales Representatives (IL and MI) that will develop new business by building relationships with existing customers and canvassing a territory in search of new customers. The ideal candidate will have a working knowledge of our service offerings and the related markets, have a hunter's mentality, high-energy, highly organized, motivated, self-starter who can thrive in a dynamic, entrepreneurial environment.

Principal Accountabilities

Reports to; Director, Premier Thermal Solutions with dotted line to Plant General Manager

Meet with qualified prospects and customers at least 60 percent of the time.

Maintain high level of industry knowledge and remain up to date on industry trends and issues.

Build relationships with top management, plant, metallurgical, and purchasing personnel at key accounts to perpetuate confidence and trust in the company.

Collaborate with company leadership on new opportunities, pricing strategies and industry trends.

Coordinate the response to RFQ's by providing all information required to complete the quote to Inside Sales, delivering the quote to the customer and then following up on the quote.

Use data available from ERP system to develop and analyze customer sales trends and budget deviations.

Operate with a sense of urgency and be responsive and proactive to customer or prospective customers

Candidate Requirements

Bachelor's degree plus at least 5 years of relevant experience, ideally selling industrial products and/or services. A working knowledge of materials science is a plus.

Existing relationships with OEM's and Tier I suppliers in the automotive, heavy truck, industrial, energy and agriculture industries is preferred.

Comfortable prospecting, qualifying, presenting and closing opportunities in a highly competitive market.

Ability to effectively use multiple channels including internet, cold calls and referrals.

Must be proficient at data analysis and related tools such as Excel or CRM software.

Compensation

Base salary plus opportunity for substantial commission earnings.

Immediately eligible for healthcare plan (medical, dental and vision)

401(k) with company match

Life, STD, LTD

Tuition reimbursement

Auto reimbursement program

Send Resume to: Steve Green, SGreen@ZCap.net or call 646-787-2436

STRAIGHTENER / QUALITY INSPECTOR / FURNACE OPERATOR

Accurate Steel Treating in Southgate, CA has a number of open positions including;

Straightener; Straighten customer parts to ensure compliance to specification. A high school diploma or equivalent is required as well as a minimum of 1 year experience in the heat treating industry. Must have a basic knowledge of heat treating and testing.

Quality Assurance Inspector; Inspect customer heat treated parts to ensure compliance to specification. A high school diploma or equivalent is required as well as a minimum of 1 year experience in the heat treating industry along with the ability to obtain and maintain a forklift operator specification. Must have a basic knowledge of heat treating and testing.

Furnace Operator; Prepare parts for heat treatment, load and unload furnaces. A high school diploma or equivalent is required as well as a minimum of 1 year experience in the heat treating industry along with the ability to obtain and maintain a forklift operator specification. Must have a basic knowledge of heat treating and testing.

Interested applicants should send their resume to jimmyh@accuratesteeltreating.com

MAINTENANCE TECHNICIAN/SUPERVISOR – CHICAGO, IL

Position Summary:

~~Performs all aspects of preventative and corrective maintenance on heat treat related systems including, but not limited to:~~ furnaces, quenching equipment, material handling equipment, electrical instruments, and control panels.

Provide instruction and assistance to other technicians as needed.

The heat treat maintenance technician/supervisor must have the ability to identify and correct any safety-related issues and perform independent equipment evaluations to identify potential equipment failures.

Responsibilities:

Troubleshoot and repair heat treat equipment.

Perform electrical troubleshooting and repairs.

Perform repairs on fork lift equipment, cranes, and hoists.

Troubleshoot and repair pumps, piping, hoses, seals, valves, bearings, and gearboxes.

Please forward resume to: applyforheattreatchicago@gmail.com

SALES REP

Sales Rep. Vacuum heat treat company Solar Atmospheres, located in Hermitage, PA is currently seeking a Sales Repre-

sentative in the Texas and Oklahoma area. Solar is interested in working with a well-experienced Representative that has strong ties, but not limited to, the ever growing Aerospace and Energy markets. A successful candidate would be familiar and experienced in the following areas;

- vacuum heat treating and brazing
- vacuum hardening, annealing, age hardening, stress relieving and other related thermal processing services.
- nickel base alloys
- titanium alloys
- austenitic stainless steels
- PH grade stainless steels

Please forward resumes to mikep@solarwpa.com

HEAT TREATING PLANT MANAGER

Heat Treating Plant Manager. The Heat Treat Production Manager is responsible for general supervision of all phases of production heat treating including: production, quality, maintenance, receiving and shipping in our Eastern Pennsylvania Facility. Responsibilities also include recruiting, hiring and training personnel and facility/physical plant up-keep among other things. Principal Duties and Responsibilities:

1. Manages, supervises and coordinates activities of workers engaged in hardening, tempering, annealing, and other Vacuum heat-treating processes to condition metal work pieces and products, applying knowledge of heat-treating processes and properties and structure of materials.
2. Maintain and expand outside customer base for Heat Treating and Brazing services. Build and maintain rapport with key customers.
3. Schedule Furnace cycles according to customer demand.
4. Communicate with Customers regarding contract, technical and delivery requirements.
5. Perform contract review and enter new orders into database to generate shop travelers used in production.
6. Encourage and promote operating in a continuous improvement environment. Remove waste and constraints from the production processes to improve efficiencies, enhance productivity and to attain established goals.
7. Ensure all members of the manufacturing team are aware of safety policies to provide a safe workplace for our employees.
8. Work closely with shop foremen and maintenance personnel.
9. Work closely with quality personnel to review product consistency, customer requirements and determine areas of improvement.

Knowledge, Skills and Abilities Required:

1. Bachelor of Science in Metallurgy, Metallurgy Engineering or Material Science and Engineering discipline or Equivalent Manufacturing experience required. A minimum of 5 plus years of experience in heat treating.
 2. Previous experience/best practices implementing and using continuous improvement tools such as; Six Sigma, 5-S, Lean Manufacturing, etc. to drive improvement.
 3. Experience with Aerospace and Nadcap requirements a plus.
 4. Previous experience/broad understanding of safety systems and enforcement of safety rules and policies.
 5. Excellent planning and organizational skills, with the ability to balance production and maintenance needs.
 6. Demonstrated ability to motivate people, assess and develop employee skills.
 7. Motivated Self starter and proactive problem solver a must
- Equal Opportunity Employer, including disabled and veterans.

Salary Commensurate with Experience. 401k, Paid Vacation & Sick time, Health Benefits. Please send resume's to; heat-treatquality@yahoo.com.

METALLURGIST / MATERIALS ENGINEER

Kowalski Heat Treating Company – located in Cleveland, Ohio has an immediate opening for a Metallurgist / Materials Engineer. This individual is responsible for management of all areas of metallurgical processing / process technology. Duties include ensuring that every process is optimized and customer metallurgical development requirements are met with minimal supervision to meet established corporate objectives.

Essential Functions

Ensures customers' technical needs are met with minimum turnaround time and high degree of quality working closely with KHT senior staff as needed.

Acts as liaison between KHT and key customers executive/department managers with the development of metallurgical processing / material selection.

Identifies, recommends and implements metallurgical changes to improve productivity and reduce cost and rework, monitor scrap and develop long-term performance data for all customers and process recipes, achieves optimum metallurgical process performance with least amount of overhead.

Responsible for the overall evaluation- implementation- validation and approval of various standards as needed for KHT to achieve its goals and objectives.(e.g., NADCAP, AS-9100 ,CQI-9 etc.)

Required Education and Experience

BS in Metallurgy / Materials Science.

5+ years of experience in a heat treating environment.

Experience developing heat treating parameters, processes and principles is preferred.

Experience working with a multi-shift environment is preferred.

Please respond to HR@khtheat.com

HEAT TREATING MANAGER/METALLURGIST/MATERIALS ENGINEER WANTED

Summary: 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 –H6875 AMS 2959 1, 2, 3, 4, 5, 8A, 11 and be able to procure and manage a metallurgical lab using the appropriate ASTM procedures. Please respond to hr@precisiongearinc.com

SERVICE TECHNICIAN WANTED

Service Technician Wanted. McLaughlin Services, LLC's West Coast Office is in search of Heat Treating Service Technicians. Requirements are as follows:

- Proven field service experience
- Ability to troubleshoot, test, repair and service heat treat equipment
- English literacy
- Ability to work flexible hours
- Provide excellent customer support during field visits
- Manage all on site installation, repair, maintenance and test tasks
- Diagnose errors or technical problems and determine proper solutions
- Produce timely and detailed service reports
- Document processes
- Follow all company's filed procedures and protocols
- Cooperate with technical team and share information across the organization
- Build positive relationships with customers

Please forward resume including salary requirements to mwalters@mclaughlinsvc.com

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SALES ENGINEERS/REPRESENTATIVES WANTED

Sales Engineers/Representatives Wanted. McLaughlin Services, LLC is in search of experienced Sales Representatives for the following US regions:

Midwest
Northeast
Southeast
Southwest

McLaughlin Services, LLC is a furnace building company that also specializes in a variety of services that supports the heat treat industry worldwide. Please forward existing line card /resume to mwalters@mclaughlinsvc.com

INDIVIDUALS SEEKING EMPLOYMENT

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

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Email: gord@themonty.com