

HEAT TREAT NEWSLETTER
Everything to do with heat treating



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HEAT TREAT NEWS

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MOLY

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INTRODUCTION

Worldwide Heat Treating Industry. Spending a week visiting captive and commercial heat treaters in Germany recently prompted our ongoing thoughts about how small the global heat treating industry actually is. I always find it interesting how you can meet a heat treater on the other side of the world for the first time and after a 20 minute conversation you realize that you have multiple mutual acquaintances. Quite frankly this is one of our favorite things about the industry - how it is such a small close knit group. Enough of our ramblings now on to the latest news and trends in the industry.

Best regards,

Gord, Dale and Jordan Montgomery

HEAT TREAT NEWS

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

People News


Mike Harper very recently became Corporate Sales Manager *for Paulo Heat Treating, Brazing and Metal Finishing*. Mike actually spent 12 years with Paulo in the Tennessee, USA area before spending the past 3 years as Regional Sales Manager for Solar Atmospheres, Inc., in the Greenville, SC, area. Interestingly enough this is the third sales person that we know of who has been hired by Paulo this year, the others being **Ron Graham** and **Mike Neuman**. **Bryan Ames** recently became General Manager of the **Bodycote, Canton** facility in Michigan. Before that Bryan had spent many years with commercial heat treater FPM in the US Midwest. **Advanced Heat Treat Corp.**, of Waterloo, Iowa has been doing some promoting. *"Dan Sager and James Wellborn have been promoted at Advanced Heat Treat Corp. Sager has been promoted to assistant operations manager, and Wellborn has been promoted to UltraOx operations manager. They both previously were production supervisors and have both been with the company since 1999."* **October 31, 2018**




Dan Sager



James Wellborn

**TPS**
Thermal Product Solutions


BAKER FURNACE INC.

Baker furnace is now offering accredited system calibrations backed by the TPS group's combined 17 years of experience.

Used Equipment

“The Monty” has one of the most complete lists of *Used Heat Treating Furnaces* in North America, a list which is updated *daily*. Our most recent additions are mentioned below. If you don’t see what you are looking for please let us know at jordan@themonty.com or 905-271-0033. *October 31 2018*

Item # G202 AFC 4500 CFH Generator, Endo Injector

Item # VF345 Vacuum Temper Furnace Unused \$250,000

Item # T355 Wisconsin Oven \$19,000

Item # VF344 C.I. Hayes Vacuum Furnace \$90,000 O.B.O

Item # B460 Super 30 Batch IQ \$45,000



Vacuum Annealing-Captive Heat Treat Shop

We ran across a rather interesting captive heat treat operation in the US Midwest last week which is worth mentioning. A manufacturer of a strip product for cutting applications required that the product be annealed in a vacuum furnace. Consequently the company invested in a total of 14 vacuum annealing furnaces, all of which were installed in the late 1990's. Earlier this year the manufacturer went with a different type of raw material which does not require annealing with the end result that this company now has 14 top load vacuum furnaces installed, ready to run but completely surplus to their ongoing requirements. It makes for a rather interesting sight to see this number of vacuum furnaces sitting idle in a cold, dark, shuttered heat treat department. If you have a requirement for vacuum annealers let us know and we will put you in touch. *October 31, 2018*



NOVATHERM 3 - “INNOVATIVE SOLUTIONS IN HEAT TREATING” SEMINAR

To this press release we have to add that this is the third year in a row that “The Monty” has been a proud sponsor of this event. *“The third edition of the Novatherm seminar held on October 3-5, 2018 in Poland has once again confirmed the organizers’ conviction that there is*

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a strong and continuous interest amongst many players in the heat treating and related industries for such events. A full house of participants from around the world benefited from the opportunity to hear about innovations that improve manufacturing quality and efficiency from leading academic researchers and industry practitioners. Participants came from Europe, but also from as far as Asia and North America.

Presentation titles ranged from very specific themes such as “Anticorrosive nitriding of selected machine parts” and “The influence of glow discharge plasma on the nitriding process of Ti99.2 titanium”, to hot topics that have value for the industry like “Industry 4.0 in the heat treating industry - risks and benefits” and “Predictive maintenance and digitalization in heat treatment”. Organizers Nitrex Metal (www.nitrex.com) and United Process Controls (www.group-upc.com) thank all speakers, participants, as well as seminar partners and media sponsors for making this year’s seminar a success. Plans are already being made for the next edition of Novatherm in 2021. We look forward to seeing you again in 2021. For more information visit www.novatherm.org” October 31, 2018



Business Opportunities

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

Item # 0355 Chicago Brazing Company For Sale

Item # 0354 Metallurgist Wanted

Item # 0353 Controls Engineer Wanted

Item # 0352 Sales Positions Available

Item # 0351 Metallurgical Engineer Wanted

Item # SE002 Metallurgical Engineer Looking For A Job

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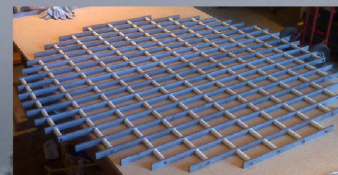
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Bodycote New Berlin, Wisconsin, USA

Wandering around Wisconsin last week we had to stop and visit the Bodycote (commercial heat treating) plant in New Berlin, Wisconsin which for a couple of reasons is a rather unusual Bodycote facility. Size wise it is fairly average but it offers two processes which are not a standard for Bodycote; press quenching and salt bath nitriding. Press quenching is never common in commercial shops mainly because it is such a specialized process involving a substantial investment in tooling which can generally only be used for one particular product. Having said that this location (which has all Gleason press quench units) actually has more Gleason units than Gleason has in their commercial/captive heat treating plant in Rochester, NY. The other process which this plant offers which is unique to Bodycote in North America is their salt bath nitriding department (FNC). This is a booming business for this plant helped by the fact that their only competitor in the area recently got out of the business and sold the equipment off. These photos give you a good idea about what you would see if you visit this location. And the people? Top notch fellows that we met. **October 30, 2018**



Left to Right; Alex Christenson, Ed Barcikowski, Bob Stanisch

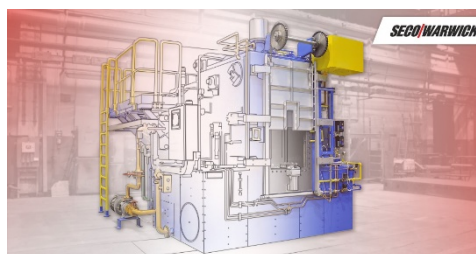
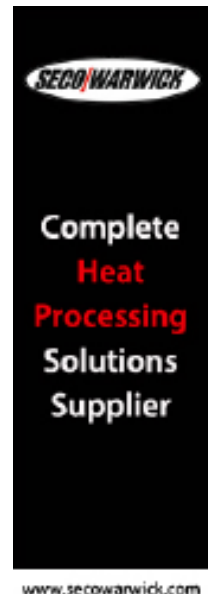


Left to Right; Ed Barcikowski, Jim Warden, Alex Christenson, Bob Stanisch



KUŹNIA Sułkowicie S.A. Buys SECO/WARWICK Sealed Quench Furnace

“KUŹNIA Sułkowicie S.A., a renowned Polish manufacturer of high quality matrix forgings, construction connectors and manual tools manufactured with their own forgings, recently bought a SECO/WARWICK Sealed Quench Furnace. SECO/WARWICK will deliver a CaseMaster AFS – a multipurpose Sealed Quench chamber furnace, intended for thermal and thermo-chemical treatment in a controlled endothermic atmosphere. The Casemaster family of furnaces are ideally suited for a wide variety of processes, particularly carbonizing, gas carbonitriding and pure hardening. The fully automated operation of the furnace is its unique advantage; personnel are only required to load and unload the work after treatment, the cycle and product transfer is completely automated. “We have been cooperating with SECO/WARWICK for more than 10 years. A decade ago, we purchased and implemented a process line for thermal and thermo-chemical treatment with a chamber furnace type CaseMaster AFS 10E. During that time, we had a chance to observe the high quality not only of the equipment itself, but also of the services provided by the company. Good cooperation resulted in a decision on making another investment in SECO/WARWICK equipment, involving the expansion of the line purchased years ago. Our activities are focused on meeting the expectations of customers, and the ability to expand an existing line, using proven solutions, ensures an increase in production capacity with the highest quality products and timely execution of orders,” said Marcin Szafrński, MSc. Ing., Commercial Director at “Kuźnia” Sułkowice S.A.” **October 30, 2018**



Safe Cronite Sold

To go with this press release from Jim Demarest, VP for North American Cronite we include this photo of Jim from an ECM event in Wisconsin just a few weeks ago. Jim is on the left. **October 30, 2018**

"We are proud to announce that on the 18th October 2018, the Safe-Cronite business unit of the Safe Group has been purchased by its CEO Pierre Wittmann and a group of managers in partnership with investment funds driven by CICLAD. Cronite is a world leader in the design and production of fixtures and parts in refractory alloys for heat treatment, steel, incineration, power generation, automotive, and aerospace industries. Cronite achieved a consolidated turnover of EUR 74 million in 2017 and employs around 800 people. It operates 7 plants in France, England, Germany, China, India, Mexico, and has a R & D and Design Center in the Czech Republic. Its sales offices in the United States, Japan, South Korea and Sweden propel a global coverage of 2,000 customers. Cronite's commitment to research, development, and design expertise continues to be its differentiator. Our R&D facility performs continuous research of alloys and materials suitable for the heat treatment processes of our customers. Our team of

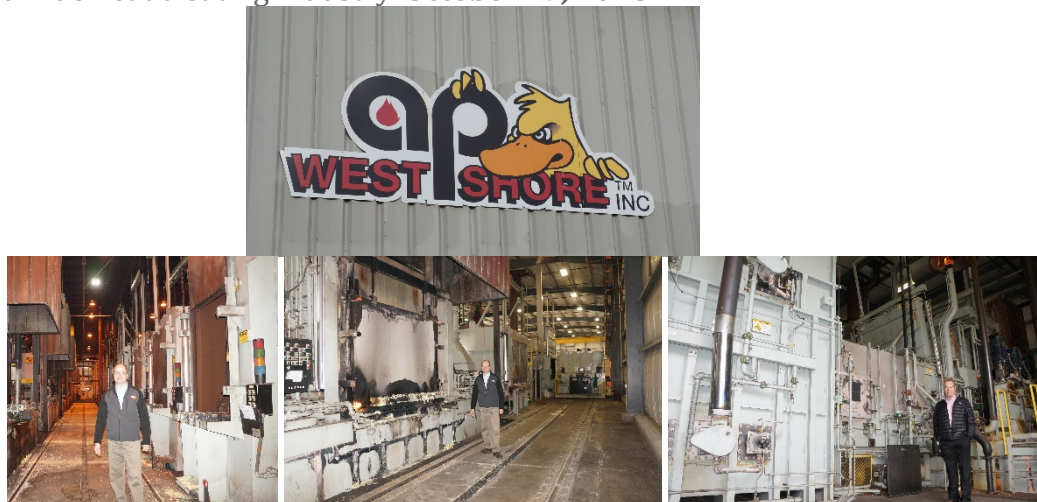


design engineers use 3D modeling software with finite element analysis of mechanical constraints at temperature to insure our custom fixtures provide years of service while maximizing net loading. Cronite is known world-wide under the names Cronite, Klefisch, Mancelle, North American Cronite, and Cronite CZ. Cronite is equipped with numerous production techniques: green sand for mass production, chemical sand for items over 2 Tons, lost wax for very accurate parts, carbon fiber composites, machining, welding and fabrication. We thank you for your trust and support. We look forward to continuing to serve you for many years to come. For more information please contact: Jim Demarest VP Sales & Marketing North American Cronite (734) 634-8818 jim.demarest@safe-cronite.com"



Monday Morning Briefing

"Monster" Batch IQ Furnace. This past Friday we posted a photo of a "monster" batch IQ furnace capable of handling 20,000 pound loads and promised more details. This furnace is the world's largest integral quench batch austempering furnace with an operating window of 84"W x 96"L x 54"T, a gross capacity of 20,000 pounds and a quench tank which holds 400,000 pounds of salt. It was built and installed in 2011 by furnace builder **"AFC-Holcroft"** of Wixom, Michigan and the end customer was commercial heat treater **"Applied Process"** for use in their AP Westshore facility in Oshkosh, Wisconsin, USA where it remains in service. Applied Process is a commercial heat treater in the USA with 3 locations, Oshkosh, Livonia, Michigan and Fort Smith, Arkansas (more details of the brand new Fort Smith plant later this week). We firmly believe that there is no other company in North America and possibly the world that does more salt quenching in particular the ADI process than Applied Process. In total the company has roughly 120 employees which includes 6 metallurgists and a total of 16 large IQ furnaces in the 3 locations. The Oshkosh location alone has the "monster" furnace and 6 other IQ's each capable of a 6,000 pound load which amounts to a total of 1.1 million pounds of molten salt at any given time. These photos below give you a better idea of the plant and include a photo of our host, **Steve Metz**, VP of Sales for the company and a fellow who truly loves his job. Also included is the AP logo "the hostile duck" which we have always felt is the best logo in the entire worldwide heat treating industry. **October 29, 2018**



November 14th there will be an online auction of some **Martinrea** (auto parts) equipment. Include in the auction are a few heat treat items including a gas fired, 90' long Gasmac walking beam furnace and some Great Lakes roller hearth furnaces. Nothing exciting but you need this type of furnace you might get a real good deal.



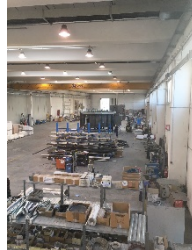
***“Paulo**, a supplier of heat-treating services for a wide range of industries headquartered in St. Louis, Missouri, officially inaugurated its first plant outside the U.S. Located at the GP Escobedo industrial park in the municipality of Escobedo, Nuevo Leon. The facility started operations earlier this year providing proprietary heat-treatment processes for the automotive industry in a 50,000 square-foot footprint which is expected to expand up to 110,000 sq.-ft as new equipment keeps coming into the plant in order to serve manufacturers of aerospace components and agriculture equipment, among others. The new facility heavily relies on automation using multiple robotic loading cells to improve safety in material handling while leaning production steps.”*



Thermetco. It's pretty cool to watch as an entire heat treat plant comes together. Several times we have mentioned how this Quebec based heat treater is moving from their current location to a brand new plant. Here is the latest photo showing a batch IQ furnace being dropped into place.

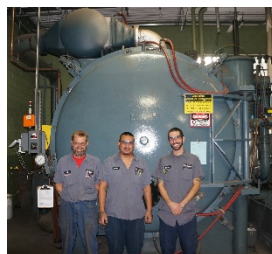


Lets go it Italy now for this item about furnace builder **Meapforni**. July 16/2018 we had this press release (this is the abbreviated version); *"Italstart announces today that has aquired Meapforni, a company that specializes in the design, manufacturing, and service of industrial furnaces. Italstart is a holding company founded by Mr. Francesco Pieropan and Ms. Paola Canal and others colleagues and investors."* As a footnote to this story we have a picture of their facility in which we can see a rotary hearth furnace under construction.



Robert Gutierrez. If you're in the heat treating industry in Texas you will almost undoubtedly have run across the name Robert Gutierrez either associated with **Houston Heat Treat, National Heat Treat** or even **JMA Heat Treat** (which goes back a while). Robert is now Operations Manager at a new commercial heat treat in Houston, Texas by the name of **Worldwide Heat Treat**.

Bodycote Sturtevant, Wisconsin, USA. Last week we were wondering around the wilds of Wisconsin in the USA and found ourselves at the Bodycote (commercial heat treating facility in Sturtevant, WI where we took this photo. In it we see from the left; **John Michelson, Ismael Gonzalez** and **Tarrin Sleeman**. This facility offers vacuum heat treating, Induction and Nitriding.



FPM Fire Update

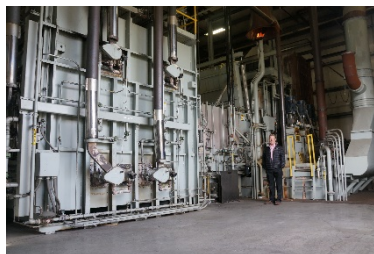
"CHERRY VALLEY, Ill. – Multiple fire departments continue to battle a fire at FPM Heat Treating at 648 Hwy 20 in Cherry Valley. "This is bad. This is real, real bad." says FPM Heat Treating employee William Richardson as flames shoot up from the roof of the building. Fire engines from all over the Stateline rushed to the scene to help put out the blaze. Boone County Fire Chief

*Kent Hulett immediately called for a box alarm when they saw the heavy black smoke, saying "The hazards here are number one, we have no water supply so we have 17 fire departments through our mutual aid box alarm system shuttling in water." Firefighters are experiencing "zero visibility" inside the building because of that heavy smoke. That's making it harder to find a source. **October 26, 2018** [Click For A Video Of The Fire](#)*




"Monster" Batch IQ Furnace

Amazingly enough what you see in this picture is a single Batch Integral Quench furnace (typically called a sealed quench furnace outside of North America) with working dimensions of 84" wide X 96" deep X 54" high capable of a 20,000 pound load. In certain industries in North America it is truly famous, outside of North America probably not so much so. As part of our Monday Morning Briefing we are going to tell you where this is, what it does and how it came to pass. **October 26, 2018**



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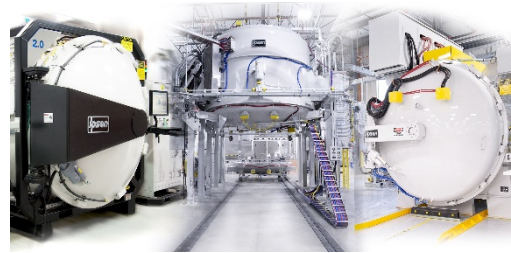
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Ipsen Ships Furnaces from Diverse Product Portfolio for Impressive Third Quarter Results

*"Ipsen USA announces strong third quarter furnace shipment results. As a total solution provider, Ipsen prides itself on always working with its customers to find the best solution specific to their needs. The shipments this quarter are a great example of this, as the product mix is very diverse and includes several TITAN® vacuum furnaces from the platform product line, several custom horizontal and vertical vacuum furnaces and multiple atmosphere box furnaces all designed to meet customers' specifications. Many of these shipments also included PdMetrics® software for predictive maintenance. "I think the diverse products shipped in the last few months really shows the range of solutions Ipsen has available to meet our customers' needs," said Pete Kerbel, Vice President of Sales. "These furnaces shipped across the United States and six countries worldwide to help mission critical applications across a variety of industries. We continue to listen closely to our customers and find the solution that best fits their needs." **October 26, 2018***



FPM Heat Treating Fire

At 6:30 PM, Thursday October 25 this was the news from *"mystateline.com"* in Cherry Valley, IL. *"CHERRY VALLEY, Ill. – Multiple fire departments are responding to the scene of a structure fire at FPM Heat Treating at 648 Hwy 20 in Cherry Valley. Authorities say employees at the facility were able to evacuate and no one was injured in the blaze."* On a personal note we have to say that FPM is a good company and we hope and pray that nobody is injured and the damage is minimal. **October 26, 2018**



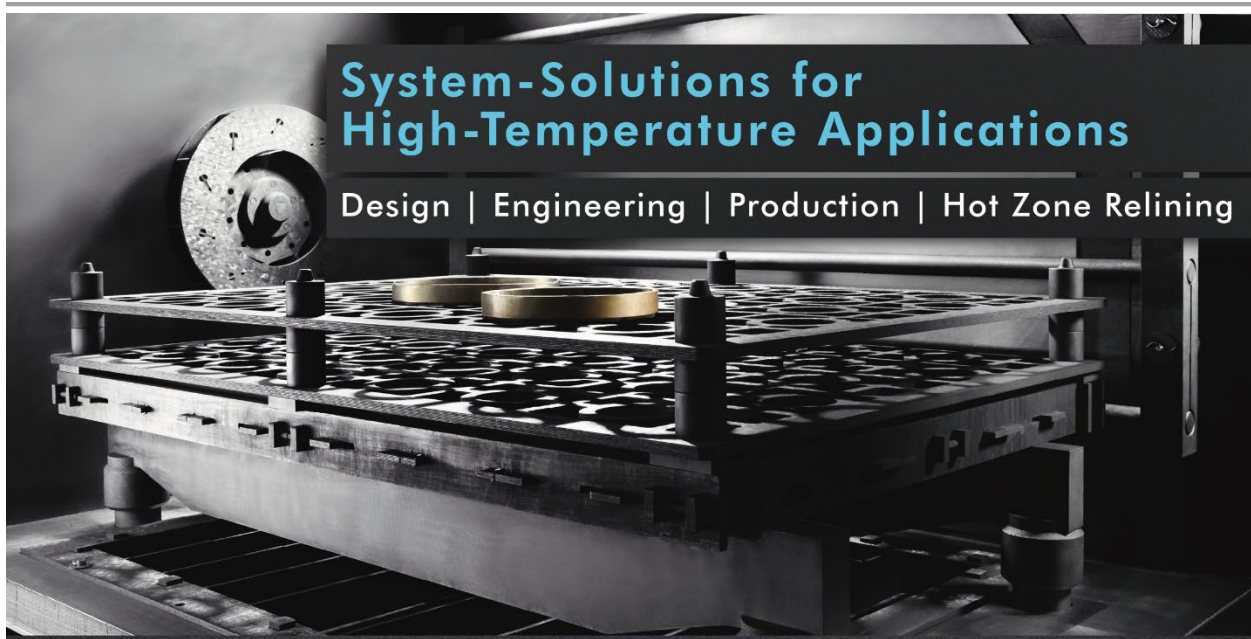
Paulo Inaugurates Monterrey, Facility

Almost a year ago now Paulo issued this press release about a new facility in Monterrey, Mexico. It would appear that the company just announced the grand opening; *"2017 Press Release. Paulo has begun construction on a greenfield facility in Monterrey, Mexico. The new plant will be completed in the fourth quarter of 2017 and processing of heat-treatment will begin in the first quarter of 2018. Paulo will initially occupy 50,000 sqft with expansion up to 110,000 sqft. Monterrey was chosen for its robust manufacturing community with close proximity to major providers of Automotive, Agriculture, Aerospace and other industrial components."* **October 25, 2018**








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Let's keep in touch:





Ipsen “Titan” Furnace #1/Rockford Heat Treaters

Back in 2008 furnace manufacturer **Ipsen** starting building and marketing their line of “Titan” Vacuum furnaces, a product which has been an undoubted success. Have you ever wondered where the very first “**Titan**” furnace the company ever built ended up? Well as it turns out “Titan” #1 was installed and tested at “**Rockford Heat Treaters**” a commercial heat treater located just minutes from the Ipsen facility which is also in Rockford. It was news to us until we visited the company today and we were lucky enough to be able to get a photo of the owners of Rockford Heat Treaters, **Ted and Tom Deutsch** in front of “Titan” #1 which is still humming along after 10 years in service. Rockford Heat Treaters is an impressive operation which has pusher furnaces (very unusual in a commercial operation), batch IQ furnaces, pit gas nitriders and a pretty cool vacuum department which can be seen in these photos. **October 25, 2018**



Vacuum Nitriding Furnaces Mexico

We will be providing more details to go along with this photo but for the time being we can tell you that this is one of 2 brand new vacuum nitriding furnaces being installed at a captive heat treater in Marques, Mexico as we speak. **October 25, 2018**



SAFE Cronite Sold

As one of the leading providers of heat resistant castings to the heat treating industry it is worth mentioning that SAFE Cronite has a new owner (the company has a banner ad on this page), However having told you this we all know that this will not make the slightest bit of

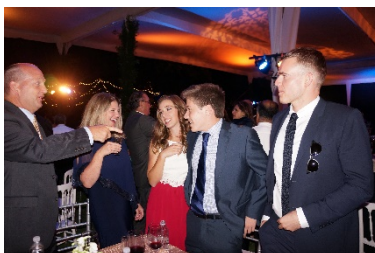


difference to alloy users that a different group now owns the company. *“On October 18th, Safe Group sold its Safe Cronite business area, including the Swiss holding company Cronite SA and all its manufacturing plants and sales offices, to new shareholders brought together by Pierre Wittmann and managers in partnership with investment funds driven by Ciclad. The Safe Cronite business area, which has been gradually incorporated into the Safe Group since 1983, is a world leader in the design and production of refractory steel tools and components resistant to high temperatures and thermal shocks. Safe Cronite achieved a consolidated turnover of EUR 74 million in 2017 and employs around 800 people. It operates 7 plants in France, England, Germany, China, India, Mexico, and has a R D and Design Center in the Czech Republic. Its sales offices in the United States, Japan, South Korea and Sweden propel a global coverage of 2,000 customers in the automotive, aerospace, incineration and steel markets.”* **October 25, 2018**

James Cross/SSI UK

Earlier this week as part of the *“Monday Morning Briefing”* we mentioned about James Cross of **SSI, UK** leaving the company. This is the entire story in James words. In this photo taken at the wedding of **Carlos Torres** of furnace builder **Mattsa** in Mexico a couple of years ago James is on the right. *“I am very excited to announce that I have joined AMETEK Land, the global leader in industrial infrared non-contact temperature measurement, combustion efficiency, and environmental pollutant emissions products and systems. From November, I will be based in the UAE and talking to customers across the Middle East and Turkey about how AMETEK Land’s leading-edge technology can increase product quality and throughput whilst reducing process costs and equipment downtime. Industries include HPI, glass, industrial processes, and metals (including heat treatment!). Thank you to everybody at AMETEK Land for the amazing welcome! And thank you to the customers, suppliers, and colleagues I worked*

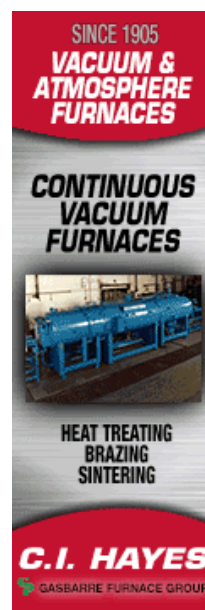
with at SSi, an incredible company that will go from strength to strength in the coming years." **October 24, 2018**



HÄNDLE Härterei GmbH, Tübingen, Germany

So you show up at commercial heat treater HÄNDLE in Tübingen (Southern Germany) and you see a nice, neat clean, modest heat treat. Then you go to the second building across the street, then the third and then the fourth and by the end of the tour you stand there and say "this place is a lot bigger than I thought"- at least that's what we said. Founded roughly 50 years ago this is a large, full service heat treat which back in April was sold to Halex Group based in Aldenhoven (*Halex as it turns out is a group of 8 or 10 commercial heat treaters which makes them one of the larger HT groups in Europe, more on them later*).

Now we don't know whether parent company Halex is investing a lot of new money into the company or whether HÄNDLE is finding business to be so good that they have to have more capacity but one way or the other the company is investing a lot of money. For instance have a look at the Ipsen Sealed Quench line in the one photo. There is a total of 6 furnaces in the line, the one you see in the front is only 1 year old and there is another furnace on the way. The induction department is quite new and very impressive, nitriding capacity is fairly new and there are plans to expand that department also-it would appear that every department in the company is growing. It always brings joy to our heart to see heat treaters investing and growing. **October 24, 2018**





From Right to Left; Gord Montgomery, Wolfran Wiech (Managing Director, HÄNDLE Härtereier), Joern Rohde, Mr. W.Saile



Vakuum-Härtetechnik Schwer GmbH Adding Nitriding Capacity

In Tübingen, Germany we see that commercial shop Vakuum-Härtetechnik Schwer GmbH will shortly be adding gas nitriding capacity. Founded in 2008 by the current owner Mr. Hanspeter Schwer with 4 employees the company has grown to 60 people, with 4 vacuum furnaces, 17 tempers and a typical workload of 1,200 orders per week. Like many heat treaters around the world the company is finding business to be great with sales for 2018 20% better than in 2017 which prompted the company to make a major investment in a new field for them-vacuum nitriding. The furnace will be provided by Rohde of Germany and should be in production within the next few months. Like many heat treat companies this is a family owned business with Hanspeter being joined by his sons Christian and Christoph. **October 23, 2018**



Gord Montgomery, Joern Rohde, Christoph Schwer, Hanspeter Schwer and Christian Schwer



Solar Atmospheres Commissions Large Car Bottom

"Solar Atmospheres of Western PA successfully commissioned a brand new 20 foot long car bottom furnace that has a total load capacity of up to 30,000 pounds. The Class 2 furnace, built by John Becker's Heat Treat Equipment Inc., located in Canton, Michigan, was installed and fully tested for the first time in Hermitage, PA. The 60 inch square by 240 inch hot zone envelope easily passed the stringent AMS 2750E Temperature Uniformity Survey (TUS) of +/- 10°F from temperatures of 300°F to 1450°F. The survey passed on the very first attempt and was put into production immediately. This new piece of equipment will serve to compliment Solar's lower temperature work – especially where surface oxidation is of little concern. It will also be used to economically process many "downstream" processes, including multiple tempering operations, which typically follow vacuum austenitizing treatments. Pictured is the inaugural run of six 4140 rolls that weigh a total of 12,000 pounds. The rolls are used for a variety of steel making industries from forming angles to rolling rebar. For additional information, contact Mike Johnson at 724-982-0660 x2223 or mike@solarwpa.com, and visit us at www.solaratm.com." October 23, 2018



HK 2018 Cologne, Germany

Well it is now a wrap for the HK 2018 heat treatment exhibition in Cologne, Germany and actually the end of the large heat treat shows for 2018 and we are breathing a sigh of relief. We have these final pictures from the show. **October 23, 2018**



Uttis Furnaces; Petruta Druga, Cristian Badina, Gord Montgomery



IVR Furnaces. From Right to Left; Rudy Bastianello, Denis Santoni, Lucia De Marco, Daniele



*Pizzol, Marco Fresch
The SECO/WARWICK Team*



"The Team CIEFFE"

*Front Row; Mr. Andrea Bressan, Mrs. Rossella Boso, Mrs. Melissa De Marco, Mr. Luigino Da Re, Mr. Peter Schweighofer, Mrs. Katia Cais, Mr. Alberto Foda,
Back Row; Mr. Roberto Carpenè, Mr. Angelo Scipione*



Aodh Mac Fhionnbhairr, Bodycote, Gord Montgomery



Roland Weeske, Bastian Schott, Monica Robl, Eduard Lassel, Nidaa Seif-Eddine, Dr. Ing. Rolf Terjung

Monday Morning Briefing

Last week we had a “teaser” news item about what is probably the largest commercially available pit gas nitriding furnace in Europe if not the world, we are now going to give you some more details. Since 1860 **Härterei Carl Gommann GmbH** in Remscheid,

Germany <https://www.gommann.de/en/company/> has been offering commercial heat treating and has become what could arguably be the largest commercial heat treater in Europe when it comes to gas nitriding (*by the way for our North American readers Härterei means hardening*). The company has over 30 furnaces and we would consider the centrepiece to be several mammoth pit gas nitriding furnaces with a working depth of up to 11.300 meters (over 33’), a diameter of up to 4.100 mm (13’) and a weight capacity of up to 100 tons with the larger furnaces being provided

by furnace builder **KGO** of Germany <http://kgo-gmbh.de/> (*the website has both English and*



German and their banner ad can be found on this page). To give you an idea about the size of the furnaces the one photo shows **Harald Roth** of KGO and **Volkher Diehl** of Carl Gommann standing in the pit beside one of the largest furnaces. In addition to gas nitriding the company y also has a very substantial plasma nitriding department.



Gord Montgomery, Harald Roth, KGO



Harald Roth, KGO, Volkher Diehl, QA Manager, Carl Gommann Company

In the US we see that **Tracy Dougherty**, long time Sales Manager of furnace builder **AFC-Holcroft** was recently promoted to Vice President Sales, a promotion which in our opinion is very richly deserved. We hunted through our file photos for an interesting photo of Tracy and came up with this one of Tracy from a couple of years ago taken during a rousing game of paint ball in Michigan. Tracy is standing on the right hand side of the stage dressed in blue. AFC-Holcroft is based in Wixom, Michigan and is one of the largest furnace builders in North America.



In Mexico captive heat treater **Kern Liebers** in Queretaro recently placed on order for a very large pit nitriding furnace a furnace which is not scheduled to be shipped for some time still. In the meantime later on this week we will tell you a lot more about the company, their various heat treating locations around the world and their plans to vastly enlarge their nitriding capacity in China. Let's move to Canada where **Thermetco** <https://thermetco.com/en/home/> just outside of Montreal is making some major investments, investments which include a move to another building. Over the past year the company has invested in a brand new batch IQ line, vacuum capacity, new cooling systems and a host of other investments all while they move from downtown Montreal to a very impressive brand new building on the South Shore. This photo shows one of the company's batch IQ lines being moved into the new building. **Thermetco** is one of the largest, if not the largest commercial heat treater in Quebec.



How about heat treat "stuff" from the **UK**? Commercial heat treater **Wallwork** has added a £130K in-house mechanical testing facility to their Cambridge facility; *"Our new £130K in-house mechanical testing facility, certified by UKAS, at our Cambridge plant is boosting customer order turn-around times. "Destructive testing is mainly specified by customers in Aerospace, however, it is becoming increasingly common in motorsport, medical devices and other industries where there can be no compromise in product integrity. The new facility gives us much quicker results than going out to an external testing lab," explained Andy Fox, operations director at Cambridge."* A couple of our favorite people in the UK heat treating industry are **Matt and James Cross** of furnace controls company **SSI UK**. Matt started the business many years ago and his son James has been following in his footsteps for the past few years. Things change and James has taken a position with another controls company and will be relocating outside of the UK. We can't say enough good things about both Matt and



James but at the end of the day sometimes an offer comes along which is too good to turn down-we wish James the best of luck. **Hauck Heat Treatment Ltd.**, in Letchworth, UK is pretty pleased with their brand new **TAV** vacuum furnace which just arrived as you can see below. It is not yet installed but getting close. TAV is an Italian manufacturer of vacuum furnaces which has a very strong presence in the UK. **October 22, 2018**



Harterei Reese/Bill Andreski

Earlier this week we had some really cool pictures from commercial heat treater Reese in Bochum, Germany (scroll down a bit to see the very large, red hot gear about to be quenched). To further show how small the heat treating industry is, it turns out that a fellow we know well, **Mr. Bill Andreski of MobilMetals** in Cleveland, Ohio, USA has worked extensively with Reese over the years helping the company in the US market. To take it one step further Bill's son (*also named Bill*) actually worked at Reese in Germany several years ago. Bill Andreski by the way is a well known rep in the US selling for companies such as **SSI, Heat Treat Central** and **AFC-Holcroft**. **October 19, 2018**



Wittman Harterei, Germany, Expansion

Back in May of this year we had this note about Wittman Harterei in Germany expanding and promised you some updates (our original post is below). We can now say that the expansion is moving along quite nicely and that it will include two brand new Vacuum Nitriding units. This photo was taken at the just completed HK 2018 show in Cologne, Germany after furnace

builder Rohde received an order for a second unit. From left to right: Raphael Raatz (Deputy Technical Director at Rohde), Natasha Rohde with Konstantin, Joern with Vincent Rohde, Ralph Matthaeus (General Manager Haertere Wittmann) and Andreas Wiesemann (Technical Director at Rohde). **October 19, 2018**

"May 16, 2018; Wittman Harterei, Germany, Expanding; Commercial heat treater wittman harterei in Uhingen, Germany will shortly be doubling the size of their plant and adding some more furnace capacity. The company was founded in 1998 and the main focus is a number of very large Aichelin Sealed Quench (Batch IQ) furnaces. With almost 40 employees the company has found business to be brisk enough to warrant a multi- million euro investment in the firm. The General Manager Ralph Matthaues (top notch fellow by the way) took the time to give us a very complete tour today and what we saw was a very clean, modern and well run shop with completely automated furnaces meaning virtually no operator involvement. While we say this is a commercial heat treater who obviously serves a number of different industries Wittman also has a sister company across the street which produces gears, all of which are heat treated by wittman. The expansion will be completed by the end of this year and we hope to be able to give you an update then."



World's Largest Pit Nitriding Furnace?

We are 99% sure that what you are looking at is the largest pit gas nitriding furnace in Europe and quite possibly the world. It has working dimensions of 4 meters diameter (12') and a depth of 8 meters (24') and a weight capacity of 100 tons. We looked at it very recently and will give you all the details next week. **October 18, 2018**



HK 2018 (Heat Treatment Congress)

We have our first update from the HK 2018 Heat Treatment Congress in Cologne, Germany. As always the show is impeccably organized and well attended. We have these photos to give you a feel for the event. In the first photo we see Dr. Winfried Grafen, Head of AWT (the heat treating organization in Germany) and Peter Lankes of HTC. Peter commented that the HK 2018 event is excellent and that in his opinion the quality of the technical seminars was excellent and superior to most other exhibitions including ones which he attended at the recent FNA exhibition. **October 18, 2018**



Pat McKenna, President, Ipsen USA, Marc Angenendt, CEO, Ipsen Europe



Thomas Dopler, CEO Aichelin Moedling, Bettina Deuretzbacher, Market Communication Aichelin Group Sladjana Jokesz, Assistant to CEO Aichelin Holding Sandra Hinterdorfer, Market Communication Aichelin Group Harald Berger, Market Communication Aichelin Group Wolfgang Brosche, Business Development Aichelin Group Matthias Wolf, CEO Noxmat



From left to right: Raphael Raatz (Deputy Technical Director at Rohde), Natasha with Konstantin, Joern with Vincent Rohde, Ralph Matthaeus (General Manager Haertereii Wittmann) and Andreas Wiesemann (Technical Director at Rohde). Picture was taken after Rohde received the order for the second furnace for Haertereii Wittmann: a chamber furnace for niriding during HK 2018.



Härtereii Reese

If we start off with the basic premise that real heat treating involves carburizing of large parts with oil quenching involved then one of the giants in the industry would be Härtereii Reese, a very large commercial heat treater with 4 locations in Germany, Bochum, Brackenheim, Chemnitz and Weimar. Like many in the industry this is a family owned company started in

1948 and with roughly 250 employees it is a big operation. We have mentioned the company before for a number of reasons, the main one being that it boasts the largest pit carburizing furnace we know of, a monster with a working diameter 5,000 mm (196"). A typical load can be seen in these photos (Bochum facility) which shows a large gear about ready for quenching. By the way as a Canadian we got a great deal of joy out of the fact the company hoisted a Canadian flag in our honour. **October 17, 2018**



From Left To Right; Phillip Reese, Mr. Dollekes, Plant Manager, Joachim Reese, Gord Montgomery, Norbert Schremb, Martina Reese, Gerd Reese, Ulrich Reese



Cambridge Heat Treating, Canada

Like many captive and commercial heat treaters around the world commercial heat treater Cambridge Heat Treating <http://cambridgeheattreating.com/> in Cambridge, Canada are finding the need for additional capacity. This photo shows one of two batch IQ furnaces the company just installed, as a matter of fact this was the very first load run though this furnace. **October 17, 2018**



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 **Bodycote**

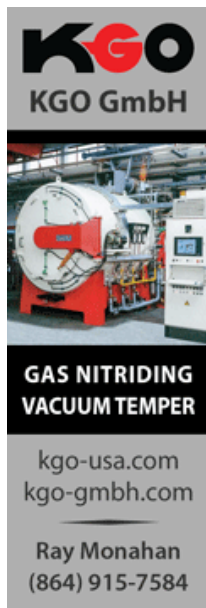
KGO GmbH, Germany

At this moment the HK 2018 Heat Treatment show which is the largest heat treat exhibition in Europe in 2018 is taking place. We at “The Monty” are in attendance and taking the opportunity to see a number of companies in Germany which are related to the heat treating industry. One which we visited today was furnace builder KGO located just outside of Cologne. In these photos we see the KGO team and also a batch IQ furnace which is currently under construction. **October 17, 2018**



Paulo Ads Hot Isostatic Pressing

Well, well we see that **Paulo** has joined a very small elite group of companies in North America able to offer **Hot Isostatic Pressing** (or **HIPPING** which is a lot easier to say). We

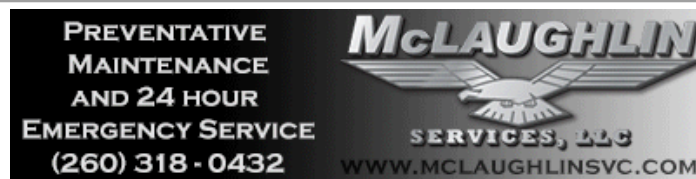


have this press release from Paulo and further down the Wikipedia definition for those not familiar with this relatively uncommon heat treating process. *“Paulo is excited to announce the purchase of a Hot Isostatic Press from Quintus Technologies. The HIP vessel will be installed in the Cleveland Division’s recent expansion and primarily support densification and heat treatment of investment castings and additively manufactured parts. Paulo’s Cleveland Division currently supports the Aerospace and Power Generation industries with Heat Treatment and Brazing. The addition of HIP will provide additive manufacturers and casting houses a one stop shop for thermal processes. The working dimensions of the vessel are 26” diameter and 68.9” height. The vessel is capable of a maximum temperature of 2552F and maximum pressure of 30,000psi of Argon. This size and configuration is well*

suited to support additive manufacturing and the ability to combine HIP and heat treatment will allow for faster turnaround time through thermal processing. Scott Herzing, Vice President

Engineering, commented, "This is an exciting addition for Paulo. We see the market for HIP expanding, with a large part attributed to additive manufacturing. We want to be a part of that. Working with a market leading company like Quintus is a good fit for Paulo and this partnership will allow us to continue to do what we have always done, help our customers succeed."

"Wikipedia Definition; Hot isostatic pressing (HIP) is a manufacturing process, used to reduce the porosity of metals and increase the density of many ceramic materials. This improves the material's mechanical properties and workability. The HIP process subjects a component to both elevated temperature and isostatic gas pressure in a high pressure containment vessel. The pressurizing gas most widely used is argon. An inert gas is used so that the material does not chemically react. The chamber is heated, causing the pressure inside the vessel to increase. Many systems use associated gas pumping to achieve the necessary pressure level. Pressure is applied to the material from all directions (hence the term "isostatic")." **October 17, 2018**



BULTEN, Sweden/HQM Heat Treatment, Germany

So, what the heck does a fastener manufacturer in Sweden have in common with a commercial heat treater in Germany? They are both getting set to receive new furnaces from Aichelin in Austria.

Back on September 3 of this year we had a press release about how captive heat treater **BULTEN** in Sweden had ordered a second cast link furnace line from **Aichelin** (this is the abbreviated press release we used at the time); "Swedish fastener manufacturer BULTEN has commissioned heat treatment specialist AICHELIN with the production of a cast link belt furnace for heat treating of high-strength steel screws and nuts. At 80 meters in length, the furnace has a capacity of 2 tons per hour and is scheduled to be shipped by December 2018. It is the second industrial furnace plant for the Swedish Hallstahammar site." This photo which we took yesterday and shows the almost complete furnace in the Aichelin plant in Moedling,

Austria with the man in charge, **Mr. Thomas Dopler**, CEO of Aichelin, Moedling. **October 16, 2018**



HQM Heat Treatment is a commercial heat treater with locations in both West and East Germany. In the photo below, you see a large “through feed” sealed quench furnace (*batch IQ for us North Americans*) almost ready for shipment to the company. This the 10th sealed quench furnace provided to HQM over the years plus ancillary equipment.



Roger A. Jones Named 2018 ASM Fellow

Solar Atmospheres' CEO, Roger A. Jones, will be awarded the distinguished honor of ASM Fellow (FASM) at the upcoming ASM Awards Dinner being held on Tuesday, October 16, 2018 at the MS&T18 Conference in Columbus, OH. According to ASM, “The honor of Fellow represents recognition of distinguished contributions in the field of materials science and engineering, and develops a broadly based forum for technical and professional leaders to serve as advisors to the Society.” Roger’s citation reads: “For advancing production vacuum thermal processes and procedures for large and heavy assemblies utilizing state of the art vacuum furnaces, for the enhancement of the overall heat treating industry.” Roger’s comment on becoming FASM, “I am extremely honored to receive this most prestigious ASM award. This highest award in the field of materials science signifies the culmination of my 45 year vacuum heat treating career. I would like to thank ASM, my colleagues who recommended me and my family for all of their support over the years. I am so proud to be inducted into the ASM 2018 Class of Fellows.” **October 16, 2018**

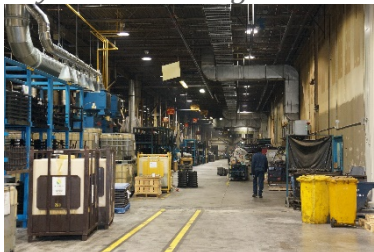


Monday Morning Briefing

A few weeks back we had a story about **Complete HT** in Milwaukee buying another heat treat in the area, **Commercial Heat Treating Inc.** As a footnote to that story we have this article; *"The operator of the Harbor District's first apartment and retail development is planning to to buy a nearby site overlooking Milwaukee's Kinnickinnic River. The site includes a 30,000-square-foot industrial building that houses Commercial Heat Treating Inc. That firm is merging with Complete Heat Treating, 1530 S. Barclay St., and is moving out. The building likely will be demolished to make way for new construction. **October 15, 2018***



There were a number of news reports about a fire at auto parts supplier and captive heat treater **Linamar** in Guelph, Canada most of them overblown. At the end of the day it was quite a minor incident with little damage. Linamar has the largest batch IQ installations in North America and is one of the fastest growing auto parts makers in the world. *"There were no reported injuries following a fire at Linamar Gear early Tuesday morning. Shortly before 2:30 a.m. on Oct. 9, Guelph firefighters were called to a reported fire at 32 Independence Place. On scene, firefighters saw smoke coming from the roof of the building. According to a news release from the fire department, there was a "fire inside a heat treating furnace within the building." The news release adds that the fire was quickly brought under control and subsequently put out once the natural gas shut off valves were found on the roof of the building. There were no reported injuries to Linamar staff or to firefighters. The cause of the fire, along with a damage estimate, is currently under investigation."*



Where Are They Now-**David Pye**. As a long time consultant to the industry David is a well known figure in the industry. Recently he made the decision to move back to the US; "Hello Gordon, This is David at Pye Metallurgical International Consulting. I am back in the USA and relocating into Hampton Virginia. I am resurrecting Pye Metallurgical International Consulting and heat treat education. Web site is at <http://www.heat-treatment-metallurgy.com> You will see that it contains a great deal on India. I have worked extensively in India on defence projects, forging/machining heat treatment, surface treatment, also on educational training, on Heat Treatment of metals."

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Radioactive Firebrick. A heat treater recently sent several furnaces to a scrap dealer where they were refused due to the fact that the brick was supposedly radioactive. The scrap dealer would accept the furnaces but only if all the brickwork was already removed. Now this is a new one on us and we did a little bit of digging-one used equipment dealer said that he has run across this several times over the years but each time it proved to be a scam, basically if he accepted a lower price for the scrap the problem would go away. However in this situation the heat treater trying to scrap the furnaces actually observed supplementary hand held scanner in use which did seem to indicate radioactivity in the brick but not in the all metal sections of the furnace. Has anybody out there run across a similar situation? It's a first on us but anything is possible. **Nickel pricing.** The graph below showing nickel pricing over the past 5 years should bring joy to every heat treaters heart. Basically we see it on a slight downward trend after some peaks earlier this year and remaining at a mid point compared to the past few years. At the end of the day this means relatively stable pricing for baskets, trays, radiant tubes and fixturing.



Furnaces North America (FNA). The largest heat treat exhibition of 2018 in North America (FNA) is now over and we have these final photos from the exhibition;



Bernie Parry of Heat Treat Central



AFC-Holcroft



Furnace Builder Rohde of Germany

What's upcoming? We have a number of real interesting things lined up for the near future which include; a completely redesigned ***"The Monty"*** website, a visit to the largest atmosphere furnace company in the world ***Aichelin*** in Austria, an interview with ***Mr. Marc***

Angenendt, CEO of Ipsen Europe, complete coverage of the **HK18 Heat Treat Exhibition** in Cologne, Germany, a profile of several captive and commercial heat treaters in **Germany** and some interesting announcements about “people” changes in the North American heat treating industry.



Furnaces North America

Another Heat Treat exhibition in this case the Metal Treating Institute (MTI) Furnaces North America show is now over. Lasting from Monday October 8th to Wednesday October 10th in Indianapolis, Indiana, USA the show attracted approximately 1,500 visitors. We at “The Monty” would call it a success and we will say that everybody we spoke to agreed that it was well organized and well attended. Having said all of that we do have one complaint, a complaint which we made at the last show and that has to do with the hours that the actual expo was open-in this case 11:15 AM to 5:30 PM on Tuesday and from 10:30 AM to 2:30 PM on Wednesday. Our feeling is that two half days do not do justice to the amount of time and money invested by the exhibitors and many of the visitors. The flip side is that the day is split into early morning technical sessions followed by the Expo itself which makes for a more organized, planned day. We freely admit that we are in the minority on this and also freely admit that the event was very successful and we as always had fun. You will find some photos of the event below with more to come over the next few days. **October 12, 2018**



The McLaughlin Services Team



Quench Oil Specialists Idemitsu



Furnace Controls Company Eurotherm



Nicholas Spieldenner and Chad Haines, Wirco



Cleveland Electric

SECO/VACCUM Sells Vector Vacuum Furnace

“Vector®, one of the SECO/VACUUM (a SECO/WARWICK Group company) flagship vacuum furnaces, will soon enhance the in-house heat treat capabilities of another company in the tool & die industry. The company taking possession of the furnace has multiple Vector furnaces and chose to purchase another one to meet growing customer demand. The company has been using equipment designed by SECO/VACUUM for more than twenty years. Now, due to increased demand, the company is expanding its capabilities, and because of the long-term, successful

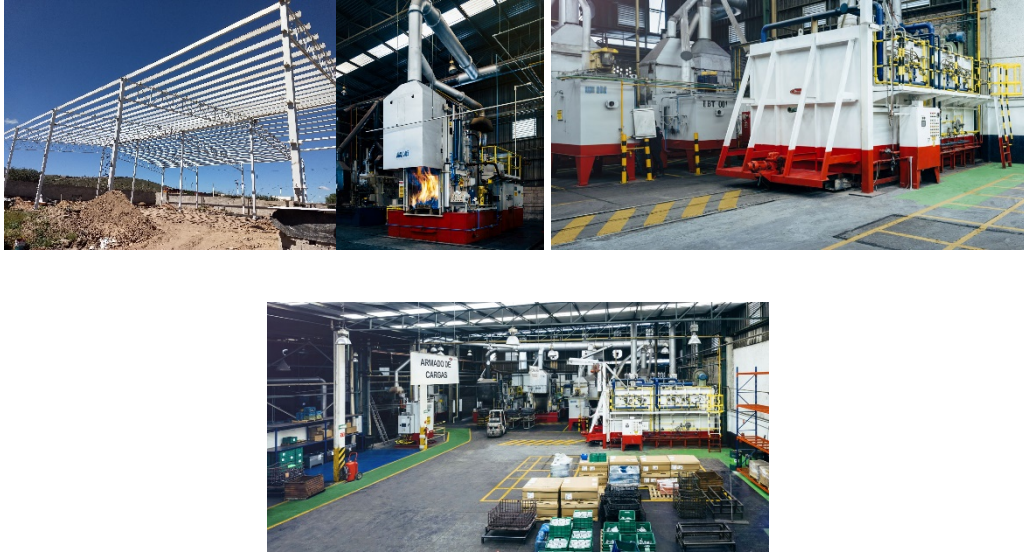
history with SECO/VACUUM, the consistent performance of the furnace, as well as the excellent service they've received, the company stayed with SECO/VACUUM and purchased another Vector.

Test Results; The purchase process included validation tests of tooling dies in a similar, nearby furnace. The positive test results confirmed the company's resolve to grow their relationship with SECO/VACUUM. The furnace being delivered is a horizontal, front-loading Vector furnace with a capacity of 2,650 lbs. Vector is a tool and die industry star; "Vector is the most popular gas quenching vacuum furnace design in the industry. It is SECO/VACUUM's workhorse product line, with built-in capabilities for heat treating a wide range of products and processes. Other tool and die companies may find the purchase of a Vector furnace an economical way to bring heat treating in-house or enhance current in-house heat treating capabilities. Considering its ease of use and low maintenance needs, Vector is an ideal choice for the tool and die industry," said Piotr Zawistowski, Managing Director of SECO/VACUUM Technologies. Learn more about Vector at <https://www.secovacusa.com/product/vector-single-chamber-high-pressure-gas-quench>" **October 12, 2018**



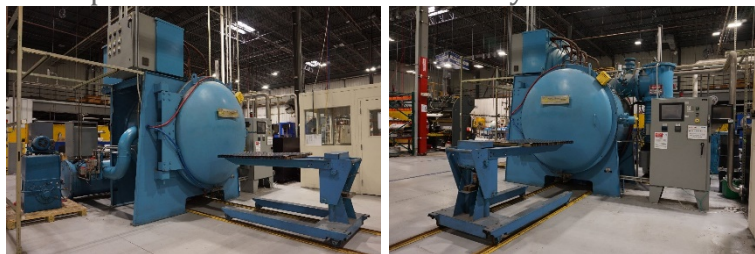
New Commercial Heat Treat Plant in Mexico

The photo below shows the framework of a new commercial heat treating facility in San Luis Potosi, Mexico. The facility is being built by one of the largest commercial heat treaters in the country, CRIO. This facility will be the third the company has with the others located in Queretaro and Saltillo. While we at "The Monty" have visited the plants in Queretaro and Saltillo our photos have become rather dated so Esteban Aguilar, GM of CRIO very kindly provided these updated pictures of the Queretaro location. CRIO is closely associate with MATTSA the largest new furnace builder in Mexico. We will keep you updated on the San Luis Potosi project which will include updates on what equipment the company plans to install. **October 11, 2018**



Technetics Auction-What's It Worth?

Recently as part of a Monday Morning Briefing we mentioned that machine shop **Technetics** in Oxford, MA, USA was auctioning off some equipment including this vacuum furnace; *"Abar HR 50 Vacuum Furnace, 36W x 30H x 48D Load, Atmospheric Quench 30 HP Fan, 20" Diffusion Pump, Stokes 412 Mechanical Pump, Graphite Hot Zone Insulation w/Moly Elements, Furnace Partially Rebuilt in 2009, Touch Screen Controls w/PLC, Wiring, Plumbing, Valves and Hot Zone"*. The auction did indeed take place October 9th and as we predicted the furnace sold immediately for top dollar. To be exact it sold for \$185,000 USD which included the furnace, spare parts, a spare vacuum pump and a leak detector. Top dollar indeed but no surprise to us. No idea who the buyer was. ***October 11, 2018***



Kentucky Heat Treating/Bodycote

So just two days ago we broke the news about worldwide commercial heat treater Bodycote acquiring Kentucky Heat Treating of Winchester, Kentucky, USA (scroll down this page for all the details). As a foot note to this story we have this very interesting photo of ***John***

Hubbard (former CEO of Bodycote, now with Thermal Process Holdings), **Ed Stenger** (former owner of Kentucky Heat Treating) and **Dan McCurdy** (President, Bodycote Automotive and General Industrial Heat Treatment, North America and Asia). This makes for an interesting photo and shows you how close the heat treating industry is. **October 10, 2018**



Furnaces North America

Live from Indianapolis, Indiana, USA we have these photos from the FNA show which is happening as we speak. **October 10, 2018**



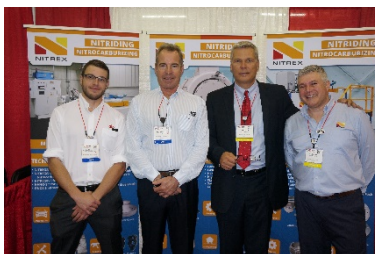
The ATP Team



Griffith and Bill Braddock (Braddock Metallurgical), Gord Montgomery



Jim Demarest, SAFE Cronite, Buster Crossley, Texas Heat Treating, Gord Montgomery



Jordan & Gord Montgomery (The Monty), Jack Kalucki and Paul Gofas (Nitrex Metal Inc.)



Mike Neumann, Paulo, Jordan Montgomery, "The Monty", Josh Hale, ISP

Bodycote Acquires Kentucky Heat Treating

Rumors have been circulating that commercial heat treat giant **Bodycote** has made yet another acquisition, with the rumors suggesting that it is Kentucky Heat Treating in



Winchester, Kentucky, USA. To either confirm or deny this rumor we approached **Mr. Dan W McCurdy**, P.E., President, Automotive & General Industrial HT, Bodycote, North America & Asia. Dan did indeed confirm that Bodycote acquired Kentucky Heat Treating October 4, 2018 from the previous owner, **Mr. Ed Stenger**. Dan also had this to say; *"We are very happy to have the company join our Automotive and General Industrial Southeast Region which also includes Morristown (TN), Fountain Inn (SC), Athens (AL), and Covington (GA)."*

From the Kentucky Heat Treating website <http://www.kyheattreat.com/index.html> we have this description of the company; *"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. Over the years, due to customer requests, we have added a number of new furnaces including vacuum furnaces up to 10 bar quenching, multiple batch IQ furnaces, car bottoms and nitriding furnaces.” October 9, 2018



Furnaces North America

While the exhibition portion of the Furnaces North America (FNA) show in Indianapolis, Indiana, USA is not yet open a number of companies are taking the opportunity to hold sales meetings prior to the show. These three photos were taken at the SSI (furnace controls) sales meeting which was held the morning of Monday, October 8. Each of these three companies, ***“The Duffy Company”*** (Chicago, USA area), ***“SSI Mexico”*** and ***Jack Bai of SSI, China*** received orders for sales growth of over 20% in the past year. *October 9, 2018*



Duffy Company



Jack Bai SSI China



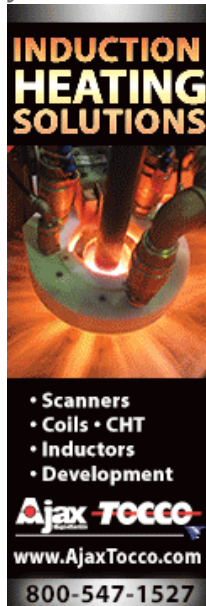
SSI Mexico

Monday Morning Briefing

It would appear that pre registration for **Furnaces North America** (FNA) which takes place next week shows a total of 1449 registered attendees-this includes both visitors and exhibitors. A very quick break down shows that roughly a third of this total are actual heat treaters. We would be curious to know whether this attendance is good, bad or indifferent as compared to previous shows. If you follow this link <https://www.themonty.com/10-largest-north-american-captive-heat-treaters/> you will find our list of the largest captive heat treaters in North America with heavy equipment manufacturer **Caterpillar** being ranked as the largest on the continent. Having said that, the company recently celebrated “Manufacturing Day” at their facilities around the world which included a tour of their Technical Center in Illinois. We mention this today because the photo below was obviously taken in the heat treat department with the Atmosphere Furnace Company logo very predominantly displayed in the background. **October 8, 2018**



Recently there was a very significant acquisition in the commercial heat treating industry in North America when **Premier Thermal Solutions** acquired **Alfe Heat Treating**-between you and I we will very confidentially predict that we will be hearing about others in the near



to medium future. In the mean time here is an opportunity in the Chicago area, a small brazing company for sale. *“Chicago area furnace belt brazing company. This represents an excellent opportunity as a stand alone company, or as an addition of furnace brazing to the local heat treaters list of processors, a local brazing company who wants to expand their sales & customer base, or the perfect opportunity for an outside the area thermal processor to enter the Chicago market with a well established customer base. Owner anxious to retire! For information contact: Steven Hamel, Lemah Associates Ltd., 847-433-9296, Lemahassocltd@yahoo.com”* Speaking of commercial heat treating **Metex Heat Treat** in Canada have been invested like mad fools this year to be able to keep up with demand. The photo below shows their most recent acquisitions an AFC-Holcroft Batch IQ furnaces with working

dimensions of 36” X 48” X 36”, we believe this is now their 5th batch IQ furnace this size. In addition the company recently replaced an older **Rogers** cast link belt furnace with a newer Can Eng mesh belt unit.



German fastener manufacturer **KAMAX** announced earlier this year that they would be setting up a brand new manufacturing facility in Mexico which would be in production early in 2019 (the official announcement is below). We mention this because the facility will include an in house heat treating department. *“German manufacturer Kamax announced plans to invest US\$ 45 million in the municipality of Leon, Guanajuato to build a plant dedicated to the production of high strength fasteners for the automotive market. The facility, Kamax first manufacturing site in Latin America, will be located in the Colinas de Leon industrial park. The company plans to open 215 job positions in order to star operations by March 2019. Kamax has already orders in Mexico for US\$ 25 million, company officials said during the ceremony to*

unveil the investment plan, which took place at the Hannover Messe 2018 industrial fair in Germany. The company employs 3,300 workers at facilities in Germany, Spain, Czech Republic, United States and China. Around 72% of its sales come from light car manufacturers while the remaining 28% comes from the commercial vehicles segment. BMW, General Motors and Volkswagen are among its main customers."



Where are they now-**Mike Wellham**. Mike was CEO of commercial heat treater Bluewater Thermal where he did a darn good job of running the company. Mike left the heat treating industry a little while back and we understand that he is now President, COO and Board Member at **Advanced Integration Technology**. According to **Fred Hamizadeh**, who is in charge of heat treating at **American Axle & Manufacturing**(another company we ranked among the ten largest captive heat treats in North America) the AAM is looking for 2 heat treat engineers with experience in gas carburizing and/or induction heat treating. We understand the positions can be found on the AAM website. We had a note not that long ago about **Siegener Werkzeug- und Härtetechnik GmbH** in Siegen, Germany ordering a band new **Rohde** vacuum nitriding furnace. SWF ordered the furnace, received the furnace and a week after receiving it ordered another unit, again from Rohde. We will be visiting this facility next week and hope to have some more photos.



Brazing Company For Sale

Chicago area furnace belt brazing company. This represents an excellent opportunity as a stand alone company, or as an addition of furnace brazing to the local heat treaters list of processors, a local brazing company who wants to expand their sales & customer base, or the perfect opportunity for an outside the area thermal processor to enter the Chicago market with a well established customer base. Owner anxious to retire! **October 5, 2018**

For information contact: Steven Hamel, Lemah Associates Ltd., 847-433-9296, Lemahassocltd@yahoo.com



Process Electronic Gmbh Gains ISO 9001

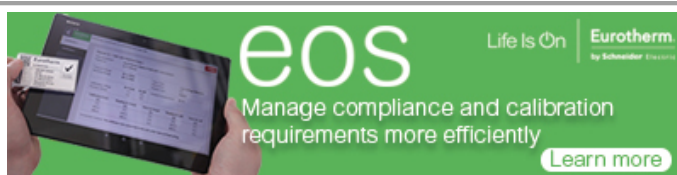
"Process-Electronic GmbH, a member of United Process Controls and a global supplier of industrial process control and automation solutions for heat treating OEM and end users, is now certified ISO 9001:2015. The company previously earned certification under ISO 9001:2008 in 2008 and has been audited and registered since 1999. The latest ISO 9001 standard places higher requirements on companies to improve communications, efficiency, and implementation of continuous improvement, and likewise demonstrates commitment to customer satisfaction and high-quality products and services.

*"ISO 9001:2015 is another step forward to assuring that customer needs are identified and met," noted Dieter Borth, Quality Manager of Process-Electronic. "The processes we have implemented in Germany make it possible to identify opportunities for the constant improvement of operational performance, which has a positive impact on our company as well as our end-market customers. Delivering high-quality customer-focused control solutions has always been a fundamental part of our business, from our start in 1974 through today, and across all the companies of United Process Controls." **October 5, 2018***



Furnaces North America Attendance

Next week will see the FNA (Furnaces North America) show which is being held in Indianapolis, Indiana, USA and the big question as always for the exhibitors will be attendance-good, bad or indifferent? We have always been strong believers that when the industry is healthy so is attendance at heat treat shows and we assume this to be the case next week and yet we have come across a rather odd scenario. Over the past week we have spoken with a few heat treaters both captive and commercial who say that they would love to attend but can't-and the reason? Because business is so good they can't afford the time away. Whether this is a wide spread scenario is hard to say but it would be rather ironic if attendance was lower than expected because individuals are too busy to be able to attend. **October 4, 2018**



Titanium Heat Treatment Services/UK

Lets have a look at a commercial heat treater in the UK, Titanium Heat Treatment. We first ran across the company back in 2016 when we had this press release about the company. *"2016 POST; Titanium Heat Treatment Services/ Buckinghamshire, UK. There is a brand new commercial heat treater in the UK which just opened for business, Titanium Heat Treatment Services in Buckinghamshire. The company says that it will offer Heat Treatment of Titanium, Aluminium and Precipitation Hardened alloys for the motorsport industry. We don't know much about the company except that the director is a fellow by the name of Pawel*

Danielewicz who was with TTI Group (now Hauck Heat Treatment) for many years.” Fast forward to 2018 and obviously the company is doing well with a new location and more equipment arriving as you can see in the attached photos. We will keep you updated. **October 4, 2018**



**‘Hot Box’ systems for furnace
surveying (AMS2750 & CQI-9)**

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P&L Heat Treating & Grinding Expansion

In Youngstown, Ohio, USA P&L Is finding business to be good enough to warrant an expansion and more vacuum furnaces which brings joy to our hearts at “The Monty”. We will hasten to add that the joy in our hearts is not because we sold P&L their new equipment but because we always like to see commercial heat treaters doing well. *“A \$460,000 expansion for a city heat-treating firm moved one step closer to execution Tuesday morning. The city’s Design Review Committee, at its monthly meeting, approved a proposal from P&L Heat Treating & Grinding Inc. to erect a 9,135-square-foot pre-engineered metal building adjacent to its 25,000-square-foot building at 313 E. Wood St. “It’s a big time for us,” **William Pociask, P&L President**, told members of the committee. “It’s an exciting time because we’re expanding. We’re growing labor-wise, size-wise and equipment-wise.” The expansion will house additional vacuum furnaces for heat treating of metals, Pociask said. The company recently picked up “a big contract” with American Axle & Manufacturing Inc., a major supplier to the North American automobile industry. “That did quite a bit for us,” along with general optimism regarding the economy, he said. The company already is running around the clock to keep up business, and he said he plans to add at least three employees to P&L’s existing workforce of 17.” **October 4, 2018***



California Brazing Purchases Ipsen Vacuum Aluminum Brazing Furnace

To this press release we will add that combined California Brazing and their sister company Nevada Heat Treating are one of the larger heat treating/brazing companies on the west coast of the US.

"Newark, CA – California Brazing recognizes the Aerospace industry's need for optimal thermal processing equipment and is continuing to expand their capacities to better support the industry's increased demand for aluminum brazing services. California Brazing offers manufacturing sequence expertise with capabilities for rapid prototyping through turnkey manufacturing of brazed assemblies that require furnace brazing, machining and outside process supplier management. They recently purchased their fourth vacuum aluminum brazing (VAB) furnace. This VAB furnace features a 38" x 40" x 62" (964 mm x 1,016 mm x 1,575) all-metal hot zone with a 1,500-pound (680kg) load capacity, and it operates at temperatures of 500 deg F to 1,200 deg F (260 deg C to 650 deg C) with +/-5 deg F (+/-3 deg C) temperature uniformity. It is also equipped with a 35-inch diffusion pump and Ipsen's CompuVac(R) controls system. Featuring multiple individually controlled heating zones, Ipsen's vacuum aluminum brazing furnaces provide fast cycle times and precise, uniform heating of the workload. According to Jeff Ager, General Manager at California Brazing, "California Brazing is committed to meeting our customers' requirements by continuing to invest in brazing and machining equipment to further improve capabilities, lead times and quality." As such, California Brazing will use this VAB furnace to expand their capacity and manufacture a variety of aluminum-brazed

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assemblies, such as cold plates, heat exchangers, waveguides and antennas, for their customers in the Aerospace, Defense and Semiconductor industries.” **October 3, 2018**



SECO/VACUUM Furnace Becomes Centerpiece in New Processing Line For Global Manufacturer

“A global manufacturer has chosen SECO/VACUUM, a SECO/WARWICK company, to supply a second vacuum furnace to its US-based manufacturing operations. This second furnace, a vacuum temper furnace for tempering and stress relieving metal parts, is part of the company’s



new US-based manufacturing expansion and becomes a centerpiece in a new processing line for the company. This horizontal, front-loading furnace is designed specifically for the customer needs with an all-metal hot zone for clean vacuum processing. The unit includes a convection fan and a pressurized gas quench for quick cooling. After weighing design, cost, and delivery options from multiple furnace manufacturers, the customer chose SECO/VACUUM thanks to the company’s special vacuum temper furnace design, competitive pricing, and timely delivery.

SECO/VACUUM offers vacuum furnaces of all type, sizes and capabilities from vacuum oil quenching and low pressure carburizing to high pressure gas quench. Even basic units such as the vacuum temper are part of the broad offerings. Each year SECO/VACUUM and its parent company, SECO/WARWICK, build scores of vacuum furnaces for the global heat treating markets.

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

*Visit www.secovacusa.com. **October 3, 2018***



Largest Commercial Heat Treaters North America

Yesterday we had a press release about Premier Thermal Solutions acquiring Al-fe Heat Treating. With this acquisition we were required to redo our list of the largest commercial heat treaters in North America, a list which can be found at <https://www.themonty.com/largest-commercial-heat-treaters-in-north-america-august-2018/> To cut a long story short Z-Capital a name unheard of in the heat treating industry a couple of years ago now through their acquisitions ranks as the third largest commercial heat treater in North America. **October 2, 2018**

Z Capital-Backed Premier Thermal Solutions Acquires Al-Fe Heat Treating

This past Friday we posted a rumor about a major acquisition in the North American commercial heat treating market. Well surprise, surprise our rumor proved to be true as you can see below. With this acquisition Z Capital becomes one of the largest commercial heat treaters in North America-tomorrow we will tell you where the company now ranks in terms of the largest in North America. **October 1, 2018**

*"LANSING, Mich., Oct. 1, 2018 /PRNewswire/ — **Premier Thermal Solutions** ("PTS" or the "Company"), a leading provider of metal heat treating services, today announced that it has acquired **Al-Fe Heat Treating** ("Al-Fe"), the largest commercial aluminum heat treater in the United States. For 40 years, PTS has provided commercial metal processing services to a variety of industries, including automotive, heavy truck, energy, wire rope, heavy equipment, rail, agriculture and aviation, through its wholly owned subsidiaries, Atmosphere Annealing and NitroSteel. Since opening its first plant in Lansing,*



Michigan, in 1978, PTS has strategically expanded to five facilities in four locations across the Midwest. "With the acquisition of Al-Fe, PTS has expanded its service offerings to include both ferrous and aluminum heat treating services. This is an important diversification of our portfolio as we expect to see substantial growth in the use of aluminum in the automotive industry as well as in a variety of other industries that we serve," said Steve Wyatt, President of PTS. "In addition to its aluminum processing capabilities, Al-Fe is Nadcap certified which will allow PTS to enhance its service offerings in other end-markets such as aerospace and defense." "Al-Fe is a valuable addition to PTS' product and service portfolio and we are pleased to welcome the Al-Fe team to the Z Capital family," said James Zenni, Founder, President and Chief Executive Officer of Z Capital. "Strategic growth is a core component of our investment strategy for PTS and this acquisition represents an important step in creating one of the largest commercial heat treaters with the most value-added and diverse service portfolio in the United States." "We are thrilled to have closed this transaction and expect to announce incremental acquisitions over the next 12 months," said Rahul Sawhney, Senior Managing Director of Z Capital. "After carving out PTS from its prior owner in 2017, the PTS executive team, with the support of Z Capital's operational resources, solidified PTS' infrastructure, making the Company acquisition-ready. Not only does Al-Fe add incremental heat treating capabilities, but also further strengthens the collective talent at PTS, which will be instrumental in continuing to provide superior customer service." Premier Thermal Solutions was acquired by Z Capital Partners, LLC in 2017."



USED EQUIPMENT

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

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

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

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

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

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

BATCH FURNACES

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

[Contact Us](#)

Quick Jump To Items:

- Item # B460** Super 30 Batch IQ
- Item # B459** Surface Combustion Batch IQ
- Item # B458** Box Furnace, 70" X 42" Retort 2,000F
- Item # B455** Lindberg Box Furnace
- Item # B454** Lindberg Box Furnace
- Item # B453** Williams Industrial Batch IQ's (2 Available)
- Item # B452** Applied Heat Technologies (AHT) Fluidized Bed Furnace
- Item # B451** Surface Combustion "Super 30" Allcase
- Item # B449** Air Atmosphere Box Furnace 2,000 F
- Item # B448** Tip Up Furnaces (3 Available)
- Item # B445** Surface Combustion "Super 36" Furnaces (3 available)
- Item # B444** BOREL Furnace 550 °C
- Item # B443** SOLO Heat Treatment Line
- Item # B442** SOLO Quenching Machine
- Item # B441** GM Batch IQ with Top Cool
- Item # B439** Surface "Super 36" Allcase
- Item # B438** Holcroft Batch IQ Furnace
- Item # B437** Ipsen Recirculating Box Furnace
- Item # B436** 36" x 60" Pit Gas Nitrider
- Item # B426** Plasma Nitriding Unit 1000 kg Capacity
- Item # B425** Box Furnace 2000 F
- Item # B415** J.L. Becker Car Bottom 1800 F
- Item # B399** Car Bottom Furnace 10' x 12' x 8'
- Item # B398** Sauder Batch IQ Line 24" x 24" x 36"
- Item # B397** "Lift-Off" Atmosphere Box Furnaces (2)
- Item # B374** Atmosphere Box Furnace 2100 F

Item # B352 Pacific Scientific Box Furnace

ITEM # B460

SUPER 30 BATCH IQ 30" X 48" X 30"

Surface Combustion "Super 30" Allcase Batch IQ furnace. Working dimensions of 30" x 48" x 30". Serial number BX 37769. Early 1970's vintage. Alloy in good condition and comes with a new spare trident tube. 2,000 F operating temperature, gas fired. Updated SSI controls. Currently installed and in good condition.

Asking Price \$45,000 USD



ITEM # B459

SURFACE COMBUSTION BATCH IQ

Surface Combustion batch IQ furnace. Serial number BX 36347-1. Gas fired, 1750 operating temperature. Endo atmosphere. 800 pound capacity. Does not require a pit. Complete and installed. Updated SSI controls with oxygen probe. Alloy and brickwork in fair condition. Working dimensions of 24"W x 36" deep X 20" high. Some cast fixturing is also included.

Asking Price \$25,000 USD



ITEM # B458

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

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

Asking Price \$80,000 USD

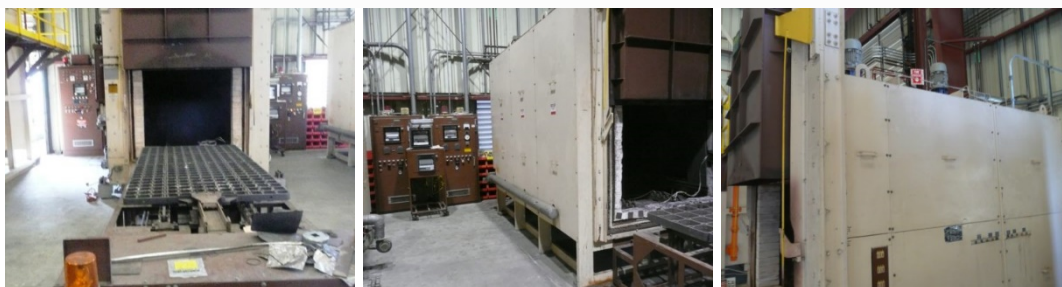


ITEM # B455

LINDBERG BOX FURNACE

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

Asking \$95,000 USD.



ITEM # B454

LINDBERG BOX FURNACE

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

Asking \$75,000 USD.



ITEM # B453

WILLIAMS INDUSTRIAL BATCH IQ'S (2 AVAILABLE)

Williams Industrial Batch, high temperature, electric, Internal Quench furnaces. 24" W X 36" deep X 24" high load size. Mid 1990s built. 2 identical units available. Currently used for solution heat treat, water and Polymer quench. Max temp. 2100F, very tight $\pm 10^\circ\text{F}$ or better uniformity. Set up for Nitrogen atmosphere. Waukee meters for air and N₂ with solenoids tied to recipes. SSI Oxygen probe with panel/display. Sand Lion PLC touch screen controls for recipes, charting, temp, agitator, atmosphere control etc. Horizontal SiCarbide glow bars for heating. SiCarbide rails make up the hearth for tray support and transfer. Chain guide and roller rails over the quench vestibule. Air operated inner and outer doors. Units are in use but ready to take out for the floor space. Transfer car not included.

Asking price \$25,000 each.



ITEM # B452

APPLIED HEAT TECHNOLOGIES (AHT) FLUIDIZED BED FURNACE

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

Asking \$99,000 USD



ITEM # B451

SURFACE COMBUSTION "SUPER 30" ALLCASE

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

Asking \$40,000 USD.



ITEM # B449

AIR ATMOSPHERE BOX FURNACE 2,000 F

Lindberg/MPH air atmosphere box. Model Number: 11-ROMT-243624-20, Job Number: 224745. Chamber Dimensions: 24” W x 36” D x 24” H. Electrically heated 40KW. Max Temp: 2,000°F. Capacity: 1,200 lbs. @ 2,000°F. Elect. Input: 480/3/60. SCCR Rating: 65 KW. F.L.A.: 5 AMPs. Elect. Drawing: 7315-1134-00A. Largest Motor/Load: 40 KW. Control Panel is included. Manufactured Date: September 2016. Never used this unit is available for immediate delivery with a full warranty.

Asking \$60,000 USD.



ITEM # B448

TIP UP FURNACES (3 AVAILABLE)

Tip Up Furnaces (3 available). Manufactured by Kleenair Products these “Tip Up” style furnaces have working dimensions of 60” wide X 60” high X 72” long. Natural gas heating-

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

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



ITEM # B445

SURFACE COMBUSTION "SUPER 36" FURNACES (3 AVAILABLE)

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



ITEM # B444

BOREL FURNACE 550 °C

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

Price on request jordan@themonty.com



ITEM # B443

SOLO SWISS HEAT TREATMENT LINE

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

Price on request jordan@themonty.com



ITEM # B442

SOLO QUENCHING MACHINE

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

Price on request jordan@themonty.com



ITEM # B441

GM BATCH IQ WITH TOP COOL

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

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

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

Asking Price: \$150,000.00



ITEM # B439

SURFACE "SUPER 36" ALLCASE

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

Please call for pricing.



ITEM # B438

HOLCROFT BATCH IQ FURNACE LINE

Holcroft Batch IQ Furnace Line. Model GP2500. Serial Number S/N #CJ-4233. Installed new in 1980. Gas fired, working dimensions of 30" X 48" X 30" and a capacity of 2500 pounds. Furnace was operational until shut down on 11/30/17 when plant closed. Also included is a double ended charge car (Holcroft) to handle loads of 30" X 48", a Holcroft

Spray/Dunk washer with heating system 30" X 48" X 30" and 2 load tables, 1 stationary and 1 scissor lift. Complete, in very good condition and ready to go.

Asking \$125,000 USD for everything.



ITEM # B437

IPSEN RECIRCULATING BOX FURNACE

Ipsen Recirculating Box Furnace 38" high x 43" wide x 48" deep. Gas fired, 1,000,000 BTU/hr with a max temperature: 1400 deg.F. Model Number: DL-3036. Serial Number: 60458. Updated controls, Honeywell indicating controller and overtemp. High temperature tempering furnace. Vertical lift air operated door with overhead air cylinder. Fiber board insulation. Alloy roller rail hearth. Direct fired furnace, but the heating chamber is separate from the work chamber and has a high velocity roof mounted circulating fan. Top mounted package burner. Complete combustion controls and safeties. 460/3/60 power. Test fired prior to shipment.

Asking Price: \$39,500.00

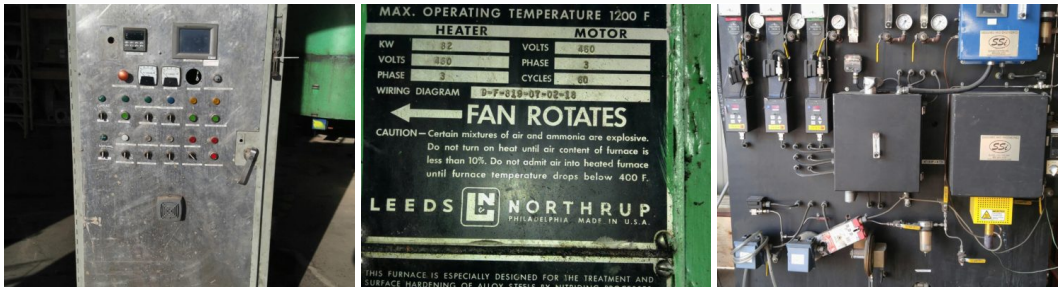


ITEM # B436

36" X 60" PIT GAS NITRIDER

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

Asking Price \$50,000 USD.



ITEM # B426

PLASMA NITRIDING UNIT 1000 KG CAPACITY

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

Asking 98.000 Euro. Located in Turkey.



ITEM # B425

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

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

Asking \$85,000 USD.



ITEM # B415

J.L. BECKER CAR BOTTOM

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

Asking Price: \$95,000.00 USD.



ITEM # B399

CAR BOTTOM FURNACE

Car Bottom Furnace. Manufactured by Huber this is a gas fired car type furnace. Maximum operating temperature of 2000F. Working dimensions of 10' 4" wide X 12' 8" long X 8' high. Overall dimensions of 16' wide X 16' long X 14' high. Gas fired. Electricity requirements; 480 Volts, 3 Phase, 60 Hertz. Controls; Watlow digital controller, Honeywell digital overtemp and Honeywell digital recorder. Power driven car with (3) three sets of axles.

Door is attached to furnace. Furnace is fibre lined and equipped with (4) four power flame model JD 130 package burners. Approximately 1,300,000 btu's each.

Asking \$85,000 USD.



ITEM # B398

SAUDER BATCH IQ LINE

Sauder Batch IQ Line. Serial Number 881978-83. Electrically heated 480/3/60/150kW total load. Maximum operating temperature of 1850F. Working dimensions of 24" Wide X 24" high X 36" long. Controls; Mounted and wired in an enclosure attached to the right hand side of the furnace includes a Marathon 10 Pro digital temperature controller, Marathon Carbpro digital carbon controller, Barber Colman analog high limit and a Honeywell digital strip chart recorder. Three power meters are face mounted to the same enclosure which monitor power in each zone of the furnace. A Halmar "SCR" power controller controls power to the heating elements. Two (2) Allen Bradley PLC controllers are mounted in the same enclosure. Standard In/Out Integral Quench Furnace w/Top Cool. This line consists of IQ furnace with top cool, heated quench tank, charge car, dunk & spray washer, temper furnace, SBS oil cooler, scissors table, atmosphere flow panel and several spare parts. Very good condition. Asking \$125,000 USD for the complete line. Shipping

Dimensions:

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

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

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

Quench: 106" x 10'H x 72"

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

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

Misc. skids, flow panel, SBS, spare parts

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



ITEM # B397

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

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

Asking \$325,000 USD each.



ITEM # B374

ATMOSPHERE BOX FURNACE

Atmosphere Box Furnace. Manufacturer: R&G Services, Inc. Inside Dimensions: 18" high x 32" wide x 36" deep. Heated: Electric, 230/3/60, 60 KW. Temperature: 2100 deg. F Model Number: EB-183236 Serial Number: 77021 Temperature Controls: Updated indicating controller and overtemp. Description & Features: Air operated vertical rising door. Slanted

face plate. Brick lined with silicon carbide hearth. Heated by heavy Nichrome ribbon heating elements. Atmosphere inlet and burn-off. Flame curtain with controls and safeties. Condition: Very good. Furnace will be cleaned & painted, repaired as necessary, checked out & test fired prior to shipment.

Asking Price: \$18,000.00 USD.



ITEM # B352

PACIFIC SCIENTIFIC BOX FURNACE

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

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Quick Jump To Items:

Item # C335 Compact Belt Furnace

Item # C330 Mesh Belt Furnace Line

Item # C327 Rogers Engineering Continuous Brazing Furnace

Item # C324 C.I. Hayes Mesh Belt Furnace 12" Wide Belt

Item # C323 Aichelin Cast Link Furnace Line 750 lbs/hr

Item # C322 Surface Combustion Rotary Hearth Line

Item # C321 Austempering System 500 lbs/hr

Item # C314 Roller Hearth (Atmosphere) 4800 lbs/hr

Item # C308 AFC Mesh Belt Furnace 54" Wide Belt

Item # C301 Cast Link Belt Line 4000 lbs/hr

Item # C283 Rotary Hearth Furnace System

Item # C269 CI Hayes Mesh Belt Furnace 12" Wide Belt

Item # C265 Sunbeam Pusher Carburizer 3000 lbs

ITEM # C335

COMPACT BELT FURNACE

Compact belt furnace 321-7-90 6677 1000°C. Built by Solo of Switzerland this is a SOLO 321-7-90 model. This furnace was manufactured in 1990. Composition: Loading frame, heating part with frame, cooling part with frame, unloading frame, driving system, conveyor belt, NH3 cracker 3m3/h, distribution for treatment and cabinet gas, operator panel. Dedicated for annealing under cracked ammonia, brazing and hardening. Max. temperature of 1000 °C Heated length: 900 mm, cooled length: 1500 mm, channel section: 80 x 40 mm, Main voltage: 3 x 380 V – 50 Hz / TN, power input: 10,5 kW, gas generated: 75% H2 and 25% N2 (NH3), effective height with belt: 30 mm, conveyor belt width: 70 mm,

external dimensions: L 5300 mm x l 800 mm x H 1250 mm. Perfect condition, ll manuals included. Located in France.

Price on request jordan@themonty.com



ITEM # C330

MESH BELT FURNACE LINE

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

Best offer.



ITEM # C327

ROGERS ENGINEERING CONTINUOUS BRAZING FURNACE

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

Asking \$250,000 USD.



ITEM # C324

C.I. HAYES MESH BELT FURNACE

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

Asking \$49,500 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

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

Asking \$50,000 USD.



ITEM # C321

AUSTEMPERING SYSTEM

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

Asking \$20,000 USD or best offer.



ITEM # C314

ROLLER HEARTH FURNACE (ATMOSPHERE)

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

Asking \$225,000 USD.



ITEM # C308

AFC MESH BELT HARDENING FURNACE

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

Asking \$75,000 USD.



ITEM # C301

CAST LINK BELT QUENCH AND TEMPER LINE

Cast Link Belt Quench and Temper Line. Manufactured by Rogers Engineering 4,000 pounds/hour cast link belt furnace line consisting of a 1750F high heat furnace and 1700F temper furnace. Serial # CC-3977-0 (1997). High Heat Furnace: 48"W Omega Cast Link Belt, 4" pitch, 3" sides. Furnace has a 30'L heating section. Four (4) zones of control with three (3) roof mounted in the last three (3) zones. Maximum operating temperature of the hardening furnace is 1750°F. Furnace is radiant tube heated with recuperators. Furnace is currently set up for Endothermic w/Enriching Natural Gas & Air. Total BTU's for

hardening furnace is 3,180,000 BTU/HR. Controls; All mounted in a free standing panel includes Allen Bradley PLC w/HMI Touchscreen, Honeywell UDC Digital Temperature Controls, SSi Carbon Controls. Voltage 480/3/60/200kW.

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

The sequence of this furnace is as follows:

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

Includes:

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

Very good condition, available immediately.

Asking \$650,000 USD.



ITEM # C283

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

Denton Thermal Systems (O'Brien & Gere) 2150°F Rotary Hearth Furnace System. Includes high temperature furnace, Nitrogen-Methanol Panel and Quench Press.

Working Zone: 6 ft Diameter Hearth, Door Opening is 14"W x 13"H Overall Size: 9ft-8in Diameter x 10ft-10"Tall. Heating: Electric, 125 kW, 1 Zone, Globar Heating Elements. Power Requirement: 200 Amps, 480V/3Ph/60Hz. Temperature Rating: 2150°F. Water Requirement: 3 GPM. Air Requirement: 100 PSI. Controls: GE90 PLC. Honeywell Temperature Controller and 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 USD.



ITEM # C269

CI HAYES MESH BELT FURNACE

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

Asking \$39,000 USD.



ITEM # C265

SUNBEAM PUSHER CARBURIZER

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

Asking \$40,000 USD.



DRAW/TEMPER OVENS

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Quick Jump To Items:

Item # T356 Vacuum Temper Furnace (Unused)

Item # T355 Wisconsin Oven

Item # T354 Surface Combustion "Super 30" Temper

Item # T353 Surface Combustion "Super 30" Temper

Item # T352 Pyradia Oven 48" X 48" X 48"

Item # T351 Mesh Belt Temper Furnace

Item # T349 Recirculating Box Type Draw Furnace

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

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

Item # T341 Temper Furnace

Item # T340 Safed/Borel Annealing Furnace

Item # T339 Box Tempering Oven

Item # T336 Mesh Belt Temper Furnace 48" Wide

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

Item # T325 3-Station Despatch Temper Furnace

Item # T320 Pifco Conveyor Oven

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

Item # T303 Pifco Temper Furnace

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

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

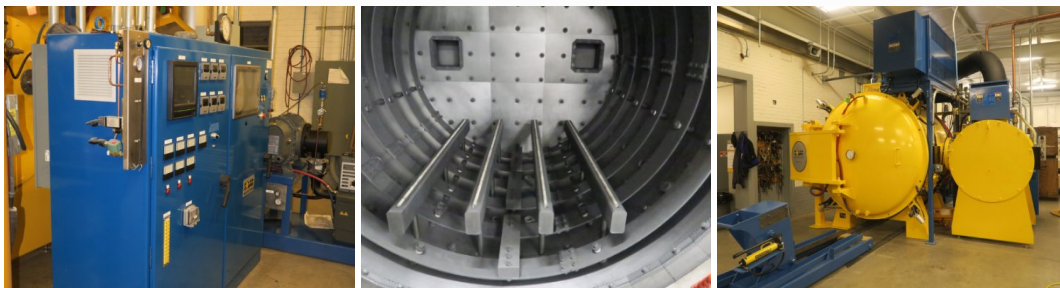


ITEM # T356

VACUUM TEMPER FURNACE (UNUSED)

Manufactured by **Solar Manufacturing** this is a **Model HFL- 5748-EQ**, Serial Number SF-180 (2016). Working dimensions of 36"W x 36"H x 48"L – 5000 Pound Load. Operating temperature of 1500F. 460V/3 Phase/60 Cycles/141 KVA/177 Amps. External dimensions of 12'W x 14'H x 15'L – Approx. Horizontal front loading double wall vacuum furnace with graphite heating elements and pneumatic cylinder door locks. Hot zone is constructed of graphite and ceramic blanket. Pumping system consists of Stokes 212 roughing pump and a Stokes 615 booster. There is a 30 HP cooling blower with heat exchanger for cooling. Furnace is complete and includes a "Dry Coolers" closed loop cooling system and manual furnace loader. Controls mounted and wired in a free standing panel includes an Allen Bradley SLC 5/05 with HMI touchscreen interface. There is also a Eurotherm 6180 Videographic Recorder. Each zone has three (3) Honeywell UDC 3500 digital temperature controllers and three (3) Honeywell UDC 2500 digital high limits. Each zone also has AC amp & AC volt meters. Run once for testing. Excellent condition.

Asking Price \$250,000 USD



ITEM # T355

WISCONSIN OVEN

Wisconsin Oven Model EWN-610-6G, 500F, 6'W x 10'D x 6'H, overall 9'6" W x 11'D x 9'9"H, 5HP/4,500CFM recirculating fan, combination airflow, adjustable louvers, airflow switch, 900 CFM exhaust with motorized dampers, Eclipse 500,000BTU Winnox Low NOx burner, UL listed control panel, Eurotherm Nanodac digital recorder/programmer, digital hi-limit, disconnect switch, 8 position T/C jack panel, 3" port.

Asking Price \$19,000 USD



ITEM # T354

SURFACE COMBUSTION "SUPER 30" TEMPER

Surface Combustion "Super 30" temper. Model HFC 36-54, Serial number BX 37159-7. Gas fired, maximum operating temperature of 1400F. The unit needs some minor brick work and the circulation fan reinstalled to be ready to run. The fan was removed from service, has a new shaft which has been balanced. Footprint; 9' 7" Deep x 6' Wide x 141" High (door frame only). Weight capacity is 2000 lbs. Installed and overall in good condition.

Asking Price \$15,000 USD



ITEM # T353

SURFACE COMBUSTION "SUPER 30" TEMPER

Surface Combustion "Super 30" Temper. Model HFC 36-54, Serial number BC-39843-1. Maximum temperature of 1400F. Gas fired. Footprint; 10' Deep x 6'-8" Wide x 141" Tall (door frame only) weight capacity is 2000 lbs. Currently installed. Complete and in very good condition.

Asking Price \$22,500 USD



ITEM # T352

PYRADIA OVEN 48" X 48" X 48"

Pyradia Oven 48" X 48" X 48". Electrically heated oven manufactured by Pyradia. Model P06P048048048HMTGV, Serial Number 2002-12-15977-1. Working dimensions of 48" X 48" X 48". Operating temperature of 1200F. Recirculating fan. 600 volts, 3 phases, 54KW. Vertical lift Door with double pivots. Convection style, 32,000 CFM. Built in 2004 this oven has been used for a total of 40 hours and should be considered like new.

Asking Price \$39,000 USD



ITEM # T351

MESH BELT TEMPER FURNACE AVAILABLE

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

Asking \$20,000 USD.



ITEM # T349

RECIRCULATING BOX TYPE DRAW FURNACE

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

Asking Price: \$39,500.00



ITEM # T343

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

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

air flow, high/low gas pressure, purge, etc. Eclipse package burner with Honeywell flame safety, UV scanner and spark ignition.

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

Asking \$49,900.00 USD.



ITEM # T342

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

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

Asking \$16,500 USD.



ITEM # T341

TEMPER FURNACE

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

Asking \$91,000 USD.



ITEM # T340

SAFED/BOREL ANNEALING FURNACE

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

Price on request.



ITEM # T339

BOX TEMPERING OVEN

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

Asking price is \$72,500 USD.



ITEM # T336

MESH BELT TEMPER FURNACE 48" WIDE

Mesh Belt Temper Furnace 48" Wide. Continuous belt temper furnace manufactured by Industrial Heating Equipment, Model # TF-5. Inside dimensions 10" over belt, 48" wide X 12' heating. Gas fired, Eclipse package burner. Maximum operating temperature 1000 F. Temperature Controls: Free standing enclosed panel. Solid state digital readout indicating controller & overtemp. Top mounted brick lined combustion chamber houses high velocity stainless steel circulating fan. Steel lined work chamber has 8-1/2" insulation. Stainless steel mesh belt on top of edge wire belt. Very good condition.

Asking \$29,500 USD.



ITEM # T335

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

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

Asking \$8,000.00 USD.



ITEM # T325

STATION DESPATCH TEMPER FURNACE

3-Station Despatch Temper Furnace. Manufactured in 1980 by Despatch Industries, Inc. 3 Independently loaded and operated furnace stations with shared panel. Tops elevate off bases for loading and unloading. Work Zone: 22"W x 40"L x 25"H Each. Hearth Height: Estimated at 36-40" (Can measure for you). Max. Temperature: 850°F with a Uniformity of +/- 25°F (Center area of 12"W x 20"L x 10"H meets +/-10°F). Electrically heated with a power of 490V/3Ph/60Hz. 3 West 4400 Temperature Contrl. & West 6700 Hi-Limit. (We can quote upgrade to new Super Systems, Inc. controls, if desired.). Just rebuilt. New heating elements, new hearth ceramics, New stainless steel side panels, new paint.

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



ITEM # T320

PIFCO CONVEYOR OVEN

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

Asking Price: \$59,000 USD.



ITEM # T318

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

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

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

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

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

Asking Price: \$72,500 USD each.



ITEM # T303

PIFCO TEMPER FURNACE

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

Asking Price: \$38,000 USD.



ITEM # T290

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

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

Please call for pricing.



ITEM # T286

LINDBERG BOX TEMPER

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

Asking Price: \$65,000 USD



GENERATORS

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

[Contact Us](#)

Quick Jump To Items:

Item # G202 AFC 4500 CFH Endo Generator

Item # G201 Ammonia Dissociator 250 SCFH

Item # G198 Endothermic Generator 3000 CFH

Item # G197 Ammonia Dissociator 1000 CFH

Item # G196 Surface Combustion 5000 CFH Endo Generator

Item # G189 Surface Combustion 2400 CFH Endo Generator

Item # G178 Ammonia Dissociators 3000 CFH

Item # G176 Surface "Multi-Bottle" Endo Generators

Item # G173 Lindberg Endo Generator 4500 CFH

Item # G169 Gasbarre Endo Generator 3000 CFH

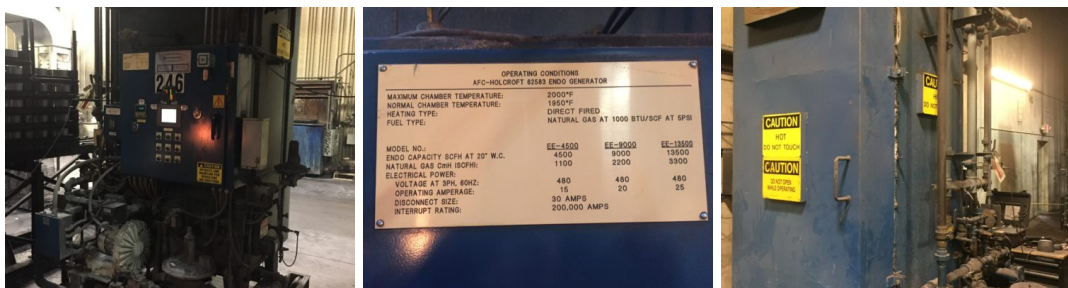
ITEM # G202

AFC 4500 CFH ENDO GENERATOR

AFC 4500 CFH ENDO GENERATOR. AFC-Holcroft EZ-4500 CFH Endothermic Generator. New in 2006. SSi 9200 controller. This stand-alone unit can be integrated into an array of up to 3 generators. Currently in operation. Manuals and drawing are included. Very good condition. Includes a spare retort (\$4000). Features:

- Recuperative type combustion system, providing 18% to 20% fuel savings
- High efficiency air-cooled heat exchanger
- 5:1 Automatic Turndown to produce only the gas required
- Ease access swing door for horizontal retort access
- SSi E-Z dew point analyzer
- Atmosphere Engineering endo injector

Asking price \$55,000 USD



ITEM # G201

AMMONIA DISSOCIATOR 250 SCFH

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

Best Offer



ITEM # G198

3,000 CFH ENDOTHERMIC GENERATOR

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

Asking \$22,500.00 USD.



ITEM # G197

AMMONIA DISSOCIATOR

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

Asking Price \$11,500.00 USD.

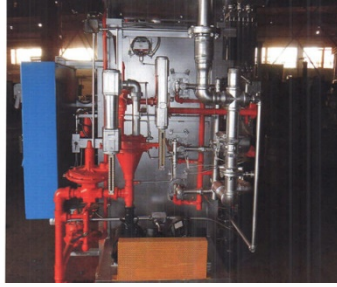


ITEM # G196

SURFACE COMBUSTION 5000 CFH ENDO GENERATOR

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

Asking \$31,500.00 USD.



ITEM # G189

SURFACE COMBUSTION 2400 CFH ENDO GENERATOR

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

Asking \$59,000 USD.



ITEM # G178

AMMONIA DISSOCIATORS (4 AVAILABLE)

Ammonia Dissociators (4 available). Built by Sargeant & Wilbur, 4 electrically heated Ammonia Dissociators. Model GAD3000E. 3,000 CFH capacity. Maximum temperature 1759F. Voltage 480/3/60/60 kW. External dimensions of 5'W x 6'H x 8'L. **Controls:** Mounted and wired in a free standing panel includes the following:

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

Mounted in the same control cabinet are three (3) SCR's. Two (2) “Halmar Robicon” and

one (1). "Ametek". One is for dissociator heating elements and the other two are for vaporizer lower/upper zone heaters.

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

Asking \$29,500.00 USD each.



ITEM # G176

SURFACE "MULTI-BOTTLE" ENDO GENERATORS

Surface "Multi-Bottle" Endo Generators. Manufactured by Surface Combustion. Natural gas heated 675 CFH/HR. Model # RX 35-75-3V. Maximum temperature 1950F. 7500 CFH capacity. Controls are complete, water cooled. SSi atmosphere controls and Atmosphere Engineering "Endo Injector". Very good condition, ready to go.

Asking \$75,000 USD.



ITEM # G173

LINDBERG ENDO GENERATOR

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

Asking \$17,500.00 USD.



ITEM # G169

GASBARRE/SINTERITE FURNACE DIVISION ENDO GENERATOR

Gasbarre/Sinterite Furnace Division Endo Generator. 3000 CFH, electrically heated 460/3/60/63 Amps/50kW. New in 2006. External dimensions of 106" wide x 75" deep x 116" high. Controls are enclosed in a panel attached to the side of the generator. Honeywell UDC 3200 digital temperature controller and Honeywell UDC 2500 digital high limit safety. Control switches with indicating lights are flush mounted in the enclosure. Flange mounted fused disconnect switch for control power. Separate non fused disconnect for the main power. Waukee flow meters are manifold mounted for incoming and outgoing gases. Flow meters include: Natural Gas 0-1000 CFH, Air 0- 2500 CFH, (3) Mixed Gas 0-1500 CFH and Endo 0- 3500 CFH. Step down transformer for reduced voltage to the heating elements. Electrically heated 3 retort generator. Refractory lined shell with vertically mounted retorts. Total of twelve (12) silicon carbide heating elements, 6 on each side are mounted through the chamber for good uniform heating of the alloy retorts. The natural gas and air

pass through a Waukee “mixor” 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 HEATING SYSTEMS

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

[Contact Us](#)

Quick Jump To Items:

Item # I178 Inductoheat Pick & Place Induction System 100kW

Item # I177 2 Station 24" Single Spindle Scanners

Item # I175 Inductoheat /Lepel Induction Power Supply

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

ITEM # I178

INDUCTOHEAT PICK & PLACE INDUCTION SYSTEM 100KW

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

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

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



ITEM # I177

2 STATION 24" SINGLE SPINDLE SCANNERS

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

Asking Price: \$99,500 USD



ITEM # I175

INDUCTOHEAT /LEPEL INDUCTION POWER SUPPLY

Inductoheat /Lepel Induction Power Supply. This is a Lepel/ Inductoheat SP5-40 kW, 3/10 kHz SCR type induction heating power supply with a separate Heat Station (I believe

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

Asking \$19,500.00 USD



ITEM # I174

AJAX/TOCCO INDUCTION HEATING POWER SUPPLY & HEAT STATION

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

Asking \$129,000 USD.



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, let us know.

[Contact Us](#)

Quick Jump To Items:

Item # L9 Wilson Rockwell Series 2000

Item # L8 Tensile Testing Machine

Item # L7 Leco Micro Hardness Tester

Item # L3 Laser Diffraction Particle Size Analyzer

Item # L1 Detroit Testing Brinell Hardness Tester

ITEM #L9

WILSON ROCKWELL SERIES 2000

Wilson Rockwell Series 2000. Capacity of 150 Kg. Power Requirements 100/120/220/240 Volts with a 3 Amp slow blow. Max power 370 VA. Frequency 47/63HZ.

Asking Price 4.200 Euro



ITEM #L7

LECO MICRO HARDNESS TESTER

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

Asking \$7,000.00 USD.



ITEM #L3

LASER DIFFRACTION PARTICLE SIZE ANALYZER

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

Asking \$20,000 for complete system.

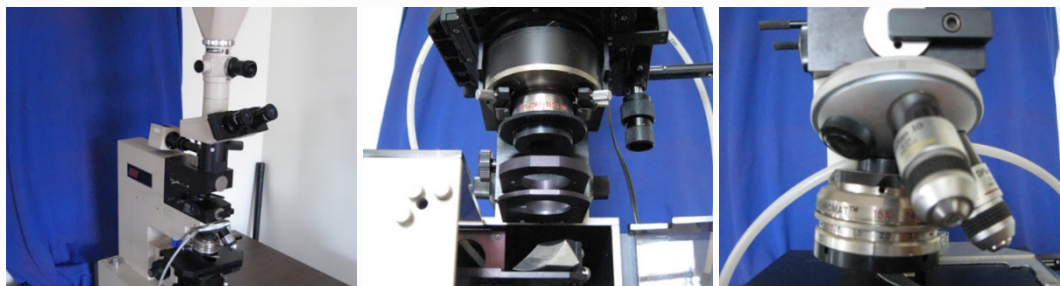


ITEM # L1

SPECTRA-TECH 0044-003 INFRARED MICROSCOPE

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

\$6,500.00 USD.



MISCELLANEOUS HEAT TREAT 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, let us know.

[Contact Us](#)

Quick Jump To Items:

Item #M423 Dunk/Spray Washer 36" X 72" X 36"

Item #M422 Dunk/Spray Washer

Item #M421 Berg Chiller

Item #M420 SBS "Quench Airs", (9 available)

Item #M417 Soluble Oil Dunk Tank

Item #M416 Wheelabrator 6' Diameter

Item #M415 Surface Combustion Parts Washer

Item #M414 Vacuum Residual Gas Analyzer (3 available)

Item #M412 Atmosphere Engineering "Endoinjector"

Item #M411 SBS Quench Oil Coolers (2 available)

Item #M406 Surface Combustion Parts Washer

Item #M400 Nitrogen Generating System 99.999 Purity

Item #M396 Surplus Cast Link Belt HT Material

Item #M381 Water Cooling System

Item #M380 Bronco Wheelabrator 36" Meshbelt

Item #M366 Wheelabrator Rubber Belt Tumbblast

Item #M363 SBS Large 3 Fan Unit

Item #M348 Ipsen Dunk/Spray Washer 36" x 48" x 24"

Item #M346 SBS Quench Air Single Fan Unit

Item #M341 AFC Charge Car 36" x 48" Tray

Item #M334 Berg Water Chiller Nearly New

Item #M314 Holcroft Dunk/Spray Washer 24" x 24" x 36"



ITEM #M423

DUNK/SPRAY WASHER 36" X 72" X 36"

Williams Industrial Dunk/Spray parts washer. Working dimensions of 36" X 72". X 36". Gas fired, capable of 210F. 30A, 3 Phase. Built in 1993. Footprint; 71"Wide x 126"Deep x 196". Weight capacity 5,000 pounds. Oil skimmer not included. Installed, complete and in very good condition.

Asking Price \$29,000 USD



ITEM #M422

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

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

Asking \$22,500 USD.

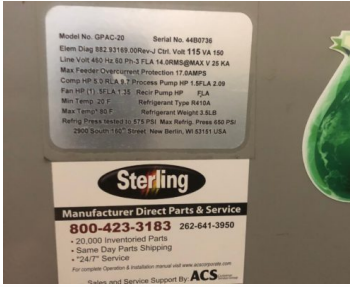


ITEM #M421

BERG CHILLER

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

Asking Price: \$8000.00 obo



ITEM #M420

SBS "QUENCH AIRS", (9 AVAILABLE)

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



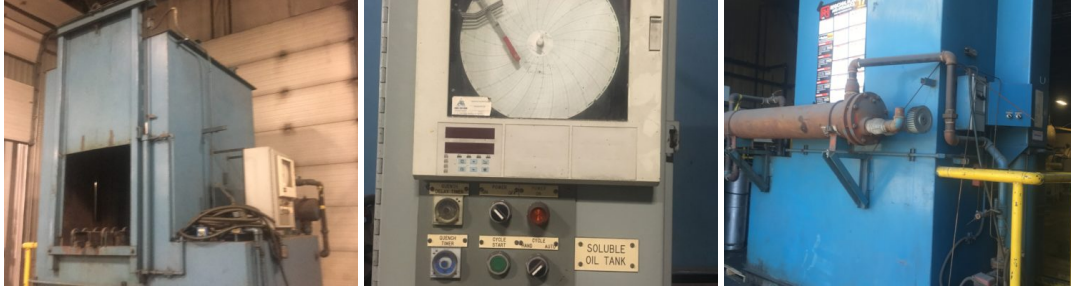
ITEM #M417

SOLUBLE OIL DUNK TANK

Soluble Oil Dunk Tank

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

Asking \$8,000 USD.



ITEM #M416

WHEELABRATOR 6' DIAMETER

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

Asking \$75000.00 USD.



ITEM #M415

SURFACE COMBUSTION PARTS WASHER

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

BEST OFFER



ITEM #M414

VACUUM RESIDUAL GAS ANALYZER (3 AVAILABLE)

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

1. 1 Each, Quadrupole electronics QME220, P/N PTM28612
2. 1 Each, Quadrupole analyzer QMA200, P/N PTM25253
3. 1 Set, QMS220, Accessories & Spare Parts
4. 1 Each, SP 220, (033-0038 43202) Power Supply 90-264VAC, 2.1mm R/A (24 V Output)
5. 1 Each, 45-0007 43024 UTP-Patch-Cable, 3m, Crossed, Red
6. 1 Each, B4564309YX Inficon Mains Cable (USA) LNPE, AWG 18, 2.5m
7. 1 Each, 45-0006 UTP-Patch-Cable, 3m, 1:1, grey 43024
8. 1 Each, PT882400-T Quadera-software, Version 4.61 12/10/2015 for Windows 7 or XP (32-bit Pro)
9. 2 Each, PrismaPlus QMG220 Operating Instructions (1-English & 1-German)
10. 1 Each, Test Reports and Configuration
11. 1 Each, PT R 26 002 Compact Full Range Vacuum Gauge PKR 251, DN 40 CF F
12. 1 Each, PT 448 250-T Sensor Cable

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



ITEM #M412

ATMOSPHERE ENGINEERING "ENDOINJECTOR"

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

Asking \$6,500.00 USD.

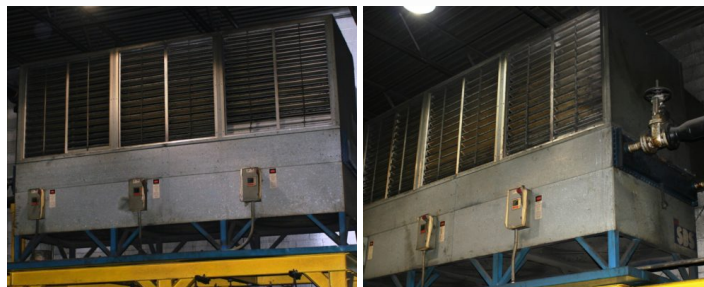


ITEM #M411

SBS QUENCH OIL COOLERS (2 AVAILABLE)

SBS Quench Oil Coolers (2 available). Air to oil quench oil coolers manufactured by SBS Corporation. 480V/6/60. External dimensions of 6' wide X 5' high X 21' long. This unit has three (3) NEMA type disconnect switches mounted on side of unit. Standard “SBS Quench Air” air cooled heat exchanger with removable tube manifold, propeller fans for moving air across the tube bundle, flanged inlet & outlets, three (3) NEMA type disconnect switches mounted on the side of the heat exchanger. This unit has a removable top that has louvers for directing the air horizontally instead of vertically. Good condition.

Asking \$13,500.00 USD Each.



ITEM #M406

SURFACE COMBUSTION PARTS WASHER

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

Asking price of \$12,500 USD

ITEM #M400

NITROGEN GENERATING SYSTEM

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

Asking \$82,500.00 USD.



ITEM #M396

SURPLUS CAST LINK BELT

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

Please call for pricing – Gord: 905.271.0033



ITEM #M381

WATER COOLING SYSTEM

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

Asking \$7,500.00 USD.



ITEM #M380

WHEELABRATOR - BRONCO

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

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



ITEM #M366

WHEELABRATOR RUBBER BELT TUMBLAST

Wheelabrator Rubber Belt 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 #M363

SBS UNIT

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

Price: \$15,500.00.



ITEM #M348

IPSEN AUTOMATIC DUNK/SPRAY WASHER

Ipsen Automatic Dunk/Spray Washer. Model #WRD-11, Serial Number 57690. Working dimensions of 36" wide X 48" deep X 24"+ high, 2200 pound capacity. Electrically heated,

72KW. Companion washer-In/Out or straight through design. Door each end, Cal Rod element bundle. 12" wide belt oil skimmer, air operated-full width elevator rack for submerged oscillation, overhead spray rinse. Overall dimensions of 7' 5" wide X 5' 4" long X 11' 8" high. Rebuilt,

Excellent condition asking \$35,000 USD.



ITEM #M346

SBS "QUENCHAIR"

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

Asking \$5,500.00 USD.



ITEM #M341

AFC CHARGE CAR

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

Asking \$28,500.00 USD.



ITEM #M334

BERG WATER CHILLER

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

Asking \$5,500.00.



ITEM #M314

HOLCROFT DUNK/SPRAY WASHER

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

Asking \$18,500.00 USD.



VACUUMS FURNACES

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

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Quick Jump To Items:

Item # VF345 Vacuum Temper Furnace Unused

Item # VF344 C.I. Hayes Vacuum Furnace

Item # VF343 Bottom Loading Vacuum Furnace

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

Item # VF340 Vac Aero 2 Bar Vacuum Furnace

Item # VF339 Centorr Vacuum Furnace

Item # VF337 Oil Quench Vacuum Furnace

Item # VF336 C.I. Hayes Vacuum Furnace

Item # VF335 ALD Vacuum Carburizing Furnace

Item # VF334 Degussa Vacuum Hardening Furnace

Item # VF333 Low Temperature Vacuum Tempering Furnace

Item # VF331 High Temperature Vacuum Furnace 2300°

Item # VF330 Surface 2-Bar Quench Vacuum Furnace

Item # VF328 Abar Ipsen Model HS-26 Vacuum Furnace

Item # VF327 Surface Combustion Vacuum Temper Furnace

Item # VF326 Ipsen 924 Vacuum Furnace

Item # VF321 Ipsen Vacuum Furnace

Item # VF320 High Temperature Vacuum Furnace

Item # VF319 Vacuum Induction Melting System

Item # VF317 Twin High Temperature Vacuum HT Sintering Furnaces

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

Item # VF315 AVS Vacuum Furnace (Rebuilt)

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

Item # VF313 Top Loading Vacuum Furnaces 2100 C

Item # VF312 Vacuum Furnace 2400 C

Item # VF299 Sunbeam Vacuum Furnace 36" x 120"

Item # VF294 Vacuum Annealing Furnace 8" x 90"

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

Item # VF282 AVS Vacuum Debinding/Sintering Furnace

Item # VF271 Sintering/De-Wax Furnace 1400 C

Item # VF267 Semi-Continuous Titanium Diffusion Bonding Hot Press

Item # VF266 Kinney 75 CFM Vacuum Pump

Item # VF243 35" Diffusion Pump

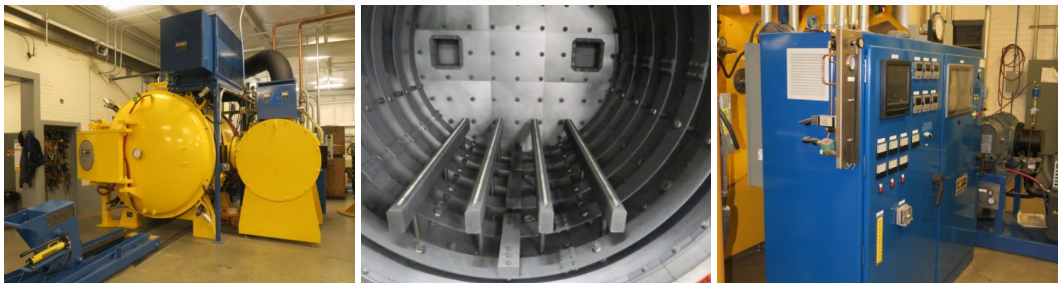
Item # VF242 35" Diffusion Pump

ITEM # VF345

VACUUM TEMPER FURNACE (UNUSED)

Manufactured by **Solar Manufacturing** this is a Model **HFL- 5748-EQ**, Serial Number SF-180 (2016). Working dimensions of 36"W x 36"H x 48"L – 5000 Pound Load. Operating temperature of 1500F. 460V/3 Phase/60 Cycles/141 KVA/177 Amps. External dimensions of 12'W x 14'H x 15'L – Approx. Horizontal front loading double wall vacuum furnace with graphite heating elements and pneumatic cylinder door locks. Hot zone is constructed of graphite and ceramic blanket. Pumping system consists of Stokes 212 roughing pump and a Stokes 615 booster. There is a 30 HP cooling blower with heat exchanger for cooling. Furnace is complete and includes a "Dry Coolers" closed loop cooling system and manual furnace loader. Controls mounted and wired in a free standing panel includes an Allen Bradley SLC 5/05 with HMI touchscreen interface. There is also a Eurotherm 6180 Videographic Recorder. Each zone has three (3) Honeywell UDC 3500 digital temperature controllers and three (3) Honeywell UDC 2500 digital high limits. Each zone also has AC amp & AC volt meters. Run once for testing. Excellent condition.

Asking Price \$250,000 USD



ITEM # VF344

C.I HAYES VACUUM FURNACE

C.I Hayes Vacuum Furnace. Built by C.I. Hayes this is a VCH-202436 Single Chamber Vacuum Furnace. Work dimensions of 20"h x 24"w x 36"d. Max. Temp.: 2450 deg.F. Connected Load: 125 KW, 440/3/60. All Graphite Heating Chamber. Vacuum Components: Mechanical Pump/Blower Combo (16" Port For Addition Of Diffusion Pump). High Volume Recirculating Gas Cooling System. Programmer Controller, OT Protection, Two Recorders. Previously used for sintering of stainless steel magnetic material and the quench is capable of hardening alloy materials. Hot zone in good condition. Furnace is presently in storage.

Asking Price \$90,000.00 or Best Offer



ITEM # VF343

BOTTOM LOADING VACUUM FURNACE

Bottom Loading Vacuum Furnace. Built by Mut Advanced Heating GmbH of Germany in 2008 this is a bottom loading vacuum furnace with working dimensions of 1040 mm x height 1200 mm and a load capacity of 660 kg.

- Operation under inert gas, vacuum, and process gas
- Temperature maximum up to 2000 ° C
- Temperature uniformity +/-10 K
- Double-walled water cooled vacuum chamber
- Control Siemens S7
- Rapid cooling, including unused side channel blowers
- Graphite retort, very good condition
- Primary cooling circuit with heat exchanger
- Nominal voltage 3 X 400 V
- Power 335 kW
- Degree of protection IP 23
- Type of current AC, 50 Hz

The furnace was built for SGL Carbon Group for manufacturing ceramic brake discs and was only used for two years. It is currently in indoor heated storage in Germany. This

furnace is in excellent condition and includes all drawings and documentation. New it was almost \$900,000 USD, asking \$192,000 USD packaged and loaded on a truck.

Asking Price \$192,000 USD



ITEM # VF342

IPSEN BOTTOM LOAD VACUUM FURNACE 48" X 54"

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

Hot Face

First Layer

Second Layer

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

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

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

Asking Price \$525,000 USD



ITEM # VF340

VAC AERO 2 BAR VACUUM FURNACE

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

Asking Price \$220, 000 USD



ITEM # VF339

CENTORR VACUUM FURNACE

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

Asking Price \$25,000 USD



ITEM # VF337

OIL QUENCH VACUUM FURNACE

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

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

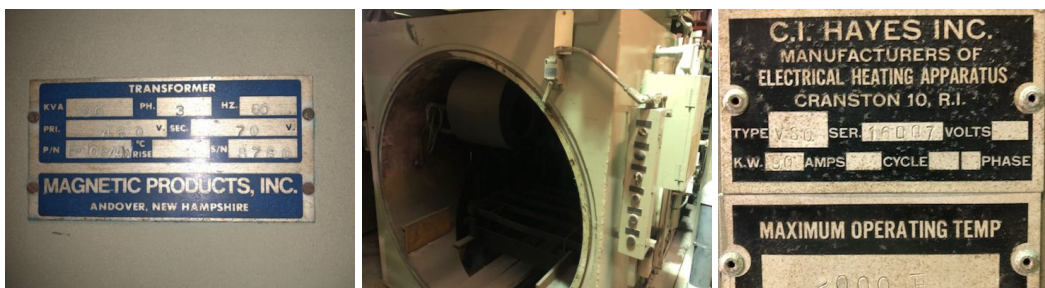


ITEM # VF336

C.I. HAYES VACUUM FURNACE

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

Asking Price: \$15,000



ITEM # VF335

ALD VACUUM CARBURIZING FURNACE

ALD Vacuum Carburizing Furnace. Working Dimensions 400 mm Wide x 400mm Deep x 400 mm high. Weight Capacity : 80 kg max. Cooling Fan Motor : 75 kW, 3000 rpm for 10 bar N2. Vacuum System : Leybold SV100 Mechanical Pump. Leybold WA501 Roots Pump. Leybold E250 Mechanical Pump. Leybold WA1001 Roots Pump. Vacuum Level : $<5 \times 10^{-2}$ mbar. Leak Rate : $<5 \times 10^{-3}$ mbar l/s. Heating Zone : 120 kW, 2 zones. Plasma Chamber : 60 kW, 1 zone. Diffusion Zone : 180 kW, 3 zones. Max. Temperature : 1250 °C (Heating chamber). Operating Temperature : 800-1100°C. Process Gases : Nitrogen, Methanol, Argon, Hydrogen. Installed Power : 700 kVA, 3x400V 50 Hz. Built in 2002. Currently in storage in Germany. Complete and in very good condition.

Price: FOT/Germany : 75.000. Euro



ITEM # VF334

DEGUSSA VACUUM HARDENING FURNACE

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

Price : FOT / Germany Euro 60.000



ITEM # VF333

LOW TEMPERATURE VACUUM TEMPERING FURNACE

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

Price : FOT/Germany Euro 28.000



ITEM # VF331

HIGH TEMPERATURE VACUUM FURNACE 2300

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

- The furnace runs on 480 volts
- Stokes roughing pump Model 148 H-9
- Holding pump (Walsh) 1402
- Varian diffusion pump - VHS-6
- Water system - Model WCS 305-ET with a 300 gallon stainless steel recirculating tower model 1CT4-64
- 2300F operating temperature
- Ut35 temperature controller controls the temperature of the furnace as programmed by the operator via the computer's profiler utili

- Complete and in Good Condition

Asking \$19,950.00 USD



ITEM # VF330

SURFACE 2-BAR QUENCH VACUUM FURNACE

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

Asking Price: \$119,000



ITEM # VF328

ABAR IPSEN MODEL HS-26 VACUUM FURNACE

Abar Ipsen Model HS-26 Vacuum Furnace. Model HS-26 Abar Ipsen vacuum furnace. Working dimensions of 24" wide X 18" high X 36" deep. Working capacity of 750

pounds. Stocks vacuum pumps and Varian Diffusion pump. 1 zone of temperature control. Honeywell controllers with Honeywell paper chart recorder. MKS vacuum instruments. Operating temperature of 2400F. 480 volts. Was used in an aerospace facility before it was very recently removed. Complete. Please ask for pricing and more details.

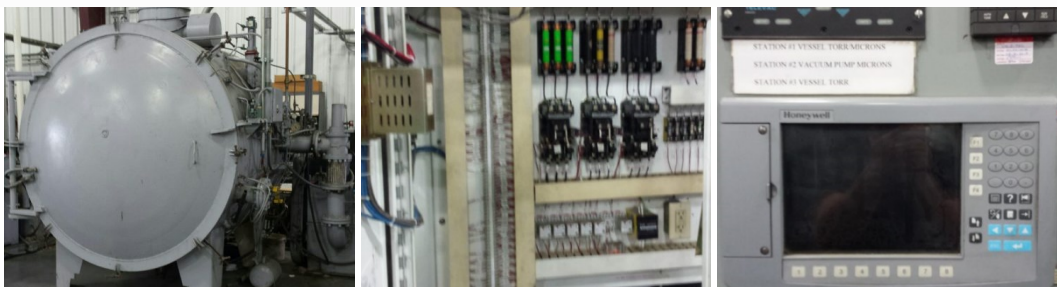


ITEM # VF327

SURFACE COMBUSTION VACUUM TEMPER FURNACE

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

Asking Price: \$50,000 USD



ITEM # VF326

IPSEN 924 VACUUM FURNACE

Ipsen 924 Vacuum Furnace. Ipsen VFC-924-R Vacuum Furnace. Working dimensions of 32" wide X 53" deep X 26" high. Maximum operating temperature of 2400F, recently surveyed from 1400-2000F at +-25F. Stokes vacuum pumps and Varian Diffusion pump.

One zone of control. Honeywell controllers. Good operating condition, currently installed but not in use. 480 Volts.

More details and asking price available upon request.



ITEM # VF321

IPSEN VACUUM FURNACE

Ipsen Vacuum Furnace:

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

Price: \$58,000 USD.



ITEM # VF320

HIGH TEMPERATURE VACUUM FURNACE

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

Asking \$100,000 USD for everything.



ITEM # VF319

VACUUM INDUCTION MELTING SYSTEM

Vacuum Induction Melting System. Manufactured by Ionex, Model 260 LB VIM, S/N 93978. Electrically heated 480/3/60/200 KVA. Work area 150 kW, 3 kHz, 260 Pound. External dimensions of 10' wide X 10' high X 15' long. Controls; Complete with PLC and touchscreen HMI interface. 260 pound horizontal front loading VIM with water cooled stainless steel vacuum chamber. Pumping system includes a BOC/Edwards 1722 package with mechanical pump/booster and a stainless steel 20" T-M Vacuum diffusion pump.

Induction power supply consists of a Pillar 150 kW, 3 kHz and includes water cooled power leads. This furnace has automatic tilt and includes two (2) crucibles. Also included with this VIM is a rotating load table that moves up and down for accurate pouring. Lot of misc. spare parts and molds are included. Excellent condition.

Asking \$285,000 USD.

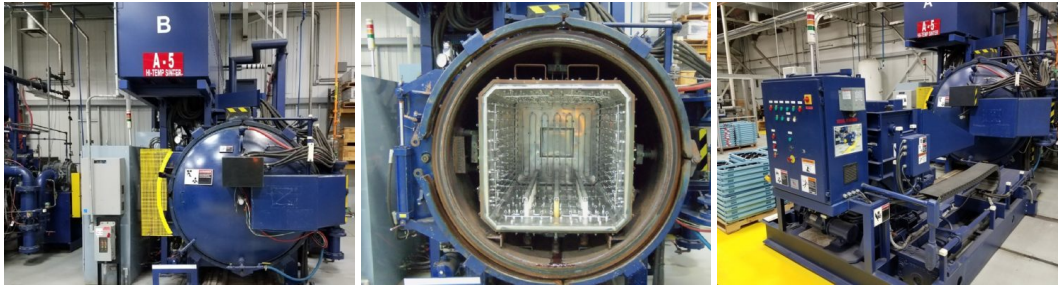


ITEM # VF317

TWIN HIGH TEMPERATURE VACUUM HT & SINTERING FURNACES

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

Asking \$275,000 USD for Both.

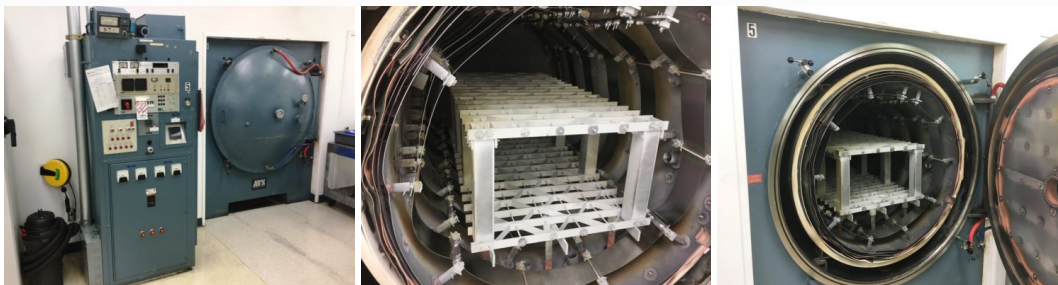


ITEM # VF316

AVS VACUUM FURNACE

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

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



ITEM # VF315

AVS VACUUM FURNACE (REBUILT)

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

Asking \$195,000 USD.

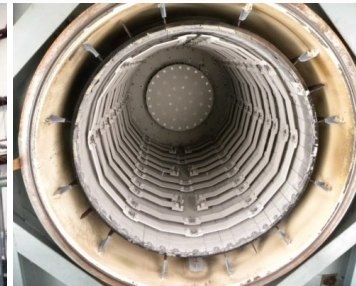


ITEM # VF314

IPSEN BOTTOM LOAD VACUUM FURNACE

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

Asking Price: \$325,000 USD.



ITEM # VF313

TOP LOADING VACUUM FURNACES (6 AVAILABLE)

Top Loading Vacuum Furnaces (6 available). Manufactured by GT Technologies, Model # AMPF-4836HP – 2015. Working dimensions of 1200mm diameter x 900mm High. Operating temperature of 2100C. Controls by Loy Instruments (Honeywell graphic touchscreen). This unique ultra high temperature furnace is high vacuum, has resistance heating with all graphite hot zone and graphite felt insulation for high efficiency operation. 480 volt 3PH 50/60 HZ, 160 KVA. Maximum load 1,000 KG. Double Wall Stainless Steel

Vessel construction. Platform with Stairs included. Halogen Gas Purge equipped, Dry Vacuum Pumping System with Blower. Graphite Purity levels to less than 5ppm. Cycle time 72 – 84 hours. 10 – 3 Torr vacuum level achievable. Options: Exhaust Scrubber System, Overhead Crane. Very good condition.

Asking \$175,000 USD each.



ITEM # VF312

2400C VACUUM FURNACE

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

Asking \$149,000 USD.



ITEM # VF299

SUNBEAM VACUUM FURNACE

Sunbeam Vacuum Furnace. Model # 40236, Serial Number F-170-82. Working dimensions of 36" wide X 120" long X 36" high. Maximum operating temperature of 2552F (1400C). 460 volts, 400Kw, 3 phase. Honeywell digital program control, Honeywell digital overtemperature control, Honeywell strip chart (inoperative) and Granville-Phillips 375 Convectron vacuum controller in enclosed panel. Double walled water cooled horizontal load vessel. Interior has a molybdenum liner with graphite heating elements on both walls, roof and floor. 20 HP cooling fan mounted in rear. Pumping system consists of a Stokes 412-11 mechanical pump with Roots booster. Power to the heating elements is through VRT's. A battery powered loader is included. Some of the heating elements were damaged during shipment and will need to be replaced by buyer.

Asking Price: \$95,000 USD.

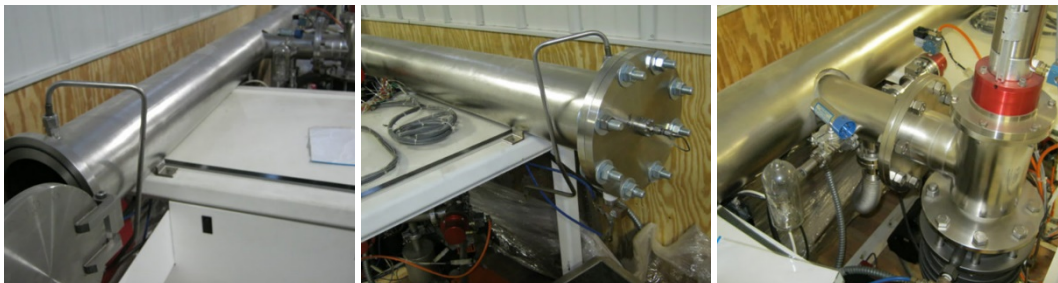


ITEM # VF294

VACUUM ANNEALING FURNACE

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

Asking Price: \$29,000.00 USD.



ITEM # VF289

IPSEN VACUUM TEMPER FURNACE

Ipsen Vacuum Temper Furnace. Built in 1981. Working dimensions of 280 mm high X 420 mm wide X 590 mm deep (11" X 16.5" X 23.2"). Maximum load 100kg (220 pounds). Minimum operating temperature 150C, maximum operating temperature 700C. Input power 94 KVA, heating 71Kw, 575 volts, 60Hz. Type K T/C's, Honeywell controls. Vacuum contact point 1.0 X 10⁻¹ mbar, operating pressure 1000 mbar. Maximum vacuum level 5.0 X 10⁻² mbar. Circulated nitrogen atmosphere gas. Elements Cr-Ni Steel. Stokes model 149H vacuum pump. SS hot zone. Class 3 furnace with a temperature uniformity of +- 8C. Used in an aerospace heat treat facility until it was replaced with a new furnace. Complete although missing the temperature recorder. Included are a manual loader and 3 baskets. Excellent condition.

Asking Price: \$59,500 USD.



ITEM # VF282

AVS VACUUM DEBINDING/SINTERING FURNACE

AVS Vacuum Debinding/Sintering Furnace. This is a horizontal graphite vacuum debinding sintering furnace for steel MIM parts completely rebuilt from top to bottom by AVS in 2010. Working volume – approximately 18 cubic feet, 28" wide x 26" high x 42" long graphite retort, 1500# capacity. Temperature – rated for continuous operation at 1400°C ±10°C in vacuum, 1450°C burn-out. 50μ ultimate vacuum; leak rate <10μ / hour, CEDORT (Clean, Empty, Dry, Outgassed, Room Temperature). De-bind system - nitrogen or argon sweep gas, 0 - 100 torr differential pressure controlled by PLC and automatic I-to-P modulating vacuum valve, binder trap, condenser assembly; options available for hydrogen gas and burn-off. De-bind lines heated to keep vapor from condensing in vacuum lines. Fast cooling with circulation fan and automatic gas re-circulation ports. Control system - AVS ACE™ control/data acquisition system. Estimated cold-to-cold cycle time of 16 to 20 hours with AVS "Fast Cool" option. Horizontal jacketed chamber - 60" dia. x 80" long, nominal dimensions, flanged, on legs. SA-516-70 mild steel construction on water jackets and door + body flanges. Stainless Steel inner jacket & dished head plus all power ports Front-

loading chamber with 2 doors - both doors on adjustable hinges, with buna o-rings, manual clamps, for operation from 50 millitorr vacuum to 3 psig positive pressure; rear door opens for service. Ports - rough line on side of chamber, delube line from bottom, fan housing flange on rear door Additional PORTS added to the system to accommodate future system modifications for processing 'sinter-hard' P/M materials – a total of up to 7 additional ports ranging from 18" in diameter down to 1" in diameter will be added. Further details available upon request. Currently installed and in excellent condition.

Asking Price: \$169,000 USD.



ITEM # VF271

SINTERING / DE-WAXING FURNACE

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

Asking Price: \$299,000 USD.

ITEM # VF267

SEMI-CONTINUOUS TITANIUM DIFFUSION BONDING HOT PRESS

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

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

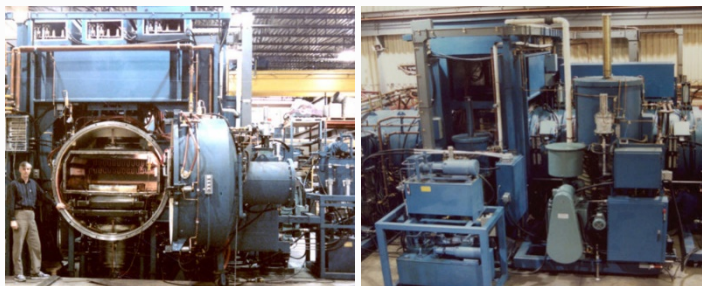
Bonding Chamber. 20" diffusion pump / 100 CFM holding pump Moly Pin walking system rated for 2720 kg load 44" w x 54" d x 20" high product size in batch mode 44" w x 54" d x 6.5" high product size in semi continuous mode Constant 1100°C Heated Platens, Moly pressing surface 1000 tons of force, up pressing ram 300 kW heater power (Hunterdon) Moly Hot Zone Mounted on roll out frame

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

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

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

As is \$890,000.00 USD

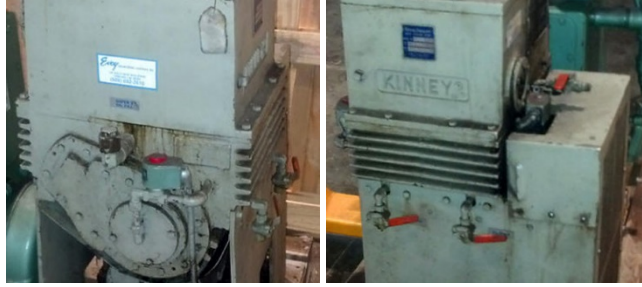


ITEM # VF266

KINNEY 75 CFM VACUUM PUMP

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

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



ITEM # VF243

35" DIFFUSION PUMP

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

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



ITEM # VF242

35" DIFFUSION PUMP

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

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

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

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



HEAT TREAT CENTRAL

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

Please send your enquiries to:

Jordan Montgomery
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@gvtinc.com Phone: 208 765-6854



NEW EQUIPMENT

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

AFC-Holcroft



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

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

ALD Vacuum Systems



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

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

Cooley Wire Products



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

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

Custom Electric Manufacturing



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

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

Dry Coolers



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

<http://drycoolers.com/>

Grammer Vacuum Technologies, Inc. (Molybdenum)

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

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

Graphite Materials



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

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

Heat Treat Central

HEAT TREAT
CENTRAL

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

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

Idemitsu



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

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

South-Tek



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

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

Super Systems



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

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

EMPLOYMENT OPPORTUNITIES ADVERTISING

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

Employment Opportunities

Quick Jump To Items:

Item # 0355 Chicago Brazing Company For Sale

Item # 0354 Metallurgist

Item # 0353 Controls Engineer

Item # 0352 Sales Positions

Item # 0351 Metallurgical Engineer Wanted

Item # 0345 Multiple Positions Available

ITEM # 0355 CHICAGO BRAZING COMPANY FOR SALE

FOR SALE! Chicago area furnace belt brazing company. This represents an excellent opportunity as a stand alone company, or as an addition of furnace brazing to the local heat treaters list of processors, a local brazing company who wants to expand their sales & customer base, or the perfect opportunity for an outside the area thermal processor to enter the Chicago market with a well established customer base. Owner anxious to retire! For information contact: Steven Hamel, Lemah Associates Ltd., 847-433-9296, **Lemahassocltd@yahoo.com**

ITEM # 0354

METALLURGIST

POSITION SUMMARY: There is currently an opening for a senior metallurgist in the RBC Bearings New Product and Process Development Center, located within our Oxford CT headquarters. We are looking for a corporate level, technological leader in metallurgy and materials science who is a hands-on, team player. The person will be expected to act as consultant and metallurgical expert to all divisions of RBC, as necessary, responding to queries about materials, material acceptability, specifications, failure investigations, material performance improvements and material quality issues both internal and with our supplier base. The successful applicant will be expected to take a leadership role in material development as RBC expands its current product offering into new applications with structural and environmental challenges beyond our current knowledgebase and capability. The candidate is required to have excellent inter personal and communication skills, be a team player that is driven to succeed within in a fast paced, challenging, and demanding environment.

RESPONSIBILITIES:

- New Product Development: Research and Development of performance enhancing materials and material heat treatments.
- Design: Support RBC engineers on materials selection and evaluation, testing, fabrication, heat treatment, and plating.
- Manufacturing: Support the evaluation of material quality, obtain and maintain NADCAP heat treat accreditation where required, consult and assist with internal/external customer concerns regarding product quality, customer audits and approvals, materials and testing, failure analysis, destructive testing, procedures, evaluation of vendors for heat treating and plating
- Metallurgical Analysis: Improve existing metallurgical laboratory and maintain a list of vendors that can provide services outside of the labs capabilities.
- Manage Corporate Metallurgy Function: Conduct bi-weekly department update meetings, coordinate the projects of two Fellow level metallurgists with more than 80 years combined experience, and oversee a lab. Technician.
- Oxford Heat Treat Department: Technically oversee and support a newly implemented heat treat department within the Oxford, CT, manufacturing facilities.

REQUIREMENTS / QUALIFICATIONS:

- BS/MS/PhD in Metallurgy, or Metallurgical Engineering, or Materials Science
- 10 + years of related experience.
- Expertise in metallurgy, thermal processing, machining, chemical processing, plating, stress relieving, material standards, material processing and potential process changes affecting material performance.
- Keen knowledge of the causes of fatigue and failure of metals, especially — but not limited to – the field of bearings.

- Anticipate travel requirements to various customers, suppliers, and RBC facilities of approximately 25%.

Please Send Resumes To **WSamuelson@rbcbearings.com**

ITEM # 0353 CONTROLS ENGINEER

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

JOIN OUR TEAM! SIGN ON BONUS!! Exciting opportunity with Excellent Benefit Package including 401K match on day one! Super Systems Inc. is a growing industrial automation systems integrator looking for full time Controls Engineer. We are a leading integrator in the metal treating industry with a dynamic workplace that includes manufacturing, software development and field service engineers. Positions for field service/project engineers are currently available in Cincinnati Ohio. We are looking for talented people with a good work ethic, enthusiasm and a customer centric attitude. We offer exciting opportunities to work on challenging projects that encompass a variety of technologies. Super Systems Inc. offers a complete package of benefits including Health, Dental, Long Term disability, 401K, paid vacation and holidays.

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

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

Education and Experience:

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

Other:

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

ITEM # 0352 SALES POSITIONS

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

ITEM # 0351 METALLURGICAL ENGINEER

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

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

POSITION SUMMARY

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

ESSENTIAL RESPONSIBILITIES

SME Functions (50-75%)

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

- Assist mills in technical capabilities.
- Assist in development of training tools and guides that are universal across all mills.

Additional engineering functions (25-50%)

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

QUALIFICATIONS and EDUCATION REQUIREMENTS

- Bachelor's Degree in Metallurgical or Material Science Engineering.
- 5 – 10 years of strong industry experience in manufacturing and steel heat treatment; tubing and metals experience a plus.
- Solid understanding of heat treating both carbon and stainless steel alloys.
- Experience with metallurgical lab equipment and procedures.
- Field Work: Ability to perform furnace system accuracy tests (SAT) and temperature uniformity surveys (TUS).
- Solid understanding of NADCAP, CQ-19 and AMS 2750.
- Experience working with data acquisition systems.
- Experience with industry specification review.
- Background in maintenance, helpful.
- Big picture understanding of machines.
- Design Tools: Experienced with AutoCAD® and Windows Office Suite. Solidworks experience a plus
- Willingness to travel 40% of the time

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

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

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

ITEM # 0347
HEAT TREATING MANAGER/METALLURGIST/MATERIALS
ENGINEER

Heat Treating Manager/Metallurgist/Materials Engineer. Reports To: Director of Manufacturing. Essential Function: NY based Aerospace components manufacturer is seeking an experienced Aerospace Heat Treating Engineer/Manager. This is a new position for the company that is starting an in-house heat treating operation. Qualifications required are a degree in Metallurgy or Material Science and five-plus years' experience in heat treating aerospace alloys. Must be proficient in Pyrometry procedures, have a working knowledge of ASM –H-6875 AMS 2959 1, 2, 3, 4, 5, 8A, 11 and be able to procure and manage a metallurgical lab using the appropriate ASTM procedures.

Primary Responsibilities:

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

Knowledge, Skills and Abilities:

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

PRECISION GEAR INCORPORATED

Education and Experience

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

REQUIREMENTS

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

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

ITEM # 0345 MULTIPLE POSITIONS AVAILABLE

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

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

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

SEEKING EMPLOYMENT ADVERTISING

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

Sales Position

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

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,
William G. Montgomery Limited
Phone: 905 271-0033
Email: **gord@themonty.com**
