the MONTY .com

OCTOBER ISSUE 2017

HEAT TREAT NEWSLETTER

Everything to do with heat treating

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INTRODUCTION

Heat Treat Exhibitions. You know we at "**The Monty**" always look forward to the month of October because of the fact that two of the largest heat treat exhibitions in the world are held during the month. First up is the Heat Treat 2017 exhibition in Columbus, Ohio, USA sponsored by ASM which is being held October 24-26th with the large German show HärtereiKongress (HK 2017) being held October 25th to 27th in Cologne, Germany. Both are excellent shows and a visit to either gives a very good indication about the relative health of the industry. Very unfortunately for the first time in history both shows are being held at almost exactly the same time which has forced a number of heat treat industry members to choose between them, our choice is the ASM show. We will have up to date photos and reports from the show and also some updates from HK 2017 although we will not be in attendance. We look forward to seeing many of you there. Now on to the most up to date news in the industry.

Best regards,
Gord

We're investing in you.

We are committed to advancing the heat-treating industry with the latest innovations and updated equipment. As part of that commitment, **we are investing $1,000,000 in the industry.** Now, we want your help.

Trade in your old furnace and
receive a $50,000 credit
toward a new TITAN® vacuum furnace.

Booth #1801,
ASM Heat Treat/Gear Expo 2017

It is our hope that this investment results in future growth and innovations – for you, your customers and the industry as a whole.

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Build Better.
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ASM Heat Treat/
Gear Expo 2017
www.IpsenUSA.com

Together, we can change the world.

As a child, you dreamed of changing the world. Today, you build amazing things that impact the lives of everyone around you.

Here at Ipsen, we want to be your partner on this journey – whether it's helping you select a standard furnace to get the job done or turning your ideas into a custom heat-treating solution. We will be there through each step of the process, working tirelessly to push the limits of what's possible.

Our job doesn't stop there. We want to be in the trenches with you, providing tools and support that help you succeed. From a software platform that predicts maintenance needs, to a service person just a call away, we want your equipment to run for years to come.

Changing the world isn't easy, but you've found a partner that believes in being better.

HEAT TREAT NEWS

An Interview with Peter Schweighofer, CEO of Italian Furnace Builder, Cieffe International AG

Peter your route to the heat-treating industry has not been as direct as many. Could you tell us how you ended up here?

"Absolutely, it is more the result of many accidental factors. I joined Accu Holding AG, the former owner and mother company of Cieffe, as M&A manager and Head of Finance back in April 2014 just before the intended acquisition and financial integration of the whole Cieffe Group started. My first project therefore was to perform a due diligence of the acquisition target including a strategic analysis of the end markets with the corresponding economic potential. This gave me a broad and enhanced understanding of the major industry drivers, the structure of the end markets, the players as well as the cyclicality of order partners from different customers. Unfortunately, Accu got into serious financial troubles and was forced to divest all relevant assets. Supported by the two remaining major shareholders, we decided to buy out Cieffe Group from the assets in liquidation and to launch a radical and far-reaching restructuring program. Consequently, I took over this challenging responsibility to lead this project as CEO of the new holding company Cieffe International AG in Zug (Switzerland)."

Please tell us what you can about Cieffe, the size of the company, markets served, the types of furnaces you offer, anything that you feel comfortable sharing.

"After downsizing the company in non-core segments and focusing on the core business we currently employ slightly over 100 people in Italy and a few selective sales agents in important strategic markets. Although our product portfolio offers a full range of products, from chamber furnaces to nitriding lines, we are currently unable to compete on a global basis in every segment. Therefore, we focus on our existing strong customer basis within

Europe and to grow our platform through their global expansion. This approach requires a clear focus on innovations and technological developments to secure the competitive advantage for our customer and/or the OEM. The most recent example is the political development regarding electrical cars. This requires us to find efficient commercial solutions for processing smaller parts and/ or combining different materials at various temperatures."

I don't want to dwell on this but there were some issues in 2016 having to do with the ownership of the company. Could you address these issues?

"You are referring to the bankruptcy of the previous owner Accu Holding. Unfortunately, the former CEO Marco Marchetti and majority shareholder had been remanded in custody for misappropriate use of funds and falsification of documents on April 11th, 2016. The subsequent investigation revealed multiple and severely punishable criminal offences. This resulted not only into the liquidation of Accu but also triggered massive financial distress in all other companies involving M. Marchetti as owner or executive. To protect us from regressive actions we had to financially restructure Cieffe, to put the companies into liquidation and to restore trust towards our customers by transferring all operating activities into a new structure. Therefore, we incorporated Cieffe Thermal Systems S.R.L. as rescue company in October 2016. Since the 1st of April 2017 we are fully operational and independent." September 29, 2017

Continue Reading….

Rockford Heat Treaters Buys Ipsen Titan H6 Vacuum Furnace

"The original beta tester for the TITAN® vacuum furnace when it first launched – and the proud owner of more than 24 other Ipsen furnaces – Rockford Heat Treaters (RHT) remains focused on providing their customers with high-quality options so they can stay competitive in today's market. As RHT continues to invest in their plant and equipment, they recently purchased a TITAN H6 to expand production capacity and cater to increased demand. As a

commercial heat treater, process versatility is essential in a shop where requirements change on a day-to-day, or even hour-to-hour, basis. Part of what appealed to the company about the TITAN product line is its high adaptability and part cleanliness. In fact, when they purchased the first TITAN furnace, it gave them the flexibility to expand their customer base and take jobs not previously possible. Their newest furnace continues in this tradition, and it will join many other Ipsen furnaces, including a complete atmosphere line of seven integral quench furnaces with ancillary washers and tempers, more than a dozen draw furnaces, a VFS® vacuum furnace and four other vacuum furnaces.

The TITAN H6 has a 36" W x 36" H x 48" D (915 mm x 915 mm x 1,220 mm) all-graphite hot zone with a 3,000-pound (1,361 kg) load capacity. Equipped with a diffusion pump, this furnace allows them to meet Aerospace requirements and process sensitive materials that require deep vacuum levels. RHT also took advantage of several Ipsen support offerings, including on-site inspection of the installation, equipment start up and personnel training. This support, coupled with Ipsen's inventory of speculation-based TITAN furnaces, allowed RHT to begin processing customer parts within five weeks of issuing the purchase order. With the current option to trade in an old furnace and receive a $50,000 credit toward a new TITAN®vacuum furnace, other companies can invest in their customers while adding the latest innovations to their facility as well. The TITAN vacuum furnace incorporates years of customer feedback to deliver user-friendly features, all while maintaining a global platform, small footprint and short delivery times. Available

in several sizes and horizontal or vertical configurations, the TITAN provides powerful performance for both experienced and first-time heat treaters. Learn more about this opportunity at www.IpsenUSA.com/Invest.

About RHT – *With over 50 years of servicing an array of customers, Rockford Heat Treaters, Inc. knows what it takes to give customers the quality and service they need to be competitive in today's market. Being family owned and operated, they ensure that the customer always comes first. They are continually moving forward to stay current with today's technology and the environment. Learn more at www.RockfordHeatTreaters.com.*

About Ipsen – *Ipsen designs and manufactures integrated heat treatment solutions for a wide variety of industries, including Aerospace, Automotive, Energy and Medical. With an extensive network of global locations in America, Europe and Asia, we continue to provide expert-driven solutions that strengthen heat treatment throughout the world. Learn more at www.IpsenUSA.com."* September 29, 2017

Used Equipment

Please take a look at our most recent used equipment offerings. If you see anything you like don't hesitate to get in touch with us at jordan@themonty.com or 905-271-0033. September 29, 2017

Item # M408 **Surface Combustion Power Loading Table 30″ W**
Item # M407 **Surface Combustion Charge Car 30 x 48**
Item # B436 **36″ x 60″ Pit Gas Nitrider**
Item # C330 **Mesh Belt Furnace Line**
Item # B435 **CODERE Switzerland System 250 42/60**

Macsteel Special Steels, Dunswart, South Africa

For a number of reasons ranging from a downturn in natural resource prices, to political uncertainty and continuing all the way to a shrinking economy the South African economy is struggling these days but this is not to say that all companies are having a difficult time. Macsteel the largest steel distributor in Africa certainly sees the challenges but overall the company is doing quite well. The company has several location around the country but we saw the largest which is located in Dunswart close to the manufacturing center of Johannesburg http://www.macsteel.co.za/macsteel-special-steels-dunswart This location operates as both a captive heat treater (heat treating their own products) and a commercial heat treater processing parts such as fasteners, some auto parts and a large variety of mining components. This location covers the gauntlet when it comes to heat treating and their equipment reflects this, mesh belt austempering lines, batch IQ furnaces, vacuum furnaces, a pit furnace and numerous box furnaces. We would not describe the equipment as "state of the art" however the depth of knowledge at this location is very impressive and Daan Du Plooy, General Manager and his team obviously know their stuff, do a good job and run a good profitable operation. While we did not see an enormous number of captive heat treats in South Africa we understand that this is one of the larger ones. In the photos below you see Derrick Murphy, Manager of Metallurgical Services on the left, Daan Du Plooy and Gord Montgomery September 28, 2017


SECO/WARWICK 20th Training Seminar

September 12-14th furnace manufacturer SECO/WARWICK held their 20th Training Seminar combined with an "Open Day" at their facility in Swiebodzin, Poland. Having visited the company we should correct that and say that SECO actually has 2 or 3 locations in this area, from the pictures I would say that this is the largest of their locations. These pictures show the plant and attendance. September 28, 2017


Business Opportunities

Please take a look at our most recent employment offerings. If you see anything you like don't hesitate to get in touch with us at jordan@themonty.com or 905-271-0033. September 28, 2017

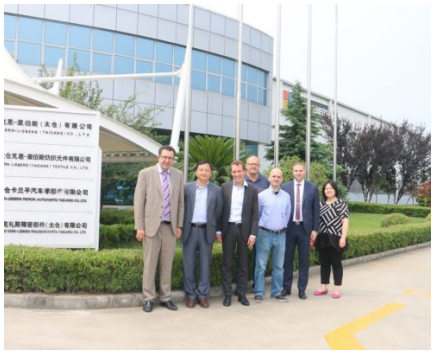
Item # O330 **Plant Managers**
Item # O329 **Sales Engineers**
Item # O328 **Process Metallurgist Wanted**
Item # O327 **Outside Sales Representative**
Item # O326 **Straightener / Quality Inspector / Furnace Operator**

Trifast PLC

Pretty well unknown in North America UK based fastener manufacturer Trifast with manufacturing locations around Europe and Asia is deciding that doing heat treating in house makes sense. To that end the company has just installed a brand new £1 million new heat treatment plant at their TR Vic location in Italy. This will be combined with new automated inspection and packaging equipment. Many a captive or commercial heat treater processing fasteners has found that combining heat treating, packaging, coating and sorting makes a heck of a lot of sense when combined into the same area. While Trifast does currently do heat treating in house the company has made it plain that the heat treating aspect of their business will be expanded. September 27, 2017

KERN-LIEBERS Installing Expanite Technology in China

"Today it's formally announced that the German industrial supplier KERN-LIEBERS with approx. 7,500 people working at over 50 locations globally will install Expanite's patented technology for surface hardening of stainless steel. Driven by demand from one of the world's leading manufacturer of automotive fuel pumps, the installation will be done at KERN-LIEBERS' facility in Taicang, China, and shall be operational by November 2017. Based on a license agreement between the two companies, KERN-LIEBERS will install equipment capable of executing Expanite processes in their Taicang facility. By this move, Expanite will be the first supplier of stainless steel surface hardening who can offer the same unique product in Asia, Europe and the US. Together, KERN-LIEBERS and Expanite will promote this technology to companies in the region. Expanite is a pioneer within the field of surface hardening of stainless steel and titanium, and has in the recent years grown to become a proven supplier of surface hardening and heat treatment to industries such as food & beverage processing, consumer goods, medical device, pumps, valves and various industrial applications. With Expanite's processes it is possible to increase wear and corrosion resistance of stainless steel beyond what was thought possible in the past. "We are very excited about adding Expanite hardening to our portfolio of solutions to companies with presence in Asia and in the need of improving performance on stainless steel parts. This business opportunity, based on a well-proven yet innovative technology, will ensure that KERN-LIEBERS Taicang can continue its growth path of the last decade" says Richard Zhang, CEO of KERN-LIEBERS in Taicang." September 27, 2017



Donald Trump and the Heat Treating Industry

September 18th we had some comments about trade protectionism, US President Donald Trump and how much of the heat treating equipment used in North America originates in North America. This prompted some comments including this one.

"Hi Gord, Longtime faithful reader here. I saw your article about the potential impacts of protectionist policies as well as the reader follow-up and wanted to point out a few other risks of the US taking a stance against free trade. For starters, your original article seems to imply that "America First" means "North America First," and I don't think that's the case. The current administration seems to be staunchly opposed to NAFTA which means they could scrap NAFTA and impose tariffs on both Canadian and Mexican goods. That would have obvious impacts on a number of operations that manufacture furnaces (CAN-ENG) or fabrications in these countries as well as operations that move their commercial work to Mexico and back to save money. Then there are the manufacturers that build their products, including furnaces, in the former Soviet Block countries like SGL Carbon, Seco-Warwick, Nitrex and others. Obviously they would be put in a position of having to open manufacturing capability in the US or contract with a US manufacturer, both of which would increase their cost-basis. Finally, it's highly likely that other countries would respond with tariffs on US-manufactured goods and while a number of companies have set-up shop in China for building their US-branded furnaces, China could restructure their tax laws governing wholly-owned foreign enterprises (WOFEs) resulting in a substantial impact on company profits. I believe it's clear that the risks associated with protectionism and trade wars far outweigh any potential upside. A far better way to bring back more manufacturing is to revise the US tax code to encourage capital investments in US facilities. Just my two cents. -HM" September 26, 2017

Solar Atmospheres Greenville, SC Facility Is Now Nadcap Approved for Furnace Brazing

Greenville, SC, September 25, 2017 – *Solar Atmospheres Greenville, SC facility has for the second successive year expanded its scope of Nadcap approval: this time to include vacuum furnace brazing for the growing aerospace manufacturing cluster in the Southeast US.*

Jon Collier, Quality Manager at Solar Atmospheres in Greenville, SC states, "Earning this Nadcap accreditation for vacuum furnace brazing reaffirms our commitment to providing our customers with quality services that meet the increasingly stringent requirements of the aerospace industry. This accomplishment speaks to the effort of the entire Solar team coming together to build and implement the additional systems required to achieve this expansion of scope."

Mike Harper, Regional Sales Manager, Southeast states: "we are excited to once again demonstrate what Solar Atmospheres is all about, listening to the needs of our customers and responding with a solution to meet those needs."

With thermal processing in furnaces ranging from those suited for small lots and development cycles to a 6-1/2 foot diameter by 24 foot long vacuum chamber capable of processing up to 50,000 lbs at 2400°F, Solar Atmospheres is backed by AS9100 and Nadcap quality systems to provide our customers the confidence that their product is being processed appropriately.

For additional information on our processing options and our capabilities in Greenville, contact Mike Harper at mikeh@solaratm.com, and visit us at www.solaratm.com, or call 1-855-WE-HEAT-IT. September 26, 2017

Monday Morning Briefing

We start off the week in the UK where **Vacuum and Atmosphere Services** has this announcement; *"VAS would like to announce that Gary Nicholls, & Pat Whitehead have joined the VAS team. With multiple years experience within the heat treatment industry, VAS is delighted to have Gary & Pat as an addition to the already vastly experienced engineering team at VAS. Both, Gary & Pat have firmly found their feet at VAS, & are helping combat the evergrowing project order book both onsite, & within the VAS factory. VAS have seen a significant growth on every aspect of the business within 2017, & are still actively looking for engineers with experience on heat treatment equipment.* Staying in the UK we also see that commercial heat treater ***Wallwork Group***, one of the largest commercial heat treaters in the country has just hired a new Sales Manager, ***Mr. Dean Brinton***. *"Starting his career at Heat Treatment2000 in 1997, responsible for the continuous mesh belt process, Dean then moved to TTI Group in 2001. Here he gained detailed knowledge of vacuum hardening and tempering. Within four years he was promoted to TTI's Birmingham PVD coating department and then on to production management."*

In Canada we hear that ***Dan Belanger*** has parted ways with commercial heat treater ***H & S Heat Treating*** in Port Robinson, Ontario. Danny has been with the company for as long as I can remember which means it is quite a while. H & S is one of the larger commercial heat treaters in the country and specializes in Batch IQ and continuous processing. Also in Canada furnace builder ***Can-Eng*** must be pretty darned pleased with this picture which we have to assume was accidental. *"As Alabama Governor Kay Ivey officially opened Kamtek's (a*

manufacturing operation of global automotive supplier – ***Magna International****) new manufacturing facility in Birmingham, Alabama one premium equipment manufacturer's name could be seen above the backdrop; Can-Eng. Can-Eng Furnaces International Ltd. The new, $60 million facility for manufacturing aluminum castings is another shift in the automotive industry towards further lightweighting. "*

In upcoming news for this week we have a couple of interesting items for you including an interview with the CEO of ***CIEFFE Furnaces*** of Italy, ***Mr. Peter Schweighofer*** and also a profile of one of the larger captive heat treaters in ***South Africa***, a photo of which can be seen below.

Where are they now? ***Mike Wellham***. Remember Mike? He was CEO of ***Bluewater Thermal*** a few years back when Bluewater was the second largest commercial heat treater

in North America and really turned the company around. He left Bluewater a few years back and just became CEO of Advanced Integration Technology. Mike was always a sharp, ambitious guy. A reader happened to send us this news item which caught our eye because the furnaces referred to in this note was a large ***ECM vacuum carburizing system***, hard to believe it is 5 years ago now. *"FALCONER, NY – A loan issued years ago to a major Chautauqua County employer was paid off last month and earlier than originally anticipated. As a result, around $812,000 in loans are available for more business expansion and investment locally. Chautauqua County Industrial Development Agency officials recently announced that* ***SKF Aeroengine*** *in Falconer paid off an Al-Tech Loan they were issued 15 years early. The loan totaled $1 million for a 20-year period. "It was paid off after five years, which is way earlier than expected," said Rich Dixon, IDA chief financial officer. The Al-Tech Loan issued by the IDA provides companies that are investing and creating new jobs with the ability to secure financing at below-market, fixed-interest rates. IDA officials say it allows companies to grow faster or plan larger expansions that need investment to retain or grow jobs. Along with other incentives, the Al Tech Loan was issued to the developer who bought 96,000-square-feet of property and built a new world-class heat treatment facility for SKF five years ago. SKF, a lead bearing and seal company, leases the facility. New hardening and carburizing furnaces were placed in the facility to suit the low volume, high precision aerospace product manufactured in Falconer.* September 25, 2017

UPC ACQUIRES ATMOSPHERE ENGINEERING

"United Process Controls (UPC), a leading global provider of process controls, flow controls and automation solutions, is pleased to announce the acquisition of Atmosphere Engineering Company (Atmosphere Engineering), a USA-based, family-owned and operated business led by brothers Jason and Eric Jossart. Founded in 2002, Atmosphere Engineering designs and manufactures industrial flow control products, furnace control products and data acquisition software with a strong presence in North America, South America and Europe. Atmosphere Engineering will bolster UPC's product offering and technical competencies, adding brands like the FurnaceMeter™ and VersaMeter™ flow meters, the Endoinjector™, Exoinjector™ and EndoFlex™ gas generators and the dissociated ammonia generator DAGen™. While the acquisition expands the company's customer base, it will also provide a platform to expand into new markets, extend market penetration in the flow controls market, and capitalize on cross-sell opportunities.

Additionally, UPC has enhanced its organizational structure to align with the future direction of the company and its foundation for continued growth. As part of the new structure, Jason Jossart will serve as the company's Vice President of Operations and report directly to UPC's President, Paul Oleszkiewicz; Eric Jossart will join as Director of Sales, Heat Treat and report directly to Vice President of Sales & Marketing, Patrick Torok. "Atmosphere Engineering represents a great fit with our flow and process controls business and is in line with UPC's strategic direction to expand its repertoire of products and leadership in the industry," commented UPC President Paul Oleszkiewicz. "Jason and Eric run an incredible business, and we are excited to welcome them and the entire Atmosphere Engineering team to the UPC family. This acquisition shows our ongoing commitment to provide customers worldwide with a comprehensive portfolio of process and flow control solutions that optimize the quality, safety, and control of heat treating operations."

Jason Jossart, founder and President of Atmosphere Engineering commented "We at Atmosphere Engineering are very pleased to join forces with UPC. My brother Eric and I have worked hard to build Atmosphere Engineering's brand and reputation and are excited to see it grow further as part of UPC. Together we will emerge as a leader in flow and process controls to the heat treat industry and address new market challenges and opportunities for technical innovation and growth."

ABOUT ATMOSPHERE ENGINEERING. *Atmosphere Engineering Company designs and manufactures integrated flow control solutions for industrial applications. The company aims to continually develop and support systems that optimize the quality, safety, and control of each process while at the same time minimizing gas and fluid consumption to reduce production cost and eliminate energy waste. | www.atmoseng.com*

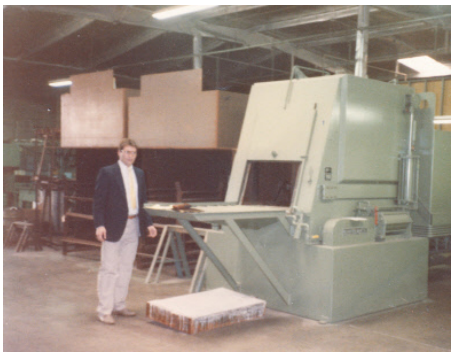
ABOUT UPC. *UPC provides process control, flow control, and automation solutions to furnace OEMs and customers with thermal processing equipment and operations. The company is now*

comprised of five brands – Atmosphere Engineering, Furnace Control Corporation, Marathon Monitors, Process-Electronic, and Waukee Engineering – with products ranging from probes, analyzers, flow meters, programmable controllers, generator mixing control systems, SCADA to complete turnkey systems. | www.group-upc.com" September 22, 2017

Kary Peterson, Beavermatic

Kary Peterson, a well known fellow in the North American heat treating market sent us this picture and story which dates back to 1986. September 21, 2017

"Enclosed is a picture of me (Kary Peterson) in 1986 in Top Line Furnace located in Paramount, CA. We had just purchased BeaverMatic IP from Barbra Beavers (Jack Beavers passed away in 1983). The rent had run out so I changed clothes quickly and started loading various assemblies on a truck to move back to Rockford, IL. Yes my hair color has changed, and from various theories!"



North American Furnaces Made in North America?

Last week we had some thoughts about "globalization" and how it effects the North American new furnace market. Specifically we suggested that most new furnaces purchased in North America are built by North American companies. A reader had these thoughts which differ from ours to some extent. September 21, 2017

"In response to your assertion that most NA furnaces are made in NA I would say that you have only looked at only a slim piece of the pie when it comes to Vacuum furnaces specifically.

First, ECM is all in France and ALD is entirely in Germany and they account for an overwhelmingly large fraction of vacuum carburizing cells due to their inroads with automotive manufacturing. But manufacturing of furnaces isn't even the right word for North American furnace shops – it's more like "assembly" at these furnace builders. More and more standardized shells or vessels are being brought in from overseas suppliers in the far east, almost all vacuum pump manufacturers are overseas; Siemens and A-B PLC's and components are made in the far east. Most graphite comes from Japan and other overseas countries, at least at some point in the actual "making" and not "fabricating"

The OEM's are very much employing engineers and overseeing the final assembly in their respective shops, that much is true. But when you look at the true global supply chain, I think you'd find that many parts of the furnace have deep roots well beyond our own borders. Without free trade, the cost of a fully finished furnace from an OEM would skyrocket. Regardless of our political leanings – if we should end fair trade, the OEM's of North America will suffer at a minimum exporting their product on the world market, and in the worst case be eliminated due to unburdened global competition." Michael Lister, Senior Sales Engineer at Flowserve in Texas.

Picture Day!

On a regular basis we change the photo display on our home page www.themonty.com and today is the day. We would politely suggest that our assortment of equipment and people pictures from various captive and commercial heat treaters from around the world might be of interest. Always feel free to send us your own pictures and we will be happy to use them. September 20, 2017

TD Coating Centre, South Africa

While our main focus at "The Monty" is heat treating we sometimes veer into coatings, shot peening and surface hardening because they are all so closely related. We will stress though that only occasionally in this case we talk about a company by the name of TD

Coatings located in South Africa, a firm that we have corresponded with for over 10 years now. TD was founded in 2000 by Mr. Jeff Ferreira and his wife Kerry-Lee Ferreira to offer Thermal Diffusion coating; since that time their product offerings have grown to include PVD Coatings, Boriding, Nitriding and several other process all of which are described in detail at http://td.co.za/ These services are offered mainly for precision-made small tooling and components from steels, tool steels or carbides. While the South African market is a small one we are very pleased to say that TD has grown from very humble beginnings in 2000 to a growing company of almost 20 employees in 2017 and without a doubt the foremost company in the country for TD Coatings and Boriding. September 19, 2017

Applied Process

With two plants in the US, Livonia, Michigan and Oshkosh, Wisconsin Applied Process is one of the largest commercial heat treaters when it comes to austempering and probably the largest when it comes to ADI (Austempered Ductile Iron. We mention this press release today mainly because it shows the state of heat treating in North America, good and getting better. September 19, 2017

"2017 has been a dynamic year with a soft start and a consistent build to our record months in May and June. At the same time, we have honed our schedule management to achieve

record high on-time delivery while maintaining our expected level of the highest quality in the industry. Agriculture and Heavy Truck have led the way with double digit percentage gains both in historical business along with new product releases. 'Seeds' (time and effort) planted between two and four years ago are now flourishing and we are reaping the benefit of assisting our customers in producing lower cost, lightweight parts with higher performance utilizing Austempered Ductile Iron and Steel."

New Vice President of Ipsen USA

We see that Mr. Peter Kerbel is now Vice President Sales at Ipsen USA. Peter has worked with furnace builder Ipsen since 2008 in a variety of sales positions. With the recent promotion of Mr. Pat McKenna to President of Ipsen USA we assume a few people will be moving up the ladder. Congratulations to Peter. September 19, 2017

Donald Trump and the Heat Treating Industry

There has been a lot of talk recently about a "wave" of trade protectionism in the US under President Donald Trump. This could involve tearing up existing trade treaties such as NAFTA (North American Free Trade Agreement) between Canada, USA and Mexico, buy America policies, additional duties or taxes on imported items, penalties levied against country's with too large a trade surplus with the US-you name it, it has been suggested. With this in mind are there many items heat treaters in North America need that comes from outside the US or North America that might be subject to some sort of penalties. And the answer is a resounding no which is rather interesting. Almost all furnaces bought in North America are built in North America. Control systems are largely purchased from US companies, quench oil, salts, burners you name it most of these items are sourced from North American companies (yes we certainly understand that some of the largest furnace

builders, Aichelin, Ipsen and Seco are all European companies but each has long established manufacturing facilities in North America). An exception would be some of the Japanese furnace builders but they restrict themselves largely to the Japanese transplants. Beyond that the only real exception to this would be high temperature alloy components sourced from Asia, primarily China which has been growing in popularity in North American because of lower costs and in many cases comparable quality. So North Americans in the heat treat industry can say with complete certainty that theirs is an industry which is still dominated by North American companies. September 18, 2017

Pictures From The Past!

Today we have some pictures from the past. September 18, 2017

Steve Thompson, SSI, Don Longenette (at the time with Timken), Scott Johnstone, SSI

Dan McCurdy, Bodycote, Danny McWilliams (unfortunately we do not know the name of the woman in the middle)

Kyle Favors, Josh Harvey, Heat Treat Services Unlimited

What's It Worth?

We were recently asked to give an opinion on this continuous brazing furnace as to value and how attractive it would be on the used market; "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 $175,000 USD". The furnace is relatively new, appears to be in excellent condition and is complete and ready to go. The price is reasonable, as a matter of fact probably fairly attractive the issue however is the number of potential buyers. At the end of the day a furnace like this with a very limited number of buyers can languish on the market for quite some no matter what the price is. On the other side of the coin if a buyer surfaces that needs exactly this size and style of furnace they can get one heck of a deal. We will keep you posted about what happens with this unit. September 18, 2017

McLaughlin Services Installs New Nitrider

Commercial heat treater Accurate Steel Treating in Southgate, California has just installed a brand new gas nitriding unit provided by McLaughlin Services of Avilla, Indiana. When we say brand new we mean it-the furnace just started producing parts two weeks ago. The controls were provided by SSI of Cincinnati, Ohio. As far as we know this is the first gas nitrider McLaughlin Services has provided but it would appear to be a success with Accurate very pleased with the performance to date. September 15, 2017

Hestia Heat Treat/Plant Manager Wanted

Remember how we told you not that long ago that Hestia Heat Treat in Racine, Wisconsin was sold? Well it looks as though the new owner is now looking for a plant manager. September 15, 2017

"Hestia Heat Treat is searching for a dynamic Plant Manager to take on the responsibility of overseeing plant activities. The successful candidate will be accountable for all aspects of plant performance, with efficiency and safety, consistent with quality requirements. He or she will also delegate authority to key supervisors in production, manage all functions involved and direct and coordinate operations for the plant. Requires extensive knowledge of heat treating, operations management, metallurgy, inspection and customer needs through technical and advanced training, seminars, college, B.S.M.E. (metallurgy) and/or equivalent work experience."

Heat Treating South Africa

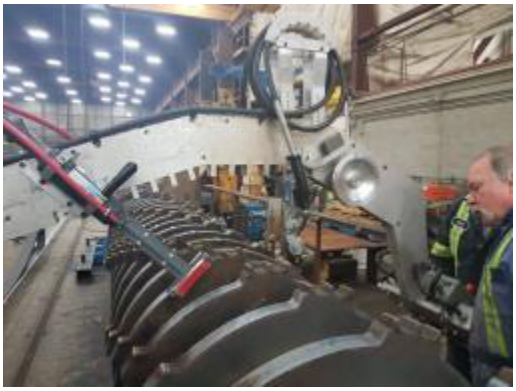
Having absolutely nothing to do with heat treating we have this photo of Gord and Dale Montgomery during their time in South Africa seeing heat treaters (we have a couple of more profiles of South African heat treaters still to come). September 15, 2017

Ajax TOCCO Magnethermic Retrofits Induction Heater

"Ajax TOCCO Magnethermic recently supplied a forestry products manufacturer with a compact remote transformer and low profile heating inductor to be used for preheating prior to GMAW. These items were sold as a field install kit that are compatible with and utilize the customer's existing induction heating cables and accessories. The heating inductor floats above the weldment without making contact. Versatility and utilization of the 35 kW induction heater were immediately increased. The customer had a need to be able to heat a rotating weldment with limited space between welds. Existing weld preheat inductors that roll on top of the weldment would not fit between the weldments, forcing the customer to rely combustion heating technology (torches).

Ajax TOCCO Magnethermic®, a subsidiary of ParkOhio Holdings Corp.®, designs and manufactures world-class induction heating and melting equipment for various industries and applications throughout the world. In addition, the Company provides a range of services including laboratory process development, preventive maintenance, equipment repair, and parts, coil repair facilities and installation services through its locations in North

America, South America, Europe and Asia. www.AjaxTocco.com September 14, 2017



Terry Bachmeier Retired

A heck of a lot of Canadians, a number of Americans and even a few Europeans will be quite familiar with Mr. Terry Bachmeier a longtime heat treater based in Canada. Terry had his own heat treat in Canada which he sold many years ago before becoming General Manager of SCHMOLZ + BICKENBACH in Windsor, Ontario (directly across the river from Detroit). In it's time Schmolz & Bichenback was one of the premier vacuum heat treaters in North America before it was closed down a number of years ago with some of the equipment moved to Carol Stream, Illinois (we still cry when we think of the enormous, almost new 12 bar Ipsen vacuum furnaces being cut up for scrap because the company was worried about any potential liability involved in selling them on the used market. If you can believe it holes were drilled in the vessels, the vessels cut in two and the separate sections sent to different scrap yards- absolutely true story, we saw it with our own eyes). After the company closed Terry spent a number of years as a manufacturers rep mainly for our friends at Rubig in Austria. Recently Terry retired leaving the industry poorer for the loss of his experience. September 14, 2017

P.H Heat Treatment CC, Germiston, South Africa

And speaking of heat treating in South Africa let's look at the largest captive or commercial Sealed Quench (Batch IQ) processor in the country P.H. Heat Treatment CC. Cecil Zlotnick, started his career in heat treating by becoming a metallurgist trained at the university of Johannesburg before starting a short stint (3 years) at a steel mill and subsequently working for BOC where he helped develop nitrogen/methanol atmospheres for use in carburizing applications. In 1981 he bought a very small commercial heat treater by the name of P.H. Heat Treatment when he installed the company's first sealed quench furnace. In 1984 P.H. moved to a new location and since then it has grown and prospered. The company today has 14 sealed quench units (most Ipsen through feed design), 2 shaker hearth furnaces mainly for processing fasteners and a Nitrex, Nitreg system. Interesting story about the Nitrex system; Back in 2003 Cecil attened a heat treat show in Indianapolis where he happened to run across some of the Nitrex fellows. A visit was quickly arranged to visit the Nitrex plant in Burlington, Canada (this is now a Bodycote facility) and from there a visit to Montreal. The end result? P.H now has the only Nitrex system in Southern Africa. Today the company has the ability to process 700 tons per month of carburizing, carbonitriding, neutral hardening, nitriding and several other processes and has roughly 50 employees making it one of the largest heat treaters in the country. These photos will give you an idea and in them you will see Cecil Zlotnick, Managing Director and Dale Boxshall-Smith, Works Manager. If you ever make it to South Africa Cecil and Dale are two of the friendliest guys you will ever meet. September 13, 2017

Tim Mohr Promoted Paulo St. Louis Plant Manager

Tim Mohr has been with Paulo for 10 years. Since 2014 he has served as St. Louis' Production Manager. In that role he was responsible for coordinating the daily operations of the plant. Managing shipping, scheduling, and the plant production team. Prior to that Tim was a corporate Project Engineer and Quality Management Representative. Tim has built great relationships with our customers and improved safety and productivity of the shop floor. He will graduate from the Metal Treating Institute's YES program this fall, a management training program for commercial heat treaters. September 13, 2017

Bohler Uddeholm. Isando, South Africa

Without a doubt the largest commercial vacuum heat treater in South Africa and most likely the largest including captives is tool steel specialist Bohler Uddeholm with four locations around the country. We at "The Monty" only had the chance to visit the largest which is located in Isando which is a suburb of the largest city in the country and the

manufacturing hub, Johannesburg. Bohler has been in the country since the 1960's and this location offers plasma nitriding in Rubig manufactured furnaces, a very wide variety of salt processing furnaces and some very impressive vacuum furnaces, again mainly provided by Rubig of Austria. The most impressive of the bunch is a fairly new 10 bar unit. Bohler is one of a very few heat treating companies in South Africa which has the latest ISO accreditations. This is an impressive heat treat but having seen a few Bohler plants around the world we were not surprised. September 12, 2017

Danie Goosen, Manager Heat Treatment Isando, Gus Schroeder, Divisional HPM Manager

Mesh Belt Move Over?

Going back a number of years rotary retort furnaces (along with shaker hearth furnaces) was the furnace of choice for processing small parts, typically fasteners or chain components. Then along came mesh belt furnaces, a technology imported from Japan and rotary furnaces largely disappeared except for places like Borg Warner (timing chain), Blount (chain saw components) and Renolds Jeffrey (chain) to name a few. The reasons for decreased demand are many and varied but atmosphere control and the cost of retorts generally come up. For this reason we read with great interest a press release from furnace build SECO/WARWICK called; "Mesh Belt Move Over: Why the NEW Rotary Retort will be your next furnace. We at "The Monty" have no idea what the new style looks like but we are certainly curious.

"SECO/WARWICK. Date and Time: Thu, Sep 28, 2017 2:00 PM – 3:00 PM EDT. This facts and figures webinar will show the math behind why rotary retort furnaces are quickly replacing mesh belts for specific parts and processes. It will also address the superior metallurgical results that can be obtained from this furnace. If you've never heard of a rotary retort furnace before, or if you remember the OLD rotary retorts, you'll want to attend this webinar and learn why the all NEW rotary retort will be your next furnace." September 12, 2017

Jim Senne, MetalPro Resources LLC

This will be a rather unique interview in that we are speaking with all three members of rep firm MetalPro Resources in the Ohio area. The three members include; Jim Senne, Bill Andreski, and Steve Maus. September 11, 2017

Jim if it is OK with you I will direct my questions to you and you can decide how you would like to answer them, jointly or individually. First off I and our readers would be very interested to know the 3 members of your team and their backgrounds.

Jim Senne, who holds an undergraduate degree in Chemistry and studied graduate level Material Science, held many roles at Xtek, Inc. in Cincinnati during his 25 years there, including Process Metallurgist, managing the Metallurgical Engineering Department and the Heat Treating Operations. His hands-on experience ranges from deep case carburizing of steel mill gears to salt bath FNC of automotive components.

Bill Andreski has an undergraduate degree in Metallurgical Engineering and an MS in Material Science and Engineering. He has over 30 years of experience in heat treatment of steel and aluminum alloys. His primary focus has been with all aspects of manufacturing of gears and gear drives, including forging, welding, heat treatment, material selection, etc.

Steve Maus has a BS degree in Metallurgical Engineering. He was with what was Allison Gas Turbines, now Rolls-Royce Corporation for 17 years, eventually as Chief Manufacturing Engineer for Special Processes. He was with furnace builder Lindberg in the 1990's and in the instrumentation industry with Danaher Controls, and has been an independent rep for nine years.

I believe that you originally started the company Jim-when was that and when did Steve and Bill join you?

February 16, 2007 is the founding date, so we recently had an awesome 10th anniversary celebration in Cincinnati with our wives to commemorate. I have to acknowledge Stahl Engineering in Indianapolis for giving me the start. They were a very well known rep agency and they called on me at Xtek, where I ran the captive heat treat shop. Bob Rodewald was the key to getting me involved in selling heat treating capital equipment. I could talk for hours

about that story, but I'll leave it at that for now. Steve Maus joined me on April 1, 2013. I have known him since 1999, when he called on me at Xtek, and I had been stalking him to join me at MetalPro Resources since day one. Bill Andreski joined us officially on January 1, 2016. I have known him since the mid 90's, when we were counterparts at head to head competitor companies. I had been stalking him to join us since day one.

Continue Reading . . .

Daniel Saenz, Fredericks Company

"The Fredericks Company, an industry-leading manufacturer of tilt and vacuum measurement products, is pleased to announce and welcome Daniel Saenz as Director of Sales and Marketing. In his new role, Dan will be responsible for developing and implementing strategic sales and marketing initiatives, defining new markets and business opportunities, and growing and strengthening our sales team worldwide. After graduating from Penn State University with a B.S. in Electrical Engineering, Dan began his career as an Electrical Project Engineer at Johnson Controls. From there he moved on to Bender Electronics Inc. where he made the transition from Applications Engineer to Sales Manager, eventually becoming the Sales Director for Mexico, Central America, and the Caribbean.

With a strong background in both engineering and sales, Dan brings a unique perspective to the Fredericks team, as well as a proven track record as a skilled and tenacious salesperson. "We're excited to have Dan leading our sales and marketing team," said Heidi McKenna, President of The Fredericks Company. "His technical expertise and application engineering background,

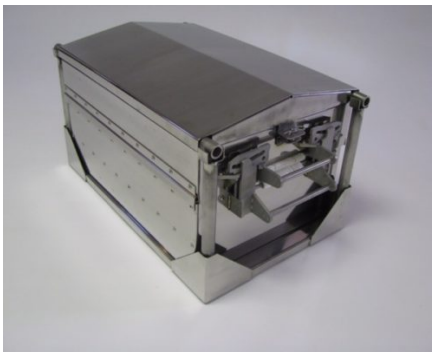
combined with his sales and marketing experience, will equip him with the skills to understand the needs of our customers and provide new solutions." September 11, 2017

Harchris Heat Treatment/South Africa

The South African heat treatment market is a difficult one these days for a number of reasons, some political, some having to do with changing markets and some having to do with changes in the resources industries. South Africa being a country long dependant upon resources has been hard hit by these changes. In spite of that companies with experience, resources and drive continue on and will continue for a long time into the future. Harchris Heat Treatment is a very good example. One of the largest commercial heat treaters in the country it was founded in 1955 by the father of the current owner Mr. Errol Preston and continues on as a family owned business. The strong point of the company is stress relieving at which it excels. A typical example can be seen in the photos below which shows a part far smaller than their maximum capacity of a 60,000 pound part. September 8, 2017

PhoenixTM

"PhoenixTM have recently supplied one of their 'Hot Box' systems to Nichidai Thailand, part of Nichidai Japan, and a major manufacturer of components for the auto and aerospace industry. The system will be used in their batch and low pressure carburizing furnaces where furnace surveys are a requirement for CQI-9 and AMS2750. In the past this manufacturer has used 'trailing' thermocouples for TUS surveys, but needed to speed up and simplify the process of CQI-9 and AMS2750 report generation. The solution was a PhoenixTM survey system which is charged into the furnace as part of a normal load, and uses 2-way RF telemetry to monitor the survey externally. The system is able to operate in both types of furnaces, and when required can be fitted with a deflector shield to withstand the high pressure gas quenches. For more information contact: info@phoenixtm.com *or* http:/www.phoenixtm.com" September 8, 2017



Pyradia/Pratt & Whitney

Pyradia has strengthened its relations with Pratt & Whitney Canada with 2 new projects for facilities in Quebec, Canada. The first project is to supply a low temperature conveyor drying

oven for steel parts complying with AMS2750 standards. Secondly Pyradia received an order for a Bottom loading type furnace. The Equipment will be used for the stress relief of combustion chambers of P&WC aero engines. The unit will be a high temperature (2000oF) retort furnace using Argon/Nitrogen and Hydrogen equipped with state of the art batching monitoring/logging capabilities. September 7, 2017

Unitrat Heat Treatment, Brazil

Remember how we had a little news item about Unitrat Heat Treatment in Brazil and their beginnings? Well now we can tell you the rest of the story which would appear to have a happy ending, this story is told by ***Marcio Magalhães,*** General Manager of the company. As part of a small business we can say that we are impressed by the determination this group has.

The end and the beginning; After Bodycote announced its decision to leave Brazil, all of the Plant Managers in Brazil had the difficult task of closing the company's activities within 3 months, informing customers, employees and suppliers. We were told though that if there was a proposal to buy the business, this could be evaluated. In a personal effort led by Cassiano Horta we visited several competitors asking them if they would be interested in acquiring the business here in Brazil. At the end there was an agreement with a National group to acquire all the sites in Brazil and we worked with this group for a short period.

Acquisition of Unitrat; As you know, Unitrat is a commercial heat treater focused on Quenching, Normalization, Carburizing, carbonitriding and Austempering in Continuous Furnaces which was closed for two

months in total bankruptcy. Due to outstanding debts we were able to acquire the company fairly quickly. We did not have much capital, in fact our money would only be sufficient for the first 3 months and with that we used loans from banks, friends and family and contradicting all expectations and predictions we went to work. After 3 months we had 8 customers and the 3 largest were in default. With no money it was a very difficult year. Despite these great challenges, we recertified the plant to ISO 9001, adapted the equipment to CQI-9, implemented VDA 6.3 actions and involved the team in daily production meetings using a methodology learned at Bodycote and the SQDP Board.

Results; Today Brazil is still experiencing a strong economic recession and the number of unemployed exceeds 13 million. Even with all the difficulties, after 1 year and 5 months we have gone from 8 to 45 customers. Billings have increase unbelievably 150% compared to 2016 (this year was already better than 2015 even with the plant closed for two months), and our customers are forcing us to increase our production capacity. All debts are being renegotiated with resources that the business itself is generating. In 2017 we will double the capacity of the Plant in Vargem Grande Paulista and there are plans to install more equipment. Only one thing has not changed, we still have no money, but today we can say that we have a healthy and expanding Comercial Heat Treatment. September 6, 2017

Heat Treating South Africa

As a prelude to our upcoming profiles about captive and commercial heat treating in South Africa we have this photo of our Editor in Chief of "The Monty", Dale Montgomery at Victoria Falls in Zimbabwe, Africa. September 6, 2017

Chris Hall, Accurate Steel Treating Interview

Today we are very pleased to have this interview with Mr. Chris Hall, General Manager of commercial heat treater Accurate Steel Treating in Southgate, California. September 5, 2017

First off Chris I am always curious as to how individuals get involved in the heat-treating industry-what is your background?

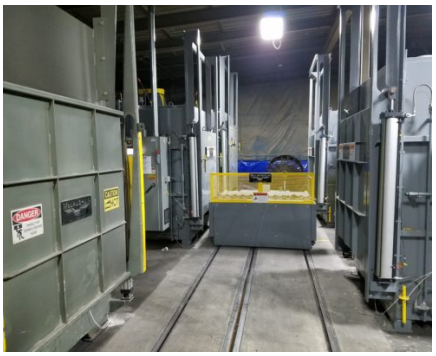
Heat treating was certainly not something I planned for growing up. Initially, out of school I needed a job and somehow found a company called Pacific Steel Treating in North Hollywood, CA. That was in 1979. With no formal training (in anything) I started as a receiving clerk of all things and just kept working hard and saying yes to the next thing I was asked to do, the result being I received a very well-rounded education in the heat-treating business. Eventually I went back to school for metallurgical training and throughout my career I have taken, various quality, sales, management and accounting courses.

I am very familiar with Accurate Steel but I am sure many of our readers know little about the company. Could you please give us the background of the company, when it was started, ownership structure, size etc.?

AST was started in 1962 as a small commercial shop. In 1989 Ron Loynds acquired the company and along with Mike Bastian grew it into the preeminent commercial tool & die shop on the west coast. Accurate Ion Technology was formed in 1998 initially as a joint venture with Lindberg Heat Treating. When Bodycote acquired Lindberg in 2000 Ron decided to dissolve the partnership and carried on with 100% ownership. I came to AST in March 2015 after working for Bodycote for 25 years to help the company with the transition to Aerospace heat treating, a completely different animal than commercial tool & die. Additionally, Mike Bastian was ready to retire so I stepped into his position as GM.

Continue Reading . . .





Labor Day Holiday.

Monday September 4 is Labor day which in many countries around the world I marked by a national holiday. For this reason the offices of WG Montgomery Ltd., will be closed that day with regular news items to resume Tuesday September 5.

Paulo announces new plant in Monterrey, Mexico

"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. Paulo will continue to add equipment throughout 2018. Initially the plant will serve the Automotive industry, processing high volumes with the same repeatable and traceable performance customers receive from our existing facilities through the use of our proprietary Production Information and Customer Service system. The Monterrey plant is currently being staffed with local leadership and will be supported by our corporate engineers, metallurgists, quality and operations staff. Paulo will also leverage automation with multiple robotic loading cells to improve safety in material handling while leaning production steps. Paulo is an industry leader in heat treatment, plating, and coatings. This new plant fulfills a strategic objective to become an international service provider while upholding our mission to help our customers succeed. To discuss partnering with Paulo in Mexico or elsewhere, please contact us. For more information about our new facility please contact Ben Crawford, Vice President Operations at 314.450.4401." September 1, 2017

ThermTech, Waukesha, Wisconsin, USA

A press release floated across our desks this morning about an acquisition. It referenced a Private Equity firm buying a company in Waukesha, Wisconsin by the name of ThermTech who does heat treating. Well there is a commercial heat treater in Waukesha with that name but something about the phrasing of the press release struck us as rather odd,

namely that it also mentioned Thermal Oxidizers. As it turns out ThermTech the commercial heat treater and one of the largest in the area has NOT been sold and remains a solid family owned business which we like to see. September 1, 2017

Mike Bastian Retirement

A good friend of ours and a well known figure in the heat treating market in California has just retired. Mike Bastian started at commercial heat treater Accurate Steel Treating in Southgate, California in 1964 and worked there until 1972 when he took a brief break from the heat treating industry. In 1974 he joined Continental Heat Treating in Santa Fe Springs, CA for a period of time before becoming General Manager of Valley Metal Treating in Pomona, CA. From Valley Metal Mike took a brief stint selling steel in the early 1980's and then become Regional Sales Manger for Abar Ipsen and then back to Continental as General Manager in 1987. Mike sums up his next move; "In 1989 Ron Loynds, the owner of Accurate made me an offer I couldn't refuse to run the company, the rest as they say is history. Heat Treating has been my life's work-a lifelong process of being challenged and learning every day." We wish Mike the absolute best in his retirement. August 31, 2017

In the photos below we see Mike with his beautiful wife Laurie, Alonzo Lozano, Facilities Manager, Tom Kreun, Production Manager, Ron Loynds and Chris Hall, General Manager

UPC Partners with Eisenhower Center

"United Process Controls (UPC) has partnered with the Eisenhower Center, a non-profit organization in Milwaukee, WI that provides work opportunities to people with disabilities. Over the last few months, UPC has established a work program with the Eisenhower Center for packaging lubricant oil used in Waukee Flo-Meter™ flow meters. During a recent visit to the center, Danny Woodring, Operations Manager of Flow Products at UPC said, "I didn't see disability. I saw people empowered to push beyond their boundaries; confident people who want to make a living for themselves. They are excited about this opportunity, and it's an incredibly uplifting experience to be in their presence. Eisenhower Center is a good fit with the goals and values of our partnership, and we look forward to this continued relationship." The vocational program at the Eisenhower Center provides education, training and jobs for the disabled through partnerships with local companies. To read more about their services or to become a business partner, please visit www.eisenhowercenter.org." August 31, 2017

USED EQUIPMENT

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

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

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BATCH FOR SALE

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

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Quick Jump To Items:

Item # B436 36″ x 60″ Pit Gas Nitrider

Item # B435 CODERE Switzerland System 250 42/60

Item # B434 Holcroft Batch IQ

Item # B433 Car Bottom 74″ x 84″ x 84″

Item # B432 Atmosphere Box Furnace 36″ X 48″ X 24″

Item # B431 Air Atmosphere Box Furnace 2,000 F

Item # B430 Ipsen Recirculating Box Furnace

Item # B428 Carbottom Furnace 1800 F

Item # B427 SOLO Swiss Line 202-30/30/60

Item # B426 Plasma Nitriding Unit 1000 kg Capacity

Item # B425 Box Furnace 2000 F

Item # B424 Atmosphere Box Furnace 80″ x 96″ x 60″

Item # B421 Surface Combustion "Super 36" Allcase

Item # B418 Lindberg High Temperature Oven 36″ Cubed

Item # B417 Fluidized Bed Furnace Line

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

Item # B414 Ipsen Batch IQ Installation Immaculate

Item # B400 Surface Combustion Super 30 Allcase

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 # B391 Ipsen T-11 Batch IQ Furnace

Item # B388 Hydrogen Atmosphere Furnace 8″ x 8″ x 8″

Item # B386 High Temperature Tube Atmosphere Furnace

Item # B374 Atmosphere Box Furnace 2100 F

Item # B371 Sauder “Auto-Tilt” Car Bottom Furnace

Item # B352 Pacific Scientific Box Furnace

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 $75,000 USD.

ITEM # B435

CODERE SWITZERLAND SYSTEM 250 42/60

CODERE Switzerland System 250 42/60. This installation was manufactured in 2001 and is situated in Switzerland. Due to the reduction of in-house heat treatment, customer decided to sell this line and outscource material, which arrives already heat treated. Austenitizing, carburising and carbonitriding furnace with operating temperature of 1000°C. The main voltage is 3 x 400V – 50Hz. The maximum weight per load is 150 kg with loading dimensions consisting of 420 mm x 600 mm. System consists of a Salt quench tank – Water quench tank- Gas cooling unit (0.2 bar) – 2 x Austenitizing furnace – 2 x Tempering furnace under protective atmosphere – Washing machinex 2 with Salt recuperator – Semi automatic manipulator with gas cabinet – Loading/ Unloading table (Suitable for 2 loads). Carbomanagement software recording all history and cycle parameters with the necessary controllers. Possiblity of changing water tank to oil quench. Codere confirm this installation will undertake retrofit of retorts before dispatch and overall insepction of line. Well maintained and has been shut down since August 2017.

Asking Price: 595,000 CHF

ITEM # B434

HOLCROFT BATCH IQ FURNACE

Holcroft Batch IQ Furnace. A Holcroft Model GPM batch IQ furnace with working dimensions of 36” wide X 48” deep X 30” high. Gross load capacity of 3,000 pounds. Gas fired with four 8” diameter U-Tubes and Hauck burner with recuperators. BTU input 1,350,000 BTU’s. Maximum operating temperature of 1800F. Uniformity from 950F to 1650F +- 10F. Quench tank 3400 gallons. Quench oil temperature 160F. Nitrogen Top Cool. Allen Bradley PLC 1400. SBS quench oil cooler which has never been used. Also included is a spare pusher head. Currently set up for carburizing and nitriding. New in 1998. Excellent condition!

Asking $55,000 USD.



ITEM # B433

CAR BOTTOM 74" X 84" X 84"

Car Bottom 74″ x 84″ x 84″. Electrically heated with a maximum temperature of 1500F.

Asking Price: 8,250 USD

ITEM # B432

ATMOSPHERE BOX FURNACE 36" X 48" X 24"

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

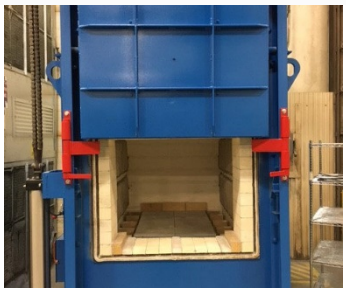
Asking $49,500 USD.

ITEM # B431

AIR ATMOSPHERE BOX FURNACE 2,000 F

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

Asking $65,000 USD.

ITEM # B430

IPSEN RECIRCULATING BOX FURNACE

Ipsen Recirculating Box Furnace 38" high x 43" wide x 48" deep. Gas fired, 1,000,000 BTU/hr with a max temperature: 1400 deg.F. Model Number: DL-3036. Serial Number: 60459. Updated controls, Honeywell indicating controller and overtemp. High temperature tempering furnace. Vertical lift air operated door with overhead air cylinder. Fiber board insulation. Alloy roller rail hearth. Rear located combustion chamber with high velocity roof mounted circulating fan. Top mounted package burner. Complete combustion controls and safeties. 460/3/60 power. Test fired prior to shipment.

Asking Price: $39,500.00



ITEM # B428

CARBOTTOM FURNACE

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

Asking $150,000 USD or best offer.



ITEM # B427

SOLO SWISS HEAT TREATMENT LINE 202-30/30/60

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

Price on request .

ITEM # B426

PLASMA NITRIDING UNIT 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.

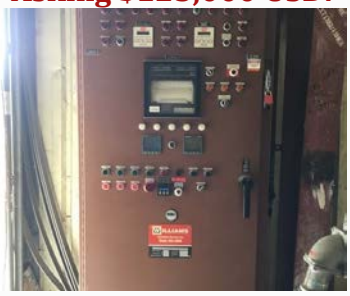


ITEM # B424

ATMOSPHERE BOX FURNACE

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

Asking $125,000 USD.


ITEM # B422

IPSEN SEALED QUENCH LINE

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

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

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

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

Ipsen Tempering Furnace DLRC-7-E built in 1976. Electrically heated with spiral wound elements. Load size 600 kg. Chamber size : 760 wide x 1220 long x 510 high mm
Ipsen Parts Washer Model WPD-4-G Gas Fired. Ipsen Loader. Ipsen Unloader. Ipsen Endo Gas Generator Model G-1500-G built in 1983. Gas fired. 1500 CFH. Can be easily upgraded to produce 2000 CFH. Dewpointer, industrial scales and portable hardness tester also included.

Asking Price £95,000.00



ITEM # B421

SURFACE COMBUSTION "SUPER 36" ALLCASE

Surface Combustion "Super 36" Allcase. Working dimensions of 36" X 48" X 30" high, gas fired. Currently undergoing a rebuild and will be in "like new" combustion in 12 weeks. Gas fired, top cool option and hot oil. Vertical U tubes with safety platforms, ladders, all new motors, wiring, components and comes with new control cabinet with SSI controls and flow scopes.

Asking Price: $353,825 USD.

ITEM # B418

LINDBERG HIGH TEMPERATURE OVEN

Lindberg High Temperature Oven. Model 41-MT-363636-2. Serial number 949223. Working dimensions of 36Wx36Lx36H. Manufactured in 1994. Maximum operating temp of 2050F.u00a0 240V, 3-phase 60hz. Honeywell Truline round chart recorder, model DR45AT and Watlow F4 digital control. Air operated vertical lift front door. Heating is provided by Lindberg MPH heating elements. Recurculating fan is mounted in the bottom. Furnace can be used for hardening, carburizing, carbo-nitriding, normalizing, and annealing. Includes retort box measuring 34x34x32 with gas connection. Excellent condition. Only used in the jet aviation industry by 1 owner. The retort was purchased with the furnace but was not actually used. Retort is brand-new. Unit has been well taken care of. Also included is a Clark Hardness Tester, Model CPT.

Asking $21,000 USD for both.



ITEM # B417

FLUIDIZED BED FURNACE LINE

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

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

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

Asking price is USD $180,000.00

ITEM # 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 # B414

IPSEN BATCH IQ INSTALLATION

Ipsen Batch IQ Installation. This 5 year old installation consists of 2 Ipsen carburizing furnaces with working dimensions of 36″ X 48″ X 36″, both gas fired. Four (4) gas fired Ipsen tempers 36″ X 48″ X 36″ capable of 1400F, an Ipsen dunk/spray washer and 2 charge cars. Carburizing furnaces are a "flow through design" using endothermic atmosphere.

Atmosphere control is through an oxygen probe/Siemens 3 gas IR system. The entire installation is designed for "lights out operation" meaning it is completely automated. Included is over $100,000 worth of spare parts along with 15 base trays and baskets. The equipment has just been removed and is in immaculate condition. New the system was $3.5 million USD,

Asking Price is $1.25 million USD. Vendor will consider selling individual items.



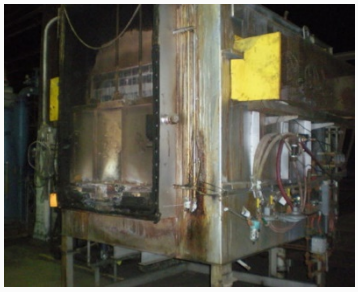
ITEM # B400

SURFACE COMBUSTION SUPER 30 ALLCASE

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

Asking $60,000 USD.





ITEM # B399

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 # B391

IPSEN T-11 BATCH IQ FURNACE

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

Asking $75,000 USD.



ITEM # B388

HYDROGEN ATMOSPHERE FURNACE

Hydrogen Atmosphere Furnace. Manufacturer: CM Furnaces.Type: Hydrogen Atmosphere Box. Work Zone Size: 12″ x 12″ x 12″ furnace work zone with 8″ x 8″ x 8″ inside retort work area. Max. Temperature: 2000ºF. Uniformity: Full work zone, prob. +/- 50ºF. Lower 6″: prob. +/- 20ºF. Atmosphere: Wet or Dry Hydrogen or Nitrogen Purge. Controls: PLC – Automatic with Proface touch screen.

Price: $5,000 USD



ITEM # B386

HIGH TEMPERATURE TUBE ATMOSPHERE FURNACE

High Temperature Tube Atmosphere Furnace. Manufacturer: Blue-M.
Type: Atmosphere Vertical Tube Furnace. Max. Temperature: 2500ºF. Work Zone Size: 2″ Diameter x 12″High. Heating: Electric, Globar elements. Tube: Ceramic. Atmosphere: Air or Any Suitable Purge Gas. Last Use: Thermocouple Calibration.

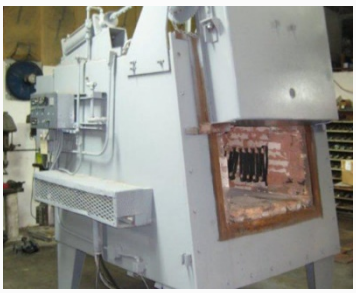
Price: $2,500 USD.

ITEM # 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 # B371

SAUDER "AUTO-TILT" CAR BOTTOM FURNACE

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

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



ITEM # 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.

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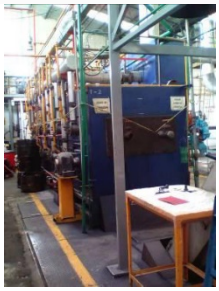
ITEM # C330

MESH BELT FURNACE LINE

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

Best offer.





ITEM # C329

CI HAYES ATMOSPHERE BELT FURNACE

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

Asking Price $15,000 USD


ITEM # C328

CI HAYES ATMOSPHERE BELT FURNACE

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

Asking Price $15,000 USD



ITEM # C327

ROGERS ENGINEERING CONTINUOUS BRAZING FURNACE

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

Asking $250,000 USD.


ITEM # C325

SINTERITE MESH BELT CONVEYOR FURNACE

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

Asking $70,000.00 USD or best offer.



ITEM # C324

C.I. HAYES MESH BELT FURNACE

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


ITEM # C323

AICHELIN CAST LINK FURNACE LINE

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

Best offer.



ITEM # C322

SURFACE COMBUSTION ROTARY HEARTH FURNACE LINE

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

Asking $50,000 USD.



ITEM # C321

AUSTEMPERING SYSTEM

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

Asking $20,000 USD or best offer.



ITEM # C319

CI HAYES HIGH TEMPERATURE PUSHER FURNACE

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

water jacketed. Rear tunnel with nitrogen curtains and burn off. Multiple atmosphere inlets, for hydrogen/dissociated ammonia with nitrogen purging. Pusher screw drive. Atmosphere bubbler. High heat chamber recently rebuilt. Overall Dimensions; 6'H x 4'-6"W x 39'L (Approx.)

Asking $100,000 USD.



ITEM # C317

CI HAYES HIGH TEMPERATURE PUSHER FURNACE

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

Asking $110,000 USD.


ITEM # C314

ROLLER HEARTH FURNACE (ATMOSPHERE)

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

Asking $225,000 USD.



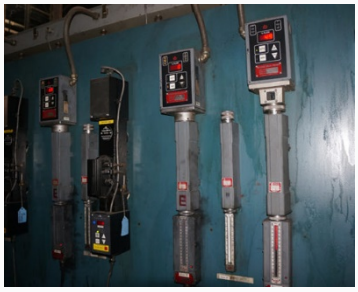
ITEM # C312

SURFACE COMBUSTION (PIFCO) ROLLER HEARTH LINE

Surface Combustion (Pifco) Roller Hearth Line. 60″ x 60″ Trays capable of 4000 lbs per tray. This line is gas fired and includes an SSi datalogging system. Also includes SBS Heat Exchangers and has waulkeetronic flow meters. Must be removed within the next few months.

Asking Price: $450,000 USD. All Offers Considered.





ITEM # C311

IPSEN PUSHER LINE P-12

Ipsen Pusher Line P-12. Rebuilt by JL Becker Company. This is a complete line which includes; a Pre-wash, Hardening Furnace, Oil Quench, Post Wash, and Temper. It's setup for endothermic atmosphere and is currently installed and operating. Hardening furnace is capable of 1750 F and has 5 zones of control. Gross load 1000 pounds. 460 Volts/3 Phase/60Hertz. 3,000,000 BTU/hr heat input, gas fired, tray size 30″ x 30″ x 29″ overall with loading. Good overall condition. Must be removed within the next few months

Asking Price $250, 000 USD. All Offers Considered.



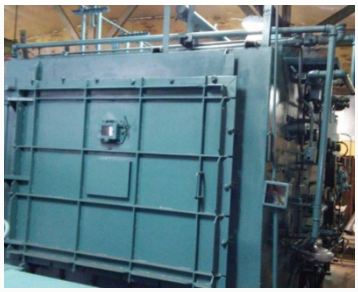
ITEM # C308

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 # C302

MESH BELT AUSTEMPER LINES

Mesh Belt Austemper Line. Built by AFC-Holcroft this is a mesh belt, gas fired austemper line. Parts to be processed are metered on to the variable speed, 30" wide mesh belt, travel through an 8" long high heat zone, drop into an electrically heated salt quench tank then are carried on a conveyor out of the quench tank and into a washer. A circulating fan distributes heat and atmosphere evenly though the heating area. Heat is supplied by two U shaped radiant tubes that are recuperated. SSI controls monitor and control the atmosphere gases. Furnace was in operation until March 2015. New in 1989. Complete, in very good condition and currently in storage.

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 hardeneing 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.

HR Contiuous Belt Furnace Line. Hardening, Oil Quench, Wash and Temp
#/Hr. Continuous Belt Furnace Line. Hardening, Oil Quench, Washer & Temper.

ITEM # C296

C.I. HAYES HIGH TEMPERATURE TUBE FURNACE

C.I. Hayes High Temperature Tube Furnace. Model MY-0002.528, 2-1/2″ ID Tube x 28″ Long Heating Chamber. Operating temperature of 1700ºC, 10.5 KW, Single Zone Control

with overtemp protection. Overall dimensions of 75″ H x 32″ W x 91″L. Hydrogen Atmosphere. Included is an automatic loader.

Asking Price $21,000 USD / OBO.



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 sold 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.



ITEM # C219

ABBOTT MODEL 6ZSCR-18-432HH6-VC-2150

ABBOTT MODEL 6ZSCR-18-432HH6-VC-2150. 18″ wide belt, 3″+ opening over the belt, 432″ heating chamber (silicon carbide muffles), six zones, 36″ long vari-cool with 162″ of additional cooling including two curtain boxes. 2150 deg.F. max temp., piped for dissociated ammonia atmosphere and nitrogen purge, 335 kw @ 480/3/60,Honeywell UMO 800 controller/programmer, OAD: 84″ w x 90″ h x 720″ l. Currently used for annealing knife blades but with a little effort a metallic muffle in the front half of the heating chamber could be added for debinding and sintering of PM parts.

Asking price: $77,000 USD / OBO.

DRAW/TEMPER FOR SALE

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Quick Jump To Items:

Item # T345 Surface Combustion Temper Furnaces (4 Available)

Item # T344 Batch Oven 72″H X 48″W X 48″D

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 # T336Mesh Belt Temper Furnace 48″ Wide

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

Item # T333 Composite Curing Oven / Heat Treat Oven

Item # T329 Guspro Heat Cleaning Oven

Item # T325 3-Station Despatch Temper Furnace

Item # T321 Grieve Conveyor Oven

Item # T320 Pifco Conveyor Oven

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

Item # T312 Recirculating Walk-In Oven

Item # T303 Pifco Temper Furnace

Item # T301 Lucifer Furnace

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

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

ITEM # T345

SURFACE COMBUSTION TEMPER FURNACES (2 AVAILABLE)

Surface Combustion Temper Furnaces (2 available). Manufactured by Surface Combustion, Model HFC-36-54. All are gas fired units with an operating temperature of 1250F. Standard Guillotine style door. Working dimensions of 36” wide X 48” deep X 30” high. Alloy and brickwork in good condition.

Asking $29,500 USD Each.

ITEM # T344

BATCH OVEN 72"H X 48"W X 48"D

Grieve Recirculating Oven. Working dimensions of 72″ high X 48″ deep X 48″ wide. Electrically heated 460/3/60, 40KW, 50 amps. Operating temperature of 650F. Model Number: WTH-446-650, Serial number 411938. Temperature Controls: Indicating controller and overtemp. Optional circular chart recorder. Description & Features: Standard Grieve truck oven. Double swing open doors. Heating elements and fan are located in top chamber. Horizontal air flow. Insulated floor with truck wheel guide tracks. Air flow switch. 2 HP fan motor. Will be rebuilt and fully operational. Test fired prior to shipment. Two ovens available. 2011 vintage. Very good condition.

Asking $14,500.00 USD.



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 $55,000 USD.



ITEM # T336

MESH BELT TEMPER FURNACE 48" WIDE

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

Asking $29,500 USD.



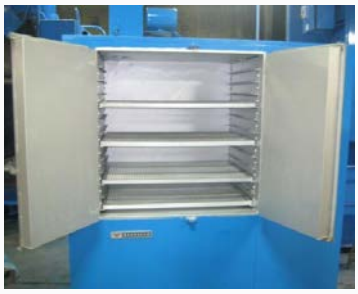
ITEM # T335

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

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

Asking $8,000.00 USD.





ITEM # T333

COMPOSITE CURING OVEN / HEAT TREAT OVEN

Composite Curing Oven / Heat Treat Oven. Manufactured by Epcon this unit has working dimensions of 30’L x 12’W x 12’H and overall dimensions of 31’3”L x 17’4.5”W x 22’4.5”H. Electrically heated with an Inconel 900 KW heater and an operating temperature of 800F. Two recirculating fans type; Two N.Y.B. Size 40 Plug Fans, capacity: 33,000 CFM Each. Motor HP: 30 HP-Each (480V/60HZ/3PH). Exhaust fan; type N.Y.B. Series 20 GI, Size 224DH, capacity 4,000 CFM, 5 HP motor. Interior is 18 Ga. Aluminized Steel and exterior is 18 Ga. Carbon Steel. Insulation: 8# Density Mineral Wool, 7” thickness. Control Panel:

NEMA-12. Power Supply: 480V/60HZ/3PH. Double swing doors. Excellent condition, virtually unused. New this was $811,000 USD.

Asking $130,000 USD.



ITEM # T329

GUSPRO HEAT CLEANING OVEN

Guspro Heat Cleaning Oven. Model G0484039ED51P354N, S/N C366. Working dimensions of 54” wide X 48” deep X 45” high. Process chamber has an operating temperature of 1,000F. Oxidizer chamber has an operating temperature of 1200-1600F. Complete and installed but not in use. Reasonable condition.

$2,000 or best offer.

ITEM # 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: 850ºF with a Uniformity of

+/- 25ºF (Center area of 12”W x 20”L x 10”H meets +/-10ºF). 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.

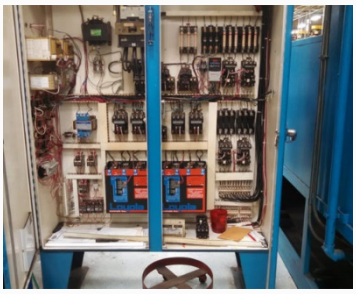
Asking Price: $39,500 USD, Offers considered.


ITEM # T321

GRIEVE CONVEYOR OVEN

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

Asking Price: $42, 000 USD.

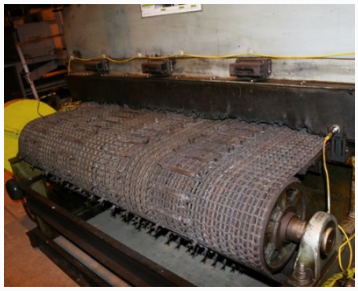

ITEM # T320

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 # T312

RECIRCULATING WALK-IN OVEN

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

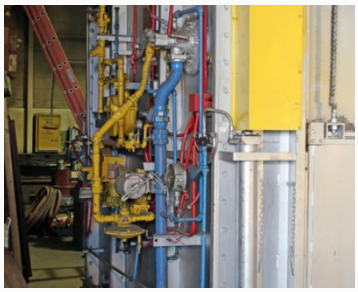
Asking Price: $13,500.00 USD.


ITEM # T303

PIFCO TEMPER FURNACE

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 # T301

LUCIFER FURNACE

Lucifer Furnace. Model Number 46GT-R36, Serial Number 6418, Working Dimensions of 24” w x 36” d x 24” h. Insulation and elements are in good shape. Front lift door with a foot actuator. Controls: Honeywell round chart recorder, Honeywell overtemp, No controller. Power: 460/3/60 28 Kw 35 Amps, Temperature: Max 1650° F. Nitrogen Atmosphere.

Asking Price: $9,950.00 USD as is, where is.



ITEM # T290

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

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

Please call for pricing.



ITEM # T286

LINDBERG BOX TEMPER

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

Asking Price: $65,000 USD



GENERATORS FOR SALE

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

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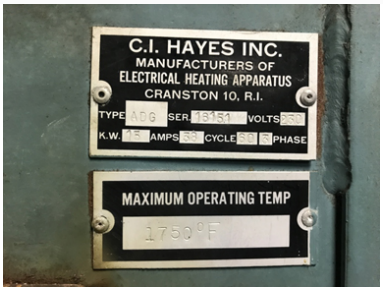
ITEM # G201

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.

Please Call For Pricing




ITEM # G200

ENDOTHERMIC GENERATORS 1500 CFH (2 AVAILABLE)

Endothermic Generators 1500 CFH (2 available). Manufactured by SECO/WARWICK these are Model Eng-15 Endo Gas Generators. Each is heated by natural gas with a capacity of 1500 CFH. 220V, 3 phase, 60hz. Manufactured in the US these have UPC controls and air cooling. Excellent condition. Both retorts were replaced within the last 3 years.

Asking $20,000 USD each or $30,000 USD for both.


ITEM # G199

SARGEANT AND WILBUR AMMONIA DISSOCIATER

Sargeant and Wilbur Ammonia Dissociater. Model No. GAD500-E Electrically Heated Ammonia Dissociator with 500 CFH capacity, over temperature cutout and alarm system, under temperature control system. 230V, 3 phase, 60 Hz, operating temperature of 1750 F. New in 2011. Retort replaced very recently. Like new condition.

Asking $17,000 USD.


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.

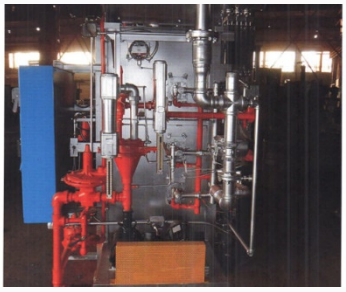


ITEM # G196

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 # G193

PACIFIC SCIENTIFIC ENDOTHERMIC GAS GENERATOR

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

Please call for pricing.



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 throught 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 FOR SALE

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

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Quick Jump To Items:

ITEM # I171

50 KW LEPEL GENERATOR

50 Kw Lepel Generator, 350 KHZ,460V, 160 amps. Lepel heat exchanger included. PLC controlled processing, Optical Infrared Pyrometer controller for heating each part to the same temperature. Parts are then removed from the coil and immersion quenched in the appropriate media. Tempering follows.

ITEM # I170

INDUCTOHEAT INDUCTION POWER SUPPLY

Inductoheat Induction Power Supply. This is a Lepel/ Inductoheat SP5-40 kW, 10 kHz SCR type induction heating power supply with a separate Heat Station (I believe this could be operated at 3 kHz but the heat station is currently arranged for 10 kHz). This is an "HS-3" Heat Station with 3 capacitors and a Jackson Transformer with ratio's of 5-3 to 17-3. The Inductoheat SP5 has been a proven reliable power supply for heating and heat treating for many years. It can be used for short heat times as it has fast and consistent ramp up to set power.

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

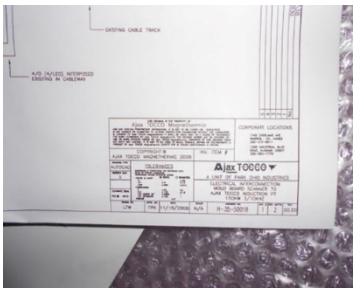
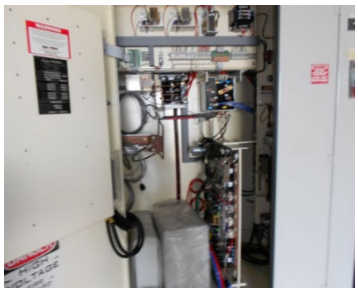
Asking $9,500.00 USD Or Best Offer


ITEM # I164

AJAX TOCCO INDUCTION POWER SUPPLY

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

Asking $33,000 USD.

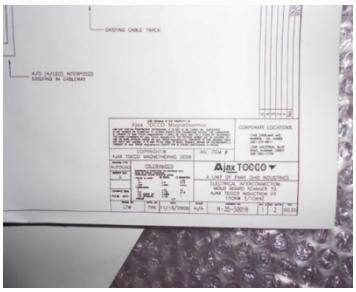



ITEM # I160

AJAX TOCCO POWER SUPPLY (UN-USED)

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

Asking $39,000.00 USD.

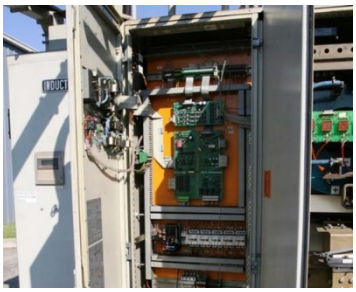
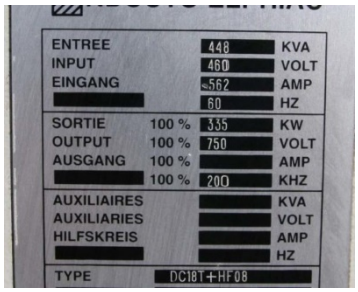



ITEM # I158

INDUCTION POWER SUPPLY

Induction Power Supply. Manufacturer Inductoheat/Elphiac. Model Number: DC18T+HF08. S/N 2177DC. 335 kW, 200 kHz, 750V Output. Input Voltage: 460/3/60/448 KVA/562 Amps. Output Voltage: 335 kW/750V/200 kHz. Very good condition.

Asking $39,500.00 USD.

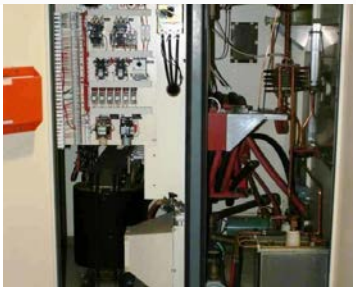




ITEM # I153

RAYDYNE INDUCTION HEATING SYSTEM

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

Asking $7,500.00 USD.


LAB EQUIPMENT FOR SALE

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Quick Jump To Items:

ITEM #L8

CLARK MICRO HARDNESS TESTER

Clark Micro Hardness Tester. Model DMH-2, Serial number 3388. Good operating condition.

Asking $6,500.00 USD.

ITEM #L7

LECO MICRO HARDNESS TESTER

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

Asking $7,000.00 USD.

ITEM #L3

LASER DIFFRACTION PARTICLE SIZE ANALYZER

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

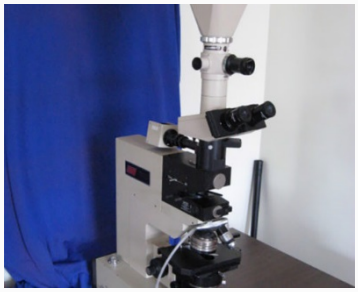
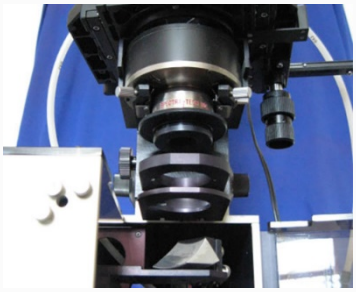
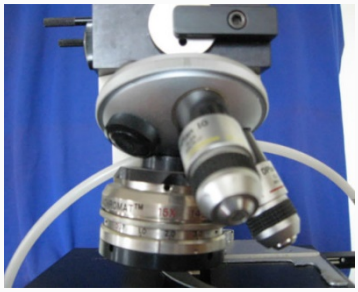
Asking $20,000 for complete system.

ITEM # L1

SPECTRA-TECH 0044-003 INFRARED MICROSCOPE

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

$6,500.00 USD.

MISCELLANEOUS FOR SALE

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Quick Jump To Items:

ITEM #M408

SURFACE COMBUSTION POWER LOADING TABLE 30" WIDE

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

Asking Price: $1,000 USD

ITEM #M407

SURFACE COMBUSTION CHARGE CAR 30 X 48

Surface Combustion Double-Ended Extended Reach 30 x 48 charge car, decent operating condition (recently removed from service).

Asking Price $6,250 USD.

ITEM #M406

SURFACE COMBUSTION PARTS WASHER

Surface Combustion Parts Washer. Manufactured by Surface Combustion this is a Spray washer with working dimensions of 30” wide X 48” deep X 30” high. Gas fired with an operating temperature of 200F. Good overall condition. **Asking price of $12,500 USD**

ITEM #M405

USED TRANSFORMERS FOR SALE

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

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

Best Offer


ITEM #M403

HOUGHTON AQUA QUENCH 3699 POLYMER (4)

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

Asking Price is $2,500.00.

ITEM #M402

CLOSED LOOP WATER COOLING SYSTEM

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

Asking $7,950.00 USD.


ITEM #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 #M399

ECLIPSE BURNERS, RECUPERATORS AND SPARK IGNITERS

Eclipse Burners, Recuperators and Spark Igniters. All of these items are in "like new" condition and still in the original boxes. Vendor will sell as a complete package or as individual items. Recuperators; Eclipse Bayonet Ultra Recuperator, Assembly 101849-24 (5BU, 24" tube length, low pressure drop model). S/N 07-27834580-8 45 units in inventory.

Asking $1840 USD each.

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

$695 USD each.

Spark Plug Igniters. Model # 100640-11. 40 units in cardboard tubes with bubble wrap.

$100 USD each.

ITEM #M396

SURPLUS CAST LINK BELT

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



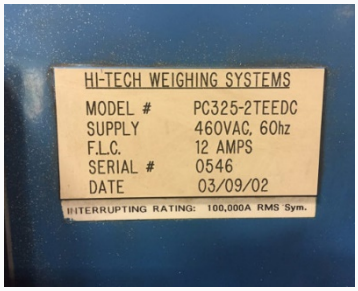
ITEM #M394

HI TECH WEIGHING SYSTEM

Hi Tech Weighing System. Excellent condition Hi Tech vibratory loading system suitable for a continuous furnace. Model PC 325-2 TEEDC, 460 VAC 60Hz, S/N 0546, built 03/09/02.

Asking $6,000 USD.





ITEM #M385

GIANT FINISHING MACHINE

Giant Finishing Machine. Manufactured by “Giant”, Model GB-10 Spiral bowl with Internal Seperation Vibratory Deburring and Finishing Machine. 10 cubic foot process capacity with 5 hp motor. Maximum load capacity 2,000 pounds. Bowl diameter 65”, unload height 39”.

NEMA 12 control panel including 0-6 hour process timer and lapsed time recorder. Control panel is JIC approved and U.L. listed. Standard voltage; 460/3/60 cycle. This is a brand new, unused tumbler. New this was $45,000 USD,

Asking $30,000 USD.

ITEM #M381

WATER COOLING SYSTEM

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 #M378

1 SURFACE COMBUSTION RADIANT TUBE AND 4 SUPPORTS

1 Surface Combustion Radiant Tube and 4 supports. Brand New the cost was $1,844 for the tube and $448 each for the supports for a total of $3,636 in 2014. The radiant tube is Surface Combustion inventory # 850628 and the support is part # 70R64/L. They are a set for a Standard Allcase furnace. One leg of the tube is 3/12 inches in diameter and 62 inches long. The other is 4 ½ inches in diameter and 60 inches long.

Asking $3,000 USD.



ITEM #M370

SBS QUENCH AIRS (2 AVAILABLE)

SBS Quench Airs (2 available). Manufactured by SBS Corp., these are air/oil quench oil coolers. Each is a 3 fan unit with disconnect and 480 volt. Suitable for a large continuous line. Installed indoors. Very good condition.

Asking $12,500 USD each. Must be removed within the next few months All Offers Considered.


ITEM #M366

WHEELABRATOR RUBBER BELT TUMBLAST

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

Asking: $55, 000.00 USD.


ITEM #M365

DUAL LANE CONVEYOR WASHER

Dual Lane Conveyor Washer. Heated: Natural Gas. Dual Lane Washer Serial Number: 08-010 (2008). Max Temperature: N/A. Voltage: 480/3/60. Work Area: 11″W x 7″H. Each Lane External Dimensions: 8’W x 10’6H x 30’L – approx. Controls: Mounted and wired in an enclosure attached to the washer. Includes an Allen Bradley MicroLogix 1200 PLC and an Allen Bradley “Powerflex 4” VFD to control conveyor belt speed. Description: This washer has three (3) stages, wash/rinse/blow-off. This washer is gas fired using Eclipse burner

and gas train with a Honeywell UDC digital temperature control. Spray nozzles are located on top, both sides and bottom. Condition: Very Good.

Asking: $39,500.00 USD.



ITEM #M363

SBS UNIT

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.

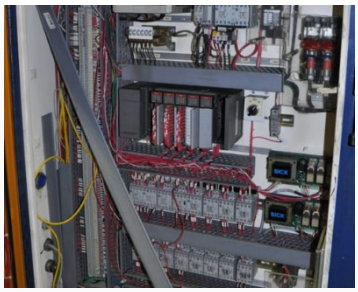
ITEM #M341

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.

SALT FOR SALE

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

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ITEM # S001 MESH BELT AUSTEMPER LINES (2 AVAILABLE)

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

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



VACUUMS FURNACES FOR SALE

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Quick Jump To Items:

Item # VF326 Ipsen 924 Vacuum Furnace

Item # VF325 T-M Vacuum Furnace 2 Bar Quenching

Item # VF324 T-M Vacuum Furnace 2 Bar Quenching

Item # VF323 150 Ton Vacuum Hot Press (2 Available)

Item # VF322 Vacuum Sintering Furnace, 2,000 C

Item # VF321 Ipsen Vacuum Furnace

Item # VF320 High Temperature Vacuum Furnace

Item # VF319 Vacuum Induction Melting System

Item # VF317 Twin High Temperature Vacuum HT Sintering Furnaces

Item # VF316 AVS Vacuum Furnace 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 # VF312Vacuum Furnace 2400 C

Item # VF311 Vacuum Furnace 6 Bar Quenching

Item # VF307 Bottom Loading Vacuum Furnace 48″ x 60″

Item # VF305 Vacuum Hot Press

Item # VF303 Surface Combustion Vacuum Temper Shell

Item # VF301 Vac Aero 2 Bar Vacuum Furnace

Item # VF300 Stokes Microvac Pump

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 # VF285 20″ Right Angle Poppet Valves (4 available)

Item # VF282 AVS Vacuum Debinding/Sintering Furnace

Item # VF281 Surface Combustion Vacuum Furnace

Item # VF271 Sintering/De-Wax Furnace 1400 C

Item # VF267 Semi-Continuous Titanium Diffusion Bonding Hot Press

Item # VF266 Kinney 75 CFM Vacuum Pump

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

Item # VF255 Roots Gas Blower

Item # VF254 MD Blower, 350 CFM

Item # VF243 35″ Diffusion Pump

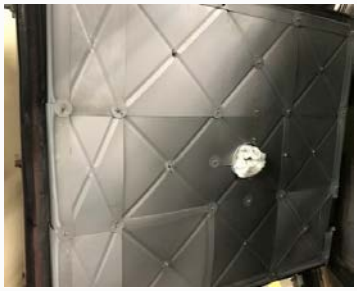
Item # VF242 35″ Diffusion Pump

ITEM # 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.

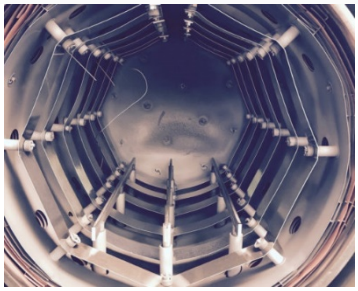


ITEM # VF325

T-M VACUUM FURNACE 2 BAR QUENCHING

T-M Vacuum Furnace. Built in 2009 this T-M Vacuum Furnace has a Work Zone: 12” wide x 24” long x 12” high with All Metal Hot Zone (less than 5 years old). Temperature uniformity: 1000F – 2400F +/- 10F with 3 zones of control for the hot zone. 10” Diffusion Pump with a TeleVac MM200 vacuum gauge. 2Bar Gas Quench. (Argon or Nitrogen gas) with an Overall Dimension of the furnace being: 82” wide x 72” long x 96” high. Great working condition and the Ability to see the furnace and run sample parts.

Price to sell: $67,500

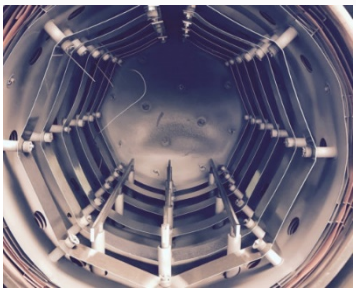


ITEM # VF324

T-M VACUUM FURNACE 2 BAR QUENCHING

T-M Vacuum Furnace. Built in 2009 this T-M Vacuum Furnace has a Work Zone: 12” wide x 24” long x 12” high with All Metal Hot Zone (less than 5 years old). Temperature uniformity: 1000F – 2400F +/- 10F with 3 zones of control for the hot zone. 10” Diffusion Pump with a TeleVac MM200 vacuum gauge. 2Bar Gas Quench. (Argon or Nitrogen gas) with an Overall Dimension of the furnace being: 82” wide x 72” long x 96” high. Great working condition and the Ability to see the furnace and run sample parts.

Price to sell: $57,500


ITEM # VF323

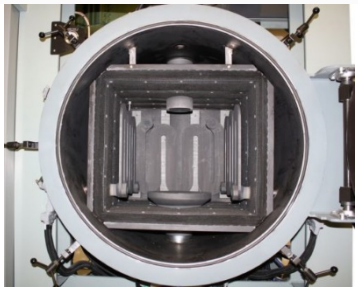
150 TON VACUUM HOT PRESS (2 AVAILABLE)

(2) 150-Ton Vacuum Hot Presses

- Maximum Temperature: • 2000o C / 3632o F (Optional 2200o C / 3992o F operation available)
- Power Requirements: • 480 volts, 60 hertz, 3 phase (Optional 380 volt, 50 hertz operation available)
- Hot Zone Dimensions: • 16” high x 19” wide x 20” deep element-to-element (41cm x 48cm x 51cm)
- External Dimensions: • 99” high x 82” wide x 74” deep (251cm x 208cm x 188cm)
- Atmosphere: • High vacuum, rough vacuum, partial pressure, and atmosphere operation
- Features: • Standard one-year warranty. • This is a compact, packaged, and assembled unit. • Graphite hot zone and four-sided graphite heating elements for optimum uniformity. • Upper ram is moveable with 6” stroke. Bottom ram is fixed. • 16.3” daylight between rams (41.4cm) • Fully automatic operation with PLC programmer/controller with alphanumeric display to indicate hot press processing cycles. • Programmable closed-loop temperature/pressure control. This system will consist of a Yokogawa UP750 two-loop programmable temperature/pressure controller with 300 programs and 3,000 segments. The UP750 will control the temperature and the pressure on the hydraulic ram on the same timeline. • Mechanical vacuum pump.
-

Asking $450,000 USD Each





ITEM # VF322

VACUUM SINTERING FURNACE, 2,000 C

Vacuum Sintering Furnace, 2,000 C. Horizontal Vacuum Sintering Furnace System for processing graphite and ceramics. Manufactured by AVS, Model HGF-22-21-62-2000. Work zone is 22” wide x 21” high x 62” deep. 12 cubic feet, maximum load of 350 kgs.

Temperature: 2000 ^{0}C maximum operating temperature. Temperatures above 1700 ^{0}C require partial pressure or positive pressure. Maximum heat rate is 10 ^{0}C/min ramp rate for room temperature to 1600 ^{0}C, ± 10 ^{0}C uniformity @ up to 1600 ^{0}C in vacuum. Rotary piston roughing pump. Evacuates chamber to 20 micron in 10-15 minutes, empty (5 X 10^{-3} Torr Ultimate vacuum) 5 ц/hr. leak rate. Process Gasses – Argon, Nitrogen, 1% Methane in Nitrogen. Controls Fully automatic operation with ACE™ control/ Data Acquisition System.
Chamber; HORIZONTAL JACKETED CHAMBER – nominal 56" diameter x 82" long flanged, on legs. All stainless-steel chamber, interior jacket and flange water-cooled. Two door containing hinges and manual door clamps. The chamber includes a 4" flanged bottom port designed for future applications and flexibility. Two site ports are included and set up with gas purged pyrometer sight port assemblies. Two load carts with battery operated hydraulic lift and roller top are provided with the furnace for use with the two hearths that are provided for the hot zone.
Hot Zone; HORIZONTIAL GRAPHITE FURNACE – Furnace is heated by graphite elements (no CFC) and insulated by rigidized graphite felt faced with graphoil. Includes heart rails with rollers for easy loading.
Gas Cooling; GAS RECIRCULATION COOLING SYSTEM – 10 HP Cooling fan and heat exchanger mounted in rear door of the chamber. Includes automatically operated front and rear door shutter fans for gas circulation. System is 9 years old, installed and in excellent condition. Almost $600,000 USD.

Asking $180,000 USD.



ITEM # VF321

IPSEN VACUUM FURNACE

Ipsen Vacuum Furnace:

– Manufacturer: Ipsen
– Model: VFC-524
– Temperature: 2400F
– Moly-faced hot zone
– Graphite heating elements
– 18″ Ipsen Diffusion Pump
– Stokes 412H-10 (old style) mechanical pump

– 50 kVA power transformer
– Top-mounted cooling fan with 15 HP Motor
– Had a new control Panel with Athena AT25 Digital Temp Control, Hastings Series 310 Digital Vacuum Controller, and L&N strip chart recorder.
– Currently in storage in San Diego, CA area

Price: $58,000 USD.



ITEM # VF320

HIGH TEMPERATURE VACUUM FURNACE

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

Asking $100,000 USD for everything.



ITEM # VF319

VACUUM INDUCTION MELTING SYSTEM

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

Asking $285,000 USD.



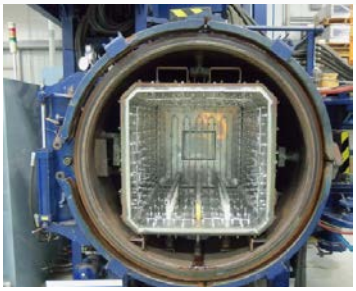
ITEM # VF317

TWIN HIGH TEMPERATURE VACUUM HT & SINTERING FURNACES

Twin High Temperature Vacuum HT & Sintering Furnaces. Two each 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.

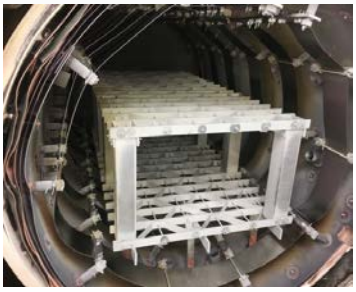



ITEM # VF316

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 Intregra roughing pump; New turbopumps and valving in 2015. Additional Port for 20" Diffusion Pump. (GVT has 20″ D.P. & right angle valve available). CTI-Cryogenics 9600 compressor. Current footprint: 15′ Deep x 15′ Wide x 11′ High (8'H without power supply). Power: 250KVA, 440-480V, 3Ph, 60Hz. Loader Included as well as a 2-Tier Moly Fixture. VFD on blower. Rear Access Door. EXCELLENT condition. Rebuilt July 2015.

Asking $195,000 USD.



ITEM # VF314

IPSEN BOTTOM LOAD VACUUM FURNACE

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

Asking Price: $325,000 USD.



ITEM # VF313

TOP LOADING VACUUM FURNACES (6 AVAILABLE)

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

Asking $175,000 USD each.



ITEM # VF312

2400C VACUUM FURNACE

2400C Vacuum Furnace. Capable of 2400C (4320F). Working dimensions of 10″ high x 22″ wide x 36″ deep element-to-element. External dimensions of 86” high x 76” wide x 85” deep. 480 volts, 3 phase, 225 kw. This unit is capable of both vacuum and atmosphere operation. Graphite rigid board insulations, graphite heating elements on all 4 sides,

graphite hearth plate, 6 channel digital chart recorder, Yokogawa UP 550 digital programmable controller. High accuracy Raytek digital optical pyrometer. All New Vacuum Chamber – Tested and Certified and new graphite hot zone. Very good condition.

Asking $149,000 USD.



ITEM # VF311

VACUUM FURNACE 6 BAR QUENCHING

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

Asking 155.000 Euro.



ITEM # VF307

BOTTOM LOADING VACUUM FURNACE

Bottom Loading Vacuum Furnace. Manufactured by Vac Aero. Working dimensions of 48″ diameter X 60″ high. 4860 High Vacuum (diff pump) bottom loader Main Chamber replaced new in 2000. 50 HP Spencer Turbine gas quench blower with a .85 Bar pressure quench. Closed loop water system w/o air coil. Yokogawa paperless chart recorder. Honeywell DCP550 Set point programmer. Edwards vacuum gauge controller. Furnace is installed and presently in operation. Customer responsible for removal. Complete and in good overall condition.

Please call for pricing.



ITEM # VF303

SURFACE COMBUSTION VACUUM TEMPER

Surface Combustion Vacuum Temper. Manufactured by Surface Combustion Model HVT 36-48-24, S/N BO 40016-1. 220Volt, 3 phase, 60Hz, 220Kw. Working dimensions of 36” wide X 24” high X 48” deep with a weight capacity of 2,500 pounds. Not in use or installed. Most components are included but this unit should be regarded as a “project”.

Asking Price: $5,000 USD or best offer.

ITEM # VF301

VAC AERO 2 BAR VACUUM FURNACE

Vac Aero 2 Bar Vacuum Furnace. Model #VAH 4848-HV2. Working dimensions of 48” X 48”, rated for 1500 pound loads. Serial #BM 981, built in 1998. Stokes vacuum pump #615-1. Serial number 915240E0498. Updated Allen Bradley controls. No diffusion pump but it does have a port for one. Good condition. Currently installed and in use for approximately 6 more weeks.

Asking Price: $150,000 USD.


ITEM # VF300

STOKES MICROVAC PUMP

Stokes Microvac Pump. Model #212H-11 150 CFM 5HP motor. Roots Rotary Lobe Booster Pump. ID #839 697 020. Designation #38-RGS. Skid Mounted 1896 lbs.

Asking Price: $6600 USD or best reasonable offer.


ITEM # VF299

SUNBEAM VACUUM FURNACE

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 in 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 X 10-6 Torr. Maximum vacuum level to operate in continuous duty is 5 X 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 # VF291

SMALL TOP LOAD VACUUM FURNACE

Small Top Load Vacuum Furnace. Brew Top Load Vacuum Furnace, Condition: Rebuilt by Pathways Thermal Technology. Work Zone: 10" Dia. x 10"H. Max. Temp.: 2000F. Hot Zone: All Molybdenum. Vacuum: Diffusion Pumped. Power: 480V/3Ph/60Hz, 75 Amps.

Asking Price: $10,000 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 # VF285

20" RIGHT ANGLE POPPET VALVES (4 AVAILABLE)

20" Right Angle Poppet Valves (4 available). 20" Right Angle Poppet Valves to mate to Varian HS-20 Diffusion Pumps. Removed from service in good operational condition by a company converting to cryo pumps. Offered in As-Is or Standard Rebuilt As-Is

Rebuilt Price: $ 3,150.00 (1 year warranty). Valves are awaiting rebuild now. (2-3 weeks required ARO). Photo shows another representative RAV prior to rebuild.

Price: $ 1,800 USD (working, but no warranty, 30 Day Return). Std.

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 # VF281

SURFACE COMBUSTION VACUUM FURNACE

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

Asking Price: $29,000 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

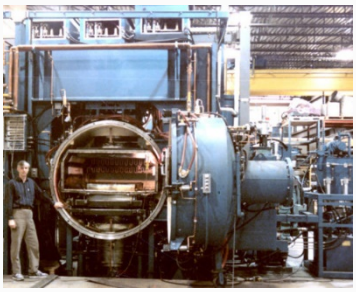
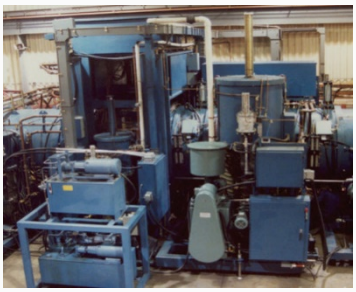
6.5” high product size in semi continuous mode Constant 1100°C Heated Platens, Moly pressing surface 1000 tons of force, up pressing ram 300 kW heater power (Hunterdon) Moly Hot Zone Mounted on roll out frame

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 rebuilder’s shop. Running without problems when removed from service.

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


ITEM # VF265

STOKES 149H-11 80 CFM VACUUM PUMP

Stokes 149H-11 80 CFM Vacuum Pump. Rebuilt Stokes Model 149H-11, Lot# CD-81004 Mechanical Vacuum Pump, Rebuilt by Evey Vacuum in 2002 and stored in heated, dry area since then.

Asking Price: $ 5,500.00 USD with 30 Day Right of Return if not satisfied.



ITEM # VF255

ROOTS GAS BLOWER

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

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

ITEM # VF254

MD BLOWER, 350 CFM

MD Blower, 350 CFM. Rebuilt (per owner) M.D. Pneumatics 350 CFM gas blower, Model 11-3210, S/N 1735R A23, on skid but needs motor. Location: Pacific North-western U.S.

Asking Price: $3,000.00 USD. 30 Day Right of Return, if unhappy.

ITEM # VF243

35" DIFFUSION PUMP

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 trays[1]
- Surface Combustion Allcase Tray
- UBQ Furnace Tray
- Site-specific custom trays
- Based on existing castings
- No setup or pattern fees[2]
- Industrial alloy grades available
- HU, HT, Super NA22H, ...

Please send your enquiries to:

Jordan Montgomery
jordan@themonty.com
905-271-0033

[1]While supplies last
[2]Applies to standard design trays only. Some restrictions apply.

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

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

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

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

Super Systems Inc.

Develops and manufactures products for the thermal processing industry. Our products include probes, analyzers, controllers, software solutions, flow control and engineered systems. We have extensive experience in addressing indus-try 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 instru-mentation, software and technical needs of the industry.

South-Tek.

Manufactures a variety of Nitrogen Generators, from those designed to output a few liters per minute of Nitrogen flow rate for table top laboratory applications, to designs capable of producing 75,000 cubic feet per hour to meet the demands of some of the largest industrial plants. Our systems are ca-pable 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 safe-ty purge South-Tek Systems has your solution.

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 # 0331
PROCESS METALLURGIST WANTED

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

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

Position responsibilities include:

- Manage, lead and train heat treat pyro group
- Initiate and lead projects such as furnace improvements, customer requirements including TPG certification, and capital projects.
- Help create and maintain process recipes.
- Evaluate final heat treat results.

Qualifications include:

- Degree in Metallurgy/Materials or Mechanical Engineering
- History of working with atmosphere furnaces (3-5+ years preferred)
    - Knowledge of carburizing, nitriding, and neutral hardening processes
- Willingness to work flexible hours

If interested, please submit resume to:

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

oerlikon
fairfield

ITEM # O328
PROCESS METALLURGIST WANTED

Process Metallurgist Wanted. Do you get fired up about heat treating and metals? Advanced Heat Treat Corp. has an opening for a Process Metallurgist for our Monroe facility in Monroe, MI. Our primary services for this location include ion and gas-nitriding for heat treatment, a surface hardening process, for a wide variety of markets. Advanced Heat Treat's vision is Exceeding Customer Expectations with UltraGlowing Results. With our 35+ years of heat treat experience and 20+ services, we've helped solve part problems that have affected the Jaws of Life, military weapons, agricultural equipment, prosthetics, commercial airplanes and MUCH MORE! From the jobs of a small machine shop to a multi-million dollar aerospace project – we find solutions. AHT has four strategically located facilities, 2 in Waterloo, IA, 1 in Monroe, MI and 1 in Cullman, AL. We offer the highest standards of quality-ISO/TS16949 and NADCAP certified. AHT offers its ULTRAGLOW surface treatment process for engineered steel, cast iron, stainless steel and titanium parts. Qualifications include a degree in Metallurgy/Materials Engineering, or related field, as well as experience in a heat treat environment. Position responsibilities include:

• Manage and lead large projects such as new customer onboarding, changes in customer requirements, and new equipment purchases.
• Calculate process variable necessary to achieve specifications by using historical run data and charts, case depth, as well as other appropriate information related to heat treatment.
• Authors process instructions by determining process parameters and techniques required to achieve customer requirements.
• Supervises Laboratory Technicians.
• Willingness to travel between AHT facilities as needed for training and consultation.
• Check out further job responsibility for this position at www.ahtweb.com.
Please submit resume to: hr@ion-nitriding.com or complete company application at www.ahtweb.com(careers).

ITEM # O325
MAINTENANCE TECHNICIAN/SUPERVISOR – CHICAGO, IL
Maintenance Technician/Supervisor – Chicago, IL.

Position Summary:

- Performs all aspects of preventative and corrective maintenance on heat treat related systems including, but not limited to: furnaces, quenching equipment, material handling equipment, electrical instruments, and control panels.
- Provide instruction and assistance to other technicians as needed.
- The heat treat maintenance technician/supervisor must have the ability to identify and correct any safety-related issues and perform independent equipment evaluations to identify potential equipment failures.

Responsibilities:

- Troubleshoot and repair heat treat equipment.
- Perform electrical troubleshooting and repairs.
- Perform repairs on fork lift equipment, cranes, and hoists.
- Troubleshoot and repair pumps, piping, hoses, seals, valves, bearings, and gearboxes.

Please forward resume to: applyforheattreatchicago@gmail.com

ITEM # 0324
SALES REP

Sales Rep. Vacuum heat treat company Solar Atmospheres, located in Hermitage, PA is currently seeking a Sales Representative in the Texas and Oklahoma area. Solar is interested in working with a well-experienced Representative that has strong ties, but not limited to, the ever growing Aerospace and Energy markets. A successful candidate would be familiar and experienced in the following areas;

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

Please forward resumes to mikep@solarwpa.com

ITEM # 0323
HEAT TREATING PLANT MANAGER

Heat Treating Plant Manager. The Heat Treat Production Manager is responsible for general supervision of all phases of production heat treating including: production, quality, maintenance, receiving and shipping in our Eastern Pennsylvania Facility. Responsibilities

also include recruiting, hiring and training personnel and facility/physical plant up-keep among other things. Principal Duties and Responsibilities:

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

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

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

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 mailto:jordan@themonty.com Your ad will appear both on the website themonty.wpengine.com and in our monthly newsletter "**The Monty**".

In Parting

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

Gord Montgomery,
W.G. Montgomery Limited
Phone: 905 271-0033
Fax: 905 271-9324
Email: gord@themonty.com
