

**HEAT TREAT NEWSLETTER**  
*Everything to do with heat treating*



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## INTRODUCTION

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If each issue of ***"The Monty"*** has a theme (which they don't but let's pretend) we would call this issue ***"The German Issue"*** for our coverage of captive and commercial heat treats in Germany. The German heat treating industry is largely based upon the auto industry and as such is the largest heat treat market in Europe, one of the largest in the world and certainly one of the most advanced in the world in terms of technology. In addition to our coverage of heat treating in Germany you will also find a great deal of news about heat treating in North America, numerous recent listings for used furnaces and a bit of an oddity-news about the heat treating market in ***Colombia, South America***. We hope it is all of interest to you.

Best regards, Gord

# HEAT TREAT NEWS

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

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## Bodycote plc/Trading Update

We would imagine there are some pretty happy Bodycote shareholders today, at the “The Monty” posted that shares were up 65 to 990 GBp. All the details can be found at <http://www.bodycote.com/en> **May 31, 2018**

*“Bodycote, the world’s leading provider of heat treatment and specialist thermal processing services, is issuing a trading update covering the four-month period from 1 January to 30 April 2018 (“the period”), ahead of the Company’s 65th Annual General Meeting, which will be held at 12.00pm today.*

*Current trading ; Group revenue for the four months ended 30 April 2018 was £243m, 7% higher than the same period last year and 10% higher at constant currency. On a divisional basis, ADE revenues were up 5% to £94m (up 10% at constant currency), while AGI revenues were up 9% to £149m (up 10% at constant currency). Within the overall Group result, Specialist Technologies’ revenues grew 12% at constant currency.*

*The following review of the Group’s markets quotes all movements based on growth against the same period in 2017, at constant currency.*

*Car and light truck revenues grew 8%, with continued strong growth in Emerging Markets and good growth in Western Europe, while North American revenues were down slightly. Civil aerospace revenues grew 4%, held back by restrained demand in France stemming from capacity shortfalls in the aerospace industry supply chains. Overall growth of energy revenues was 24%, with continued strong growth in onshore North American revenues, as well as early indications of an upturn in Western Europe oil & gas revenues. Large frame industrial gas turbine (IGT) revenues were down in North America in line with the cut backs in IGT production announced by the OEMs at the end of 2017. In Western Europe, the IGT declines were more than offset by the increase in business from the new Long Term Agreement with Doncasters. General industrial revenues were 11% higher with good growth across all geographies. Margins have continued to improve although the profit drop-through from incremental sales has been partially offset by increased investment in business development.”*

**Bodycote**







## Aichelin 150<sup>th</sup> Birthday

May 17<sup>th</sup> Austrian based furnace manufacturer Aichelin celebrated their 150<sup>th</sup> birthday with a very large party at the Porsche Museum in Stuttgart, Germany. The 150 guests came from in house heat treats, commercial heat treaters, industry suppliers, associated companies and news outlets. We at “The Monty” were in attendance and have these photos to prove it. With all due respect to Aichelin and the incredible job they did organizing the event the highlight of the evening was the venue itself-the famous Porsche museum. **May 31, 2018**



*Porsche Museum, Stuttgart*



*Our host Peter Schobesberger, CEO of Aichelin on the right*



*Stephen of Vulkan-Verlag, Antoine Cantenot, CEO of SAFED, Horst Linn*



*Friedrich Forst, Daimier, Bill Disler, AFC-Holcroft*



*Uwe Schmelzing, Technical Director, Hauck HT, Ralph Matthaus, wittman, Achim Stassen, SEW Eurodrive*

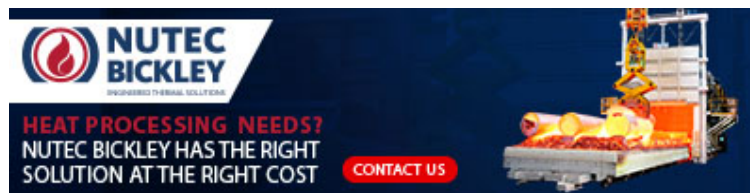
## **Orchid Memphis Upgrades Vacuum Furnaces**

Medical implants company Orchid Memphis has upgraded the controls on three VFS vacuum furnaces. We were not familiar with this company before but with 3 vacuum furnaces they have a respectable in house heat treating department. **May 31, 2018**

*"Medical implants manufacturer Orchid Memphis has modernized three Ipsen VFS vacuum furnaces in Memphis, TN, USA with process control upgrades from United Process Controls (UPC). Orchid Memphis was contending with underperforming controls that were*

*compromising furnace efficacy, productivity and uptime. The improvements also make it easier for Orchid Memphis to streamline its maintenance process and manage maintenance tasks.*

*This way, leak-up rates, events and alarms are automatically and accurately reported. Moreover, upgrading with new controls and automation ensures that Orchid Memphis meets the more complex and stringent requirements of the US Food and Drug Administration (FDA) for medical implants. "There was no need to start from scratch", noted Rob Freeman, UPC services engineer heading the upgrade. "The furnaces were robust, but existing controls needed reengineering to enhance the flexibility of operations and to meet the specific needs of Orchid Memphis in a cost-effective manner. By maintaining a focus on long-term operations, furnaces were upgraded to new business demands without incurring high upfront costs associated with new assets."*



## Ronald Damewood, Tri City Heat Treat

We just found out that former Metal Treating Institute member and former President of Tri City Heat Treat in Rock Island, Illinois, Mr. Ronald Damewood passed away recently. Tri City is a third generation commercial heat treat and one of the largest in the Illinois area. We express our condolences to the family. **May 30, 2018**

*"LAKELAND, Fla. – Ronald R. Damewood Sr., 79 years old, from Lakeland, Florida, passed away on March 14, 2018, at Lakeland Regional Hospital. Ron was born on July 17, 1938, in Monmouth, Illinois, to Ralph and Anne Damewood. He graduated from Davenport Central High School. Ron married Pamela Wolfe on December 16, 1977, in Preemption, Illinois. Ron and Pam lived in Coal Valley and Bettendorf before retiring in 2006 and enjoyed their*

*retirement in Lakeland, Florida. Mr. Damewood started working at his father's company in 1961, Tri City Heat Treat. From 1980 – 2006, Ron was President of Tri City Heat Treat. Ron's model was not to be the biggest, but to be the best in the Heat Treat Industry. He was a past member of the Metal Treating Institute, American Society of Metals. Throughout his life, Ron loved racquet ball, bowling, camping, horseback riding, water skiing, snow skiing, trout fishing, bow hunting, hunting with his sons and grandsons and golfing with his buddies."*

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## Quench Oil Coolers “R” Us

One of the most successful ad campaigns ever in the heat treat industry came from the SBS Corporation, manufacturers of air cooled quench oil coolers. The ads were entitled “A Quench Oil Fire Can Ruin Your Whole Day” and the backdrop was a drawing of a massive explosion with lots of flames-it always reminded us of a battle in the US war of Independence. The product itself is very simple, almost maintenance free, relatively inexpensive and almost indestructible which means it is no surprise that air cooled quench oil coolers are the norm around the world (we should mention that there are now other suppliers such as Dry Coolers offering very similar products). Well with the weather warming up and quench oil temperatures moving onto heat treaters radar we should mention that “The Monty” can now be called “Quench Oil Coolers “R” US. As of this morning we had 15 used units available on our “Miscellaneous” page-these range in size from 2’ X 2’ all the way up to a 6’ wide X 12’ long, 3 fan unit. Remember these things last forever (40

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year old units are not uncommon) so save yourself some money on a used unit. **May 30, 2018**



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## FEIMEC 2018, Brazil

Thomas Kreuzaler of Heat Treat Rep firm TECHPROPRO in Brazil sent us these comments and photos about a recent show they exhibited in. **May 30, 2018**

*"TECHPROPRO gathered a selection of partners which exhibited at the recent FEIMEC 2018 fair in the Expo São Paulo. Attendance was good and we had over 300 visitors at the booth. These companies invested both time and money into making the show a success for us."*

- STANGE – process controls, sensors and software
- LINN HIGH THERM – special and laboratory furnaces
- HEMO – part cleaning systems
- CODERE – modular and automated heat treatment lines with oil and salt quenching
- PVA – industrial vacuum systems for pressure sintering
- PLATEG, part of PVA – plasma nitriding systems





*In this photo we have from left to right; Horst Linn Junior – managing owner of LINN HIGH THERM, Wolfgang Rein – Sales Manager of PVA/PLATEG, Cataharine – Sales Assistant, and Thomas Detlef Kreuzaler – Managing Owner of TECPROPRO and Frank Theisen – Sales Manager of STANGE*

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## **AGCO/ Marktoberdorf, Germany**

We always appreciate it when a large “in house” heat treat gives us the opportunity to have a close look at their heat treating department which is why this news item is such a treat.

AGCO is a worldwide manufacturer of agricultural equipment through brands such as



Challenger, FENDT, GSI, Massey Ferguson and Valtra, the facility we are talking about today manufactures the FENDT brand of tractors which are considered to be amongst the best quality on the market. The facility has 3,000 employees manufacturing components and assembling the tractors-in the final picture below you will see the completed product a tractor worth roughly \$500,000 USD. The heat treating department is dedicated to transmission components for their own use only. By any standards the heat treat is large one with a 2 row Aichelin pusher furnace 10 years old, numerous batch IQ (sealed chamber) furnaces and several other continuous lines including one feeding a press quenching system which is pictured in one of the photos below. The cleanliness and organization of the whole plant is a sight to see, everything is immaculate

and the whole heat treat is air conditioned which is a sight you don't see very often. We told you how the Aichelin pusher is 10 years old-look at it and tell us if it looks a day over “brand new”, this even holds true for the batch furnaces which are over 20 years old but certainly don't look like it. We have to assume that the Heat Treatment Manager Mr. Peter Hiemer is largely responsible for this, certainly we know that the furnaces are “wiped down” every single day which explains why they look so clean. We would like to thank Achim Schneider of Aichelin who arranged the visit and proved himself to be a very knowledgeable heat treater and a great host to boot. **May 29, 2018**



*Peter Hiemer, FENDT, Achim Schneider, Aichelin, Gord Montgomery, "The Monty"*



*Achin Schneider, Aichelin, Peter Hiemer, FENDT*



## 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](mailto:jordan@themonty.com) or 905-271-0033. **May 29, 2018**

**Item # B448** Tip Up Furnaces (3 available)

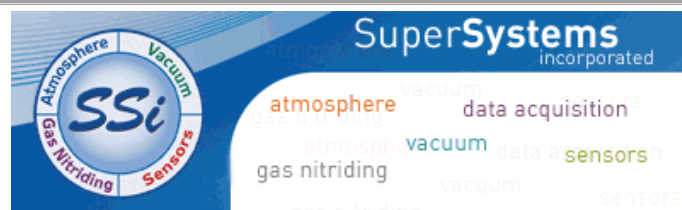
**Item # M363** SBS Unit

**Item # VF337** Oil Quench Vacuum Furnace

**Item # M420** SBS "Quench Airt", (9 available)

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

**Item # B449** Air Atmosphere Box Furnace 2,000 F



## Monday Morning Briefing

Recently we had a news item about Lake City Heat Treating in Warsaw, Indiana adding another HIP furnace to the two they already have. As a foot note to this story we have this photo of a new building they are constructing for the furnace. Because of the enormous pressures involved with a HIP furnace a great deal of caution has to be taken with the installation. As an example of a well done installation we have this older photo showing a HIP furnace installed at Bodycote in Camas, Washington. **May 28, 2018**

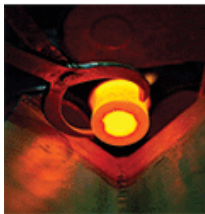


Furnace builder SECO/WARWICK sent us this press release; “Tube Investments of India Ltd., one of the leading Indian tube manufacturers, strengthens its manufacturing base in South India with a new SECO/WARWICK roller hearth tube heat treatment furnace for bright annealing and normalizing. The SECO/WARWICK roller hearth furnace system solution, that has been successfully commissioned for Tube Investments of India Ltd., is custom designed for the heat treatment of carbon steel tubes (ERW and welded), cold



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Maximum Output

Formulated to  
provide excellent  
quenching rates,  
thermal stability,  
optimal viscosity.



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drawn welded precision steel tubes, mother hollow tubes and as drawn tubes.

It is equipped with single ended self-recuperative radiant tube burners, automatic ignition system, flame monitoring system. The furnace operation is controlled by PLC based control panel, which ensures auto control and close monitoring of system parameters which in turn assures better quality of processed materials. Unique furnace design and temperature control systems results in fast heating rates with close temperature uniformity within load.

The companies’ close cooperation and dialogue on the development of new solutions strengthens Tube Investments market position – with technology designed by SECO/WARWICK, Indian tube manufacturer will offer its customers faster delivery with better quality.” We received this photo from the JL Becker company showing an almost completed “Tip Up” style furnace which the company has on their floor. “Tip Ups” are a relatively unusual style and while we have no idea who the end customer is we have seen this type of furnace used for nitriding of automotive brake components.





We had an article recently about how the dream of large scale heat treat investments to service the wind energy industry died a slow and painful death in North America. One of the casualties we mentioned was a company called Brevini Wind headquartered in Italy, who back in 2010 expanded their facility in Indiana, USA to service the wind energy. In 2016 the company announced that the plant in Muncie would be closed and the equipment sold.

One of the items available is a really top notch batch IQ furnace line which you can see below. Our understanding is that the asking price is \$750,000 USD to which we say-good luck with that!



Scroll down this page to May 22 and you will see a news item about a large captive heat treater in Germany by the name of Hirschvogel Automotive Group.

In the news item we speak about the company's large in house heat treat department and also mention about their switch from fabricated to cast fixturing for their pit furnaces. Alloy supplier Lohmann GmbH, of Edelstahlgießere, Germany asked that we mention that they are the supplier of this fixturing. Furnace builder Aichelin of Austria recently celebrate their 150th anniversary at a party held at the Porsche museum in Stuttgart, Germany an event which we at "The Monty" attended and which was a real success. We have this photo for today with a couple of more to come. In this photo you see from the left Klaus Loeser of ALD, Peter Schobesberger, CEO of Aichelin, and Bill Disler, CEO of AFC-Holrcroft.







Commercial heat treater Solar Atmospheres in Greenville, SC recently welcomed the ASME Greenville Section for a tour of their 57,000 square foot vacuum heat treating and brazing operations as you can see in this photo.

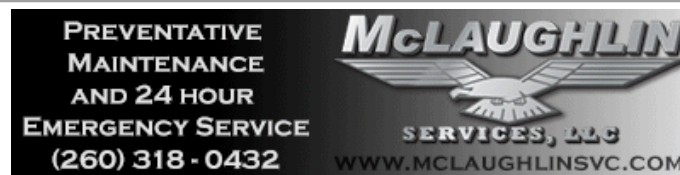


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## Where Are They Now? Bernie Parry

After a lifetime spent in the heat treating industry with companies such as Surface Combustion and AFC-Holcroft few in the industry have not run across Bernie Parry. Originally from Wales, Bernie used his engineering expertise to great advantage when it came to designing furnace systems and selling them. Bernie kind of, maybe retired from AFC-Holcroft a few years back and while we at “The Monty” have kept in close touch with him a captive heat treater asked us the other day what he was up to-hence this update. Bernie’s retirement didn’t last long and he rejoined the industry a little while back selling investment cast products for Heat Treat Central in Michigan. Experience like Bernie’s is unique and we are glad it was not lost to the industry. We searched through our files and came up with this picture from 2016 showing Bernie and Gord Montgomery at the wedding

of Carlos Torres of Mattsa Crio in Mexico back in 2016. If you would like to get in touch with Bernie we would suggest [bparry@heattreatcentral.com](mailto:bparry@heattreatcentral.com) **May 25, 2018**



## What's It Worth?

What you are looking at is an 8 year old SECO WARWICK vacuum sintering furnace in excellent condition and we mention it today because this is a perfect example of a used furnace which is not especially price sensitive-let us explain. This furnace has everything going for it; it is relatively new, manufactured by a very respectable company, SECO WARWICK, is in excellent condition and has a very attractive asking price of \$140,000 USD and yet it (and its twin) have languished on the market for some time now-why? The answer is simple-there is very little demand for a furnace such as this. With 1 bar quenching only and no diffusion pump the systems have a very limited potential market. If somebody needs a vacuum sintering furnace this is an excellent deal, if nobody needs a vacuum sintering furnace even an asking price of "free" is too much (we of course exaggerate slightly-these are not going to be free). Other examples of furnaces which have limited market appeal and are consequently not especially price sensitive would include Cast Link Belt furnaces, pushers-even the evil "fluidized bed" type of furnace would fall into the same category. **May 25, 2018**



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## What is Upcoming at “The Monty”?

Things to look forward to at *“The Monty”* include an in depth write up and photos of an enormous *Captive Heat Treater* in Germany, photos from the recent *150<sup>th</sup> Anniversary Party for Aichelin*, an interview with *Jeff McLaughlin* of McLaughlin Services, some more used equipment listings which includes *Batch Temper Furnaces*, photos from the upcoming *“Thermal Process in Motion”* conference in SC in two weeks, a story about an *Overpriced Batch IQ Furnace* and lots more. *May 25, 2018*

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## Thermal-Vac Technology/Energy Storage

A reader recently sent us a note about how commercial heat treater Thermal-Vac out in California recently invested in an energy storage system as a way of cutting peak demand charges (Thermal-Vac owned by Steve Driscoll is a top notch company by the way). *May 24, 2018*

*“ROCKLIN, Calif., May 9, 2018 /PRNewswire/ — JLM Energy recently signed agreements to install energy storage systems for Modern Postcard® in Carlsbad, Thermal-Vac Technology and Continuous Coating Corporation in Orange. Energy storage will enable these businesses to reduce commercial demand fees, resulting in millions of dollars saved. Thermal-Vac*

*Technology is a 33-year industry leader and premier brazing, heat-treating and metal finishing facility located in Southern California Edison utility territory. JLM*



*will be installing a 750 kW/1500 kWh Gridz energy storage system.” It would appear that the system stores electricity during off peak periods (electricity provided either by solar or other sources) for use during peak demand periods allowing the user to avoid the added costs associated with peak periods. The story caught our eye as heat treaters, especially heat treaters running a number of electrically heated vacuum furnaces have long searched for a way of cutting down on energy costs. In Europe no heat treater would operate a vacuum furnace without some form of “energy optimization” system however it has been slow to catch on in North America. Dibalog of Germany offers such a system and had some moderate success in North America a few years back installing between 10 and 20 systems at companies such as Pratt & Whitney in Texas however at the end*

*of the day the company largely abandoned the US market because of the very slow acceptance by North American heat treaters. The Dibalog system is a good one but for reasons unknown to us, the technology has never excited North American customers.*

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## **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](mailto:jordan@themonty.com) or 905-271-0033. **May 24, 2018**

**Item # 0357** Quality Control Manager

**Item # 0356** Heat Treat Machinery Maintenance Leader

**Item # 0355** Heat Treat Quality Engineer

**Item # 0354** Seeking Plant Metallurgist

**Item # 0353** Plant Manager Wanted

**Item # 0352** Senior Applications Engineer

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## Löttechnik Burkhard, Kaufbeuren, Germany

Last week we jumped at the chance to see a captive/commercial heat treater by the name of Löttechnik Burkhard located in Kaufbeuren, Germany. Family owned Burkhard Group actually has three different companies dedicated to producing auto parts, making components for tank cleaning systems and also heat treating. The heat treat division was opened in 1995 and roughly 15% of their capacity is dedicated to heat treating their own parts with the remainder dedicated to commercial heat treating. While we say heat treating the company is largely focused on soldering and brazing components in a number of mesh belt furnaces. It's a very nice, clean operation with quite new, modern furnaces. In the photos below you see Tanja and Juergen Burkhard along with Joern Rohde of ROHDE Schutzgasöfen GmbH and Gord Montgomery. Tanja and Juergen are holding what is a fairly typical brazed part. *May 24, 2018*



## Wallwork Heat Treatment

In the rather “weird” but strangely interesting category we have this video from one of the largest commercial heat treaters in the UK, Wallwork Heat Treatment in Bury, UK. It certainly caught our attention as we have stood in exactly the spot where this video was taken as you can see in this photo from March of 2013. We are willing to bet that you have never before seen somebody ride a dirt bike over a vacuum furnace. *May 23, 2018*





## Peter Schobesberger, Aichelin

We are very pleased to be able to offer you this interview with Mr. Peter Schobesberger, CEO of one of the largest furnace builders in the world Aichelin. We were able to speak with Peter at the company's 150<sup>th</sup> anniversary which took place in Stuttgart, Germany this past week. Peter going by memory it is about 3 years since our last interview which can be found at <http://themonty.wpengine.com/peter-schobesberger/> In that interview you gave us the background of Aichelin so I see no need to go over that again. Instead let's look at what has changed since then. **May 23, 2018**

**This moment celebrates the 150<sup>th</sup> anniversary of Aichelin, a very impressive moment for the company- it must make you and your team very proud to be part of it. What would you like to say about this celebration?**

*"We are very happy to celebrate this anniversary with a lot of close business partners today in Stuttgart. Aichelin Group is in excellent condition and we are looking forward to the future. This is also a day where we are grateful to all the people from the heat treat community which have helped us in all the decades. For us it is also a mission to continue with all our passion to serve this market in the future in order to be on top for many more decades."*

**While there have been a number of changes at Aichelin over the past few years it would appear that the acquisition of US based AFC-Holcroft is the most significant-how did this**

*come about? (at this point I should mention that WG Montgomery Ltd., “The Monty” is a longstanding AFC-Holcroft rep covering Canada and Upstate, NY.)*

*“For sure, this acquisition was one of the big steps in Aichelin’s history. There were attempts from Aichelin to get a substantial presence in North America since the 1980’s however up until 2016 our success was limited to European based companies, which were familiar with the Aichelin furnace philosophy. This unfortunately though was limited to only a minority of the US heat treatment clients. So it was obvious that Aichelin should team up with a US based partner to gain more influence. We had this plan in our minds for a long time, but in 2016 the timing with AFC Holcroft was perfect. Like in a marriage: Both have to say “Yes” at the same time, which we did.”*

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*Peter Schobesberger, Gord Montgomery*



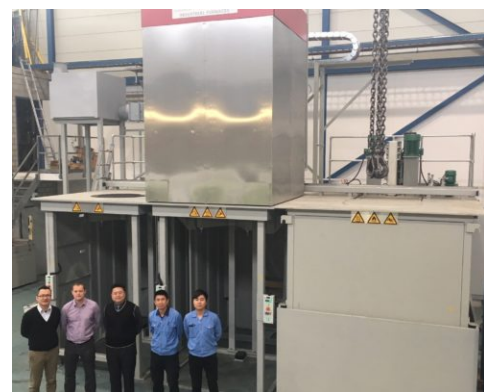


## Codere Furnace Order

*“Over a busy period for Swiss furnace manufacturer Codere SA, David Howard of the Sales department wants to tell readers about a new market entry and successful pre-reception for a leading Aerospace Manufacturer in Taiwan working with **Safran**group and **GE Aviation**. The main reference part in question for this order to Codere was the landing gear, which is considered to be one of the critical structures of an aircraft which plays a major role for flight safety during its takeoff and landing procedures. The landing gear is designed to absorb and dissipate the kinetic energy of landing impact, thus the effective technical strategies will be focused on the manufacturing techniques for machining Ultra High Tensile Steel and special processes for subsequent surface treatment and non-destructive testing. The company in question does not want to be named but respects NADCAP norms for the following processes Conventional Machining, Nonconventional Machining, Heat Treating, Chemical Processing and Surface Enhancement – Shot Peening with accreditation from Safran group among others. They first entered into Aerospace industry by incorporating with AIDC manufacturing commercial aircraft components in 1995.*

*This furnace measuring Ø 900 mm with useful height 1500 mm with a gross weight capacity of 1.5 ton respecting AMS 2750E Class 2*

*Instrumentation D. This furnace will be located in a new building the fourth, which has been constructed since 2009 in the South of Taiwan. Codere were chosen as preferred supplier due to supplying to such solutions for landing gears from medium size up to 3 metres in length over the last 15 years in the global market. Aerospace leaders have been attracted by the*



*flexibility of the System 250. Customers have been interested with possibility of 2 furnaces with 1 oil bath or two quench tanks for example oil & water working with 1 furnace in the same line for multiple alloy types such as iron, aluminum, titanium and copper. Rapid heating up to working temperature in austenitising & carburising furnace with transfer times*

*respecting AMS 2750E norm's is another important factor considered. Codere has unique advantages against traditional batch furnaces. There has been growth especially in salt quenching processes (ADI, martempering, bainitic hardening), titan treatment, aerospace projects respecting AMS 2750E or Automobile (CQI9) and multi product series (Flexibility needed for temperature & atmosphere). Other installations, which are next in the production line at Codere are for the rail, watch-making, precious metal, tooling, defense and auto industries. Codere suggests you follow us on Twitter page for the most recent updates @Codere\_CH & if you have any questions on our website, please don't hesitate to contact David Howard at [info@codere.ch](mailto:info@codere.ch) for further information or call + 41 32 465 1010" **May 23, 2018***

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## **Rexnord, Indianapolis, Indiana**

Back in 2016 ball bearing manufacturer Rexnord announced that their facility in Indianapolis would be closing and the production moved to Texas and Monterrey. The



plant again made the news in 2017 for political reasons (as you can see below). The final bell tolled for the company just last week when all of the remaining equipment was sold, this included some Surface IQ equipment and an AFC-Holcroft rotary hearth furnace which you can see below.

Nothing exciting the furnaces but probably saleable. **May 22, 2018**

*"November 22/2017. It's the end of an era for an Indianapolis manufacturing plant as the remaining few Rexnord workers clocked out for the last time on Wednesday. The company announced in 2016 they were moving their operations to Texas and Monterrey, Mexico. Last October, the company employed more than 300 workers at its west side plant, which made ball bearings for equipment around the world. The fight to keep jobs in Indianapolis received national attention during the 2016 Presidential process, with President Trump getting involved with Carrier's exit from the*

*state and calling out Rexnord for "viciously firing all of its 300 workers." Workers at Rexnord had hoped that the president would step in on their behalf like he did with Carrier but it never happened. Rexnord is headquartered in Milwaukee, Wisconsin, comprised of two strategic platforms, Process & Motion Control and Water Management, with approximately 7,700 employees worldwide, according to its website."*



## Hirschvogel Automotive Group

Based in Germany Hirschvogel Automotive Group is a worldwide supplier of automotive components. The location we visited last week in Denklingen, Germany has 3,000 employees making forged automotive components and as you have probably already



guessed has a very large in house heat treating department. With the largest rotary hearth furnace we have ever seen, multiple pusher furnaces, cast link belt furnaces and a number of pit annealing furnaces we really do feel we are not exaggerating when we say large heat treat department. To add to this impressive list of equipment the company is two weeks away from starting up a 2,000 kg/hour gas fired pusher line which will be completely automated. The photos below show a small portion of the heat treat department which features 8 pit annealing furnaces all built by Rohde of Germany. The owner of the company, **Herr Joern Rohde** can be seen on the left in one of the photos below, to his left is **Herr Stefan Maiwald**, Maintenance and **Herr Martin Mair**, Heat Treat Department. Incidentally all the fixturing for the pit furnaces which you

see in these photos is investment cast. It turns out the company has been using fabricated fixtures for many years however they recently switched over to investment cast on the basis that while it is more expensive up front in the long run it is cheaper because of the life. **May 22, 2018**





## SEW EURODRIVE , Bruchsal, Germany

If you're in the gear business you know SEW Eurodrive. If you're in the heat treating business you probably also know SEW because their plants around the world generally include substantial heat treating departments. For these reasons we are very lucky to give you an in depth glimpse of the heat treat department at one of their larger facilities which is located in Bruchsal, Germany. The overall facility covers many acres, the heat treat department is relatively new-the furnaces you see below are approximately 10 years old were built and installed by Aichelin. What you see are multi chamber batch furnaces with oil quenching designed for case hardening of gears and shafts along with washers, tempers, charge cars, shotblasting equipment and a very complete lab-in short everything required to run a state of the art heat treating department. Even a cursory glance at these pictures will show you that this is a meticulously maintained heat treat which is very much in line with the whole plant. While this installation is fairly typical of the heat treat department of a major gear manufacturer we will also say that this is a finer example than many. **May 18, 2018**



*Achim Schneider, Aichelin, Achim Stassen, SEW, Gord Montgomery*

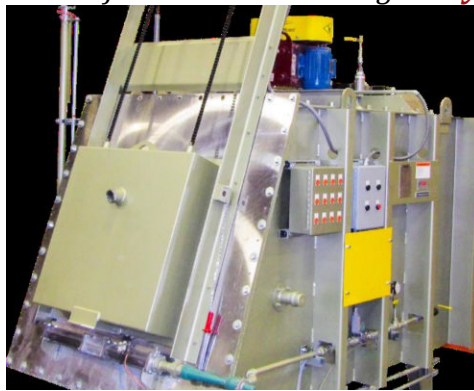


*Achim Stassen, Manager Hardening/Grooving, SEW Eurodrive*



## Lindberg Furnace Order

*"Riverside, MI – April 18, 2018: Lindberg/MPH announced the shipment of an electrically heated rod overbend atmosphere box furnace to the aerospace industry. The box furnace will perform a heat treatment on parts within the work chamber under a reducing atmosphere generated from a nitrogen methanol panel. The atmosphere box furnace has a maximum temperature rating of 2000°F and work chamber dimensions of 24" wide x 36" deep x 24" high. A recirculating fan distributes atmosphere and heat evenly within the work chamber and temperature uniformity is +/-25° F at 2000°F. The rod overbend box furnace also utilizes an integrated carbon control circuit for neutral hardening." **May 18, 2018***



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## Ipsen U Course

*"The first Ipsen U class of the year was held in April where attendees received an extensive overview of furnace equipment, processes, maintenance and more. This three-day course also provided hands-on training and casual open-discussion for all levels of experience in the heat-treating industry. Participants traveled from several states, including California, Indiana, Pennsylvania and Ohio, as well as from other countries, including Israel and Mexico. Attendees*





*found the hands-on demonstrations and engaging presentations from experienced instructors to be most helpful. Ipsen will continue hosting its series of Ipsen U classes June 5-7, August 7-9 and October 2-4. Register today for an upcoming 2018 Ipsen U course at [www.IpsenUSA.com/IpsenU](http://www.IpsenUSA.com/IpsenU) **May 17, 2018***

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## **Aichelin Furnace Installation**

We just toured what is one of the most impressive captive heat treat departments that we have ever had the chance to see, a department dedicated to heat treating transmission components. It was so impressive that it warrants a full blown write up, a write up which is going to have to wait until later this week but for the time being we will show you these two photos. **May 17, 2018**



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## **Toxic Substances**

A real issue in the North American heat treating industry is that of ground contamination as a result of manufacturing practices many years ago. Generally any contamination was a result of ignorance of the possible health effects of using or dumping certain substances. So the question is; “are companies responsible for the use of substances which time has proven could possibly be unhealthy?” We ran across this case from Wisconsin, USA which comes from the “Watertown Daily Times” (we have abbreviated this story); **May 17, 2018** *“MADISON — A federal judge has dismissed a Watertown couple’s lawsuit alleging the demolition of a vacant factory next to their South Third Street home caused the release of toxic substances that damaged their health and property. Acting on a motion by the owner of*



*the former furnace and transformer plant and two companies involved in its demolition, District Judge William Conley concluded that William and Nancy Liebhart's suit did not prove their claims."The Liebharts simply have not adduced evidence that defendants have violated the relevant standards under the (Resource Conservation and Recovery Act or the Toxic Substances Control Act)," Conley wrote in a March 30 opinion. The Liebharts' owned*



*properties at four South Third Street addresses including their former home at 1115 S. Third St. The properties are adjacent to the former Hevi Duty factory site is about 5.3 acres and consists of a 174,000-square foot plant and office building. Heat-treating furnaces, transformers and hot plates were made at the plant beginning in the 1920s and continued until 1971. All operations ceased in 2005. SPX Corp. purchased the property and in 2009, retained TRC Environmental Corp. to conduct an environmental site assessment which found polychlorinated biphenyls, PCBs, a toxic substance, in the concrete floor of the plant. In November 2014, TRC submitted plan to the Environmental Protection Agency on behalf SPX to demolish the Hart Street factory. Months later, the EPA approved the plan. The demolition was completed in March 2015. SPX later completed an analysis of soil taken from the demolition site and the Liebhart's property, which contained varying levels of PCBs. In September 2016, SPX submitted a plan to the Department of Natural Resources to remove contaminated soil from their property and has been waiting for permission to further sample soil on Liebhart's property."*

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## **Wittman Harterei, Germany, Expanding**

Commercial heat treater wittman harterei in Uchingen, Germany will shortly be doubling the size of their plant and adding some more furnace capacity. The company was founded in 1998 and the main focus is a number of very large Aichelin Sealed Quench (Batch IQ) furnaces. With almost 40 employees the company has found business to be brisk enough to warrant a multi- million euro investment in the firm. The General Manager Ralph Matthauss (top notch fellow by the way) took the time to give us a very complete tour today and what we saw was a very clean, modern and well run shop with completely automated furnaces meaning virtually no operator involvement. While we say this is a commercial heat treater who obviously serves a number of different industries Wittman also has a sister company

across the street which produces gears, all of which are heat treated by wittman. The expansion will be completed by the end of this year and we hope to be able to give you an update then. **May 16, 2018**

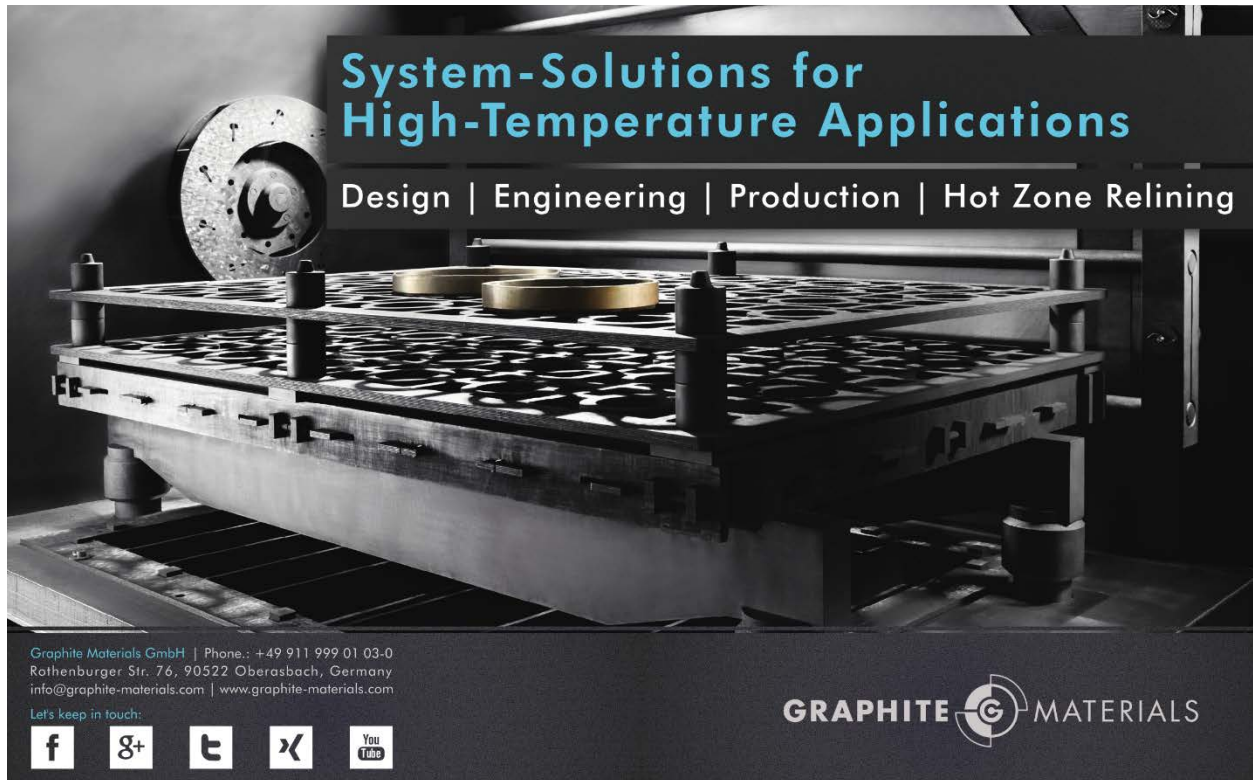


*Gord Montgomery, Ralph Matthaues (Wittmann Harterei)*



*Ralph Matthaues (Wittmann Harterei), Joern Rohde (Rohde)*



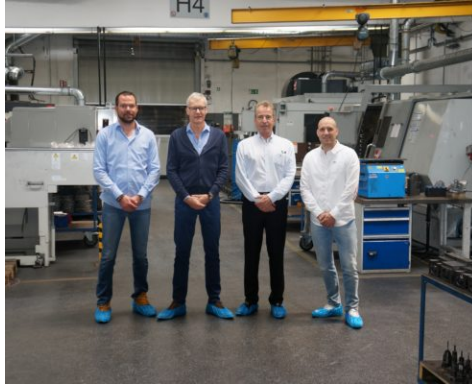


## Graphite Materials, WG Montgomery Ltd.

WG Montgomery Ltd., recently became the North American reps for Graphite Materials, a company based in Oberasbach, Germany which is one of the leading suppliers of graphite fixturing and components for the heat treating industry. <http://www.graphite-materials.com/en/> These photos show a visit between the two companies which happened earlier this week. **May 16, 2018**



*Gord Montgomery and Rolph Terjung*



*Mr. Alexander Kern (Engineering), Mr. Dr.-Ing. Rolf Terjung (CEO), Mr. Gord Montgomery, Mr. Roland Weeske (Head of Business Unit Specialty Graphite)*

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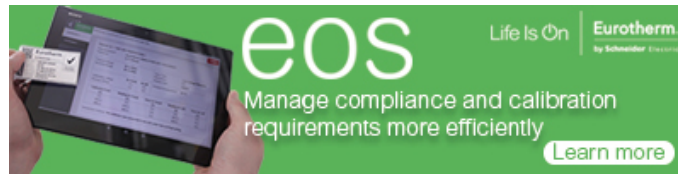


## **Allgemein Gold und Silberscheideanstalt, Pforzheim, Germany**

We have a very brief story about this company in Southern, Germany. Basically the company refines gold, silver, copper and other metals and consequently has a very interesting but quite private heat treating department. We are lucky to be able to share with you this photo of Gord Montgomery and Joern Rohde standing in front of one of the pit stress relieving furnaces provided by Rohde Furnaces. The furnaces stress relieve coils of silver and copper which is a pretty cool sight to see. **May 16, 2018**







## **PETERS' HEAT TREATING EXPANDS PRODUCTION CAPABILITY WITH NEW AFC-HOLCROFT FURNACE EQUIPMENT**

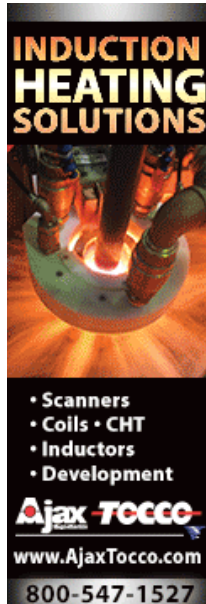
*"Peters' Heat Treating, Inc., headquartered in Meadville, Pennsylvania (USA), has invested in a new UBQ (Universal Batch Quench) integral quench furnace and two 1400°F gas fired UBT temper furnaces for their headquarters facility. This new furnace equipment will be integrated into an existing complete UBQ furnace line purchased previously from AFC-Holcroft, and adds an additional 3,500 pound gross load capacity to the existing line. They have also invested in a new 1400°F gas fired UBT temper furnace for their McKean, Pennsylvania facility.*

*Peters' Heat Treating has made significant investments in furnace technology to expand their production capability and gain entry into new markets. In 2014, Peters' Heat Treating became first-time customers of AFC-Holcroft, and have gone on to make additional investments in AFC-Holcroft equipment in subsequent years. "This investment shows the continued commitment by Peters' Heat Treating to invest in the latest technology and we're excited to be a part of it," said Tracy Dougherty, Sales Manager at AFC-Holcroft. This latest UBQ furnace will interface with existing tempering furnaces, spray-dunk washer, automated transfer car and an EZ™ Series endothermic gas generator and other companion equipment and offers the flexibility to heat treat a wide range of parts and a number of metallurgical processes.*

**About Peters' Heat Treating, Inc.:** *Since 1979 and now into the second generation, Peters' Heat Treating, Inc. has been one of the leaders in the precision parts heat treating industry. Located in Northwestern Pennsylvania, Peters' Heat Treating has three locations servicing the tri-state region. Peters' Heat Treating has been historically known for their specialization in vacuum heat treating; however, with the AFC-Holcroft equipment expansion, Peters' has dramatically increased their capacity for oil hardening and carburizing. Processing capabilities include: vacuum processing, neutral hardening, carburizing, gas nitriding,*

*cryogenics, annealing, stress relieving, black oxide coating, induction processing, sandblasting, integrated straightening and metallurgical testing.*

**About AFC-Holcroft:** Founded in 1916, AFC-Holcroft, is one of the US market leaders in the production of industrial furnace equipment for ferrous and non-ferrous metals. The company manufactures turn-key heat treating systems for applications including commercial heat treating, bearings, automotive, aerospace, mining, aluminum heat treatment, gear manufacturing, fastener manufacturing, and alternative energy industries. Member of the Aichelin Group since 2016 and headquartered in Wixom, Michigan, AFC-Holcroft operates its own subsidiaries in China and Switzerland and has a global presence through a network of partners located in Australia, Brasil, China, India, Mexico, Poland and Spain.



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





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## Solar Manufacturing

*"Solar Manufacturing recently shipped a large horizontal front loading vacuum furnace to a titanium manufacturer and fabricator located in the Midwest region of the United States. The furnace includes a molybdenum shielded hot zone and heating elements, with a work zone size of 54" (1.37m) wide X 54" (1.37m) high X 144" (3.66m) deep and a weight capacity of 7,500 pounds (3,400 kg). The furnace is specifically designed for processing titanium alloys for the aerospace, medical, and other industries. It is fully compliant to aerospace specification AMS2750E. The large work zone size and heavy weight capacity of the furnace requires safe and effortless loading and unloading of the furnace, accomplished with a robust, motorized loading truck. The furnace is capable of processing in an argon atmosphere or in high vacuum in the  $10^{-6}$  Torr range with a 35" Varian diffusion pump assisted by a Leybold booster pump and a Leybold dry mechanical roughing pump. The furnace incorporates the new SolarVac Polaris® control system with large HMI graphic touchscreen overview. Programming capabilities include gas quench rate control up to two bar pressure with an AB variable frequency drive. Precise temperature control up to 2400° F (1316° C) is accomplished utilizing digital power trimming technology." **May 15, 2018***



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

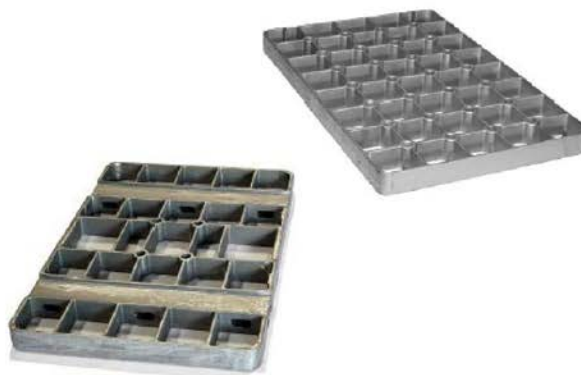
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## Monday Morning Briefing

We start off today in Benton, Illinois looking at a brand new captive heat treat. Going back to August of 2017 **Mincon**, a manufacturer of drill bits announced that they would be making a \$2 million USD investment in a heat treating department for their plant in Benton (the full press release follows). It is our understanding that the heat treat department is just getting going. *"Benton's Mincon manufacturing plant, which specializes in industrial sized drill bits, is making some big additions to their location and a big financial investment in Benton itself. The company currently makes large industrial shipments of their product to Africa, Australia and many other places around the world. Regional Sales Manager Matt Jones added that the business is planning an extensive expansion including a new heat treat plant and new office space. To start the new development will mean three to five new jobs in the office area, Jones said, and eventually the possibility of 10 to 15 new jobs once the heat treat operation is up and running. The plant currently employs around 30 total employees in their production facility. The new office will be up and running by mid September, Jones says. The building for the heat treat plant will be completed by October, with the materials to begin setup arriving shortly after. The heat treatment operation should be up and running by the*



end of the first quarter of 2018, Jones added. "Right now the heat treat is the only thing we have to farm out," said Jones. "Being able to do this in house is going to save us a lot of time and is going to turn a one week turn around for our customers into a one day turn around and will help us build a better product." The photo below shows a number of parts being "racked" before heat treating.



**AMG Advanced Metallurgical Group N.V.** Reports First Quarter 2018 Results. As the parent company of ALD (*the commercial heat treat and furnace building company*) some of our readers might possibly, maybe, be curious about the financials for their parent company AMG. Bottom line is Revenue increased by 20% to \$308.4 million in the first



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quarter 2018 from \$258.0 million in the first quarter 2017 and the company looks healthy. For those of you real curious about the company the results can be found on line and the heat treating portion of the company is in the AMG Engineering Division. In the UK **Stewart Griffiths**, who was for a number of years with **Hauck Heat Treatment**, quite possibly the second largest commercial heat treater in the world has changed his career path. Stewart is now with **Fluke Process Instruments** the Datapaq people. That would be an interesting change from using the equipment to selling the equipment. Recently a 5 year old **Ipsen Titan** vacuum furnace appeared on E-Bay of all places. It had working dimensions of 2' X 2' X 3' and an operating temperature of 2400F. We don't know the buyer but we understand the sale price was \$85,000 USD.

**Atmosphere Annealing**, a division of Premier Thermal Solutions (PTS), recently added Ferritic Nitrocarburizing (FNC) to its capabilities at it's Lansing, Michigan, USA

plant. When we think of Atmosphere Annealing we primarily think of large volume, continuous annealing furnaces but certainly FNC is a process with a very bright future in front of it. If you recall Atmosphere Annealing and it's sister company NitroSteel were purchased by a investment firm by the name of Z Capital Partners back in March of 2017 and the company renamed Premier Thermal Solutions.

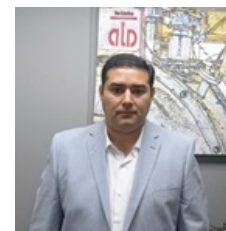


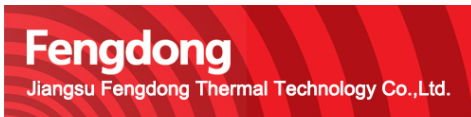
Commercial heat treater **ALD Thermal Treatment** recently made some people changes which we mentioned briefly, here are a few more details and pictures. ***Hector Ibarra** has been promoted to Vice President of Business Development North America, in his new role, Hector Ibarra will be responsible for all sales activities for the North America Market (Canada, USA and Mexico) in addition to his responsibilities for the Mexico Operations. Hector Ibarra has been with ALD for a little more than 5 years in several Director positions the latest as the responsible for the ALD TT Ramos plant for which he will remain involved.*



***Chuck Sefcovic** has been added to the Sales team as Director of Sales for New Customers in Canada and United States, Chuck comes from a long successful career in the automotive industry and he will expand the presence of ALD services beyond current customers and geographical locations.*

***Edwin Orozco** has also been added to the Sales team as Director of Sales for Mexico. Edwin has more than 15 years of experience in the automotive industry and he will continue to promote ALD in Mexico and expand our customer base.*





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**Rohde Furnaces.** Two years ago we visited the new facility of Rohde Furnaces in Hanau, Germany which was almost but not quite completed. We now see the plant completed. Rohde is a family owned furnace builder with a long history both in Germany and around the world. *May 14, 2018*



*Natasha, Konstantin, Vincent and Joern Rohde.*

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## Texas Is Back! Houston Heat Treat

Tough times in Texas the past few years with the slowdown in the oil and gas industries but things have been picking up the past few years and we believe we can now say with some certainty that things are looking good for captive and commercial heat treaters in the state. A good example is commercial heat treater Houston Heat Treat in Houston, Texas. Things have picked up to such a degree that the company finds it necessary to add equipment. Currently being installed is a Surface Combustion "Super 36" batch IQ furnace with working dimensions of 36" X 48" X 36". While the company will be adding several other furnaces in the near future this is the first one we can mention. *May 11, 2018*



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## Heat Treating Germany

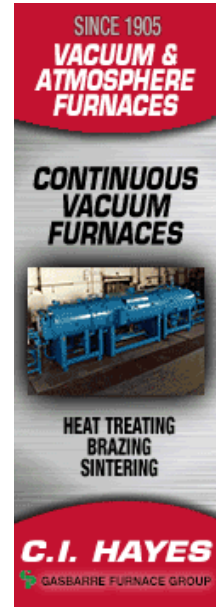
One of the largest and certainly one of the most advanced heat treating markets in the world exists in Germany and it is a market we have spoken about many times over the years. Next week we will be visiting a number of very large captive heat treats along with several commercial heat treats around the country. We will have photos and write ups about each and a summary about how the industry looks in Germany and Europe these days. While we will not be visiting the German heat treat shown in the photo below, we will leave you with this bit of trivia-what you are looking at is most likely the largest pit carburizing furnace in use in a commercial heat treat anywhere in the world. **May 11, 2018**





## Lake City Heat Treating, Warsaw, Indiana

Commercial heat treater Lake City Heat Treating is expanding and adding more “Hipping” capacity later this year. Lake City is one of only a handful of commercial heat treaters around the world who offers Hipping, the largest one of course is Bodycote. The Warsaw, Indiana area by the way is a hotbed of vacuum heat treating both captive and commercial heat treaters with companies such as DePuy Orthopaedics, Inc., Applied Thermal Technologies and a few others all largely serving the medical industry. “Lake City Heat Treating is pleased to announce the construction of a 6,000 square foot addition to its facility in Warsaw, IN. The company is excited about the expansion, which speaks towards its continued growth in production and expanding its heat treating capabilities. The new building also allows Lake City Heat Treating the space to bring in new machines and equipment, including a new Hot Isostatic Press in late fall 2018. Lake City Heat Treating specializes in vacuum heat treating of stainless steels, cobalt and nickel alloys and vacuum heat treatable steels for aerospace, medical and other quality-critical industries, with Cryogenic, Hot Isostatic Pressing and Tempering services also offered. LCHT offers the heat treating capabilities and capacities to meet customers’ exact requirements and specifications.” The photo below comes from the Lake City website <http://lakecityheattreating.com/> **May 10, 2018**





## Dokka Fasteners/Ipsen/McLaughlin Services/Asia

If you ever needed an example of how close knit the world wide heat treating industry is- this is it. Back in 2012 a Norwegian company by the name of Dokka Fasteners (a manufacturer of fasteners for the wind energy industry) set up a brand new plant in Michigan. As we mentioned a few weeks back the operation was a victim of the failed wind energy industry in North America and consequently the plant closed in 2015 with most of the equipment being put up for sale. Included in the surplus equipment was a really top notch Ipsen “Titan” automated batch IQ line, a replica of a system the company has in Norway and which was built at a cost of roughly \$3 million USD-we believe the line was built at Ipsen in Kleve, Germany. The line was eventually bought by a furnace builder/rebuilder in Avilla, Indiana by the name of McLaughlin Services. Very recently the entire system was sold by McLaughlin to a captive heat treater in Asia with McLaughlin Services rebuilding as necessary and also providing a McLaughlin Tru-Mix 4200 endothermic generator. So to summarize a Norwegian company buys a furnace line built in Germany, installs it at a plant in the USA, from where it is eventually sold to a captive heat treater in South East Asia-it is indeed a small world. This photo shows the furnaces when they were installed in Michigan. *May 9, 2018*



## Expanite/MAN Diesel

From “Expanite” a supplier of a “super duper” stainless steel hardening technology we have this press release; **May 9, 2018**

*“MAN Diesel & Turbo’s newest generation of gasdriven engines already plays a key role in the sector’s fuel conversion from oil to alternative energy. When developing the engine, Expanite and MAN Diesel & Turbo collaborated in solving the installation of their gas injection valve in the engine. An important part of the solution came from Expanite – a surface hardening technology that makes stainless steel extremely wear and corrosion resistant.*

*Per Brandt, manager at MAN Diesel & Turbo, says: “Originally, we had specified a chrome plating in our cylinder cap for mounting our gas injection valve, but it could not always stay tight as there were high requirements for chrome surface quality. We tried unsuccessfully with different solutions. Fortunately, someone had heard about Expanite’s surface hardening, and although stainless steel is usually softer than chrome surface, it turned out to be the solution. A design change coupled with Expanite’s hardening technology solved our challenge. In cooperation with Expanite we relatively quickly found a hardening that made our surface resistant against scratches and corrosion. The solution passed our test in service where the system remained sealed and tight and in addition the solution was also easy and cost efficient to implement.”*



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## Heat Treat Industry Interviews

An interview yesterday with Mr. Geoffrey Somary of furnace manufacturer Ipsen leads us to “blow our own horn” a little. Without a shadow of a doubt there is no other source in the industry which has done as many interviews as “The Monty” and these can be found at <https://www.themonty.com/interviews/> In this section you will find interviews from the past and current CEO’s of “Bodycote” the world’s largest commercial heat treater, “Bill Gornicki” of “ALD”, Gunther Braus from “Dibalog”, Damian Bratcher of “SSI” and over 50 other individuals all well known in the heat treating industry. If you would like to be interviewed for “The Monty” please let us know. **May 9, 2018**

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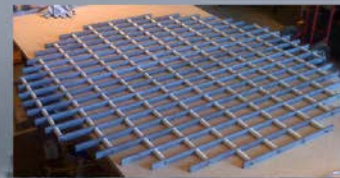
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## **Geoffrey Somary / Ipsen**

Recently we interviewed Mr. Pat McKenna, President & CEO of furnace builder Ipsen. As a follow up to that interview we have been looking forward to speaking with Mr. Geoffrey Somary, COO at Ipsen Group who is going to give us more of a global perspective about the company. **May 8, 2018**

Perhaps it is a sign of age Geoffrey but it seems that I preface many of my interviews with “we have known each other for some time now” and this interview is no different-how long have we known each other now?

*We first met at the Reno FNA show in 2006 when I was leading VFS prior to merging that strong brand together with Ipsen. I believe I gave you a deck of ‘VFS Reno 2006’ playing cards – which are now treasured by collectors worldwide.*

I got a little ahead of myself with my first question, what is your background and how did you into this industry?



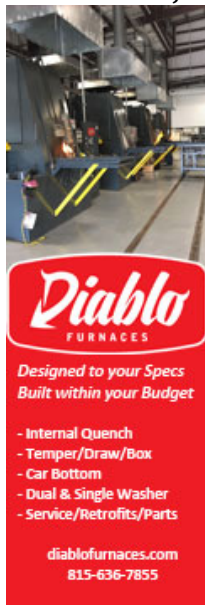
*Born and raised in New York City – I left the Big Apple to attend Northwestern University where I received my mechanical engineering degree. I spent the first 17 years of my career at a German-owned technology company where they asked me to train for my first two years near Stuttgart. During this time, I learned the German language – I was also there to help take down the Berlin wall and I still have a piece of it. In 2005, Ipsen recruited me to join the team as Vice President Technology and that started my journey with Ipsen which is now nearly thirteen years.*

**Continue Reading**

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## **Columbus McKinnon Fire, Virginia, USA**

We really know very little about this facility or the cause of the fire beyond what we were sent below. We can add that though that there was a fire at the plant back in January of 2017 that injured a firefighter and that the plant has roughly 220 employees making chain



hoists for cranes and other products. **May 7, 2018**

*“Three fire crews rushed to the scene of a fire early this morning at the Columbus McKinnon plant in Damascus, Virginia. Dispatch received a call at 7:05 A.M. that the heat treat area of the plant, located toward its rear, was on fire. Crews from Damascus, Abingdon and Glade Spring arrived, with the earliest at 7:15 A.M. The Damascus Rescue Squad was also on scene. Roughly 150 employees of the plant evacuated. Crews remained on scene from 7:15 A.M. to 9:00 A.M. The heat treat area sustained fire and smoke damage to the roof, while the entire plant sustained minor water damages. After emergency crews left, employees entered the building and returned to work. The heat treat section of the Columbus McKinnon plant was affected by smoke and water damage. The Damascus Fire Chief and general manager now say*

*they’ll assess the situation once the power returns. The entire building was not affected, and parts may reopen today.”*

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## Atmosphere Furnaces

Automatic heat treatment lines



Continuous furnaces with online quenching



Continuous furnaces



## People News

Where are they now? **Scott Workman**. We firmly believe that everybody in the worldwide heat treating industry knows Scott Workman. Scott is an experienced heat treater who has worked at a number of captive and commercial heat treats around the world including VW in China, Stanley Black and Decker in Texas and Mushashi in South Carolina (which closed a number of years ago. We just ran across Scott who is now with a company by the name of FOMAS Inc., a manufacturer of seamless rings located in York, South Carolina, USA (formerly this company was known as "The Ajax Rolled Ring & Machine" Company). The company operates a number of rotary hearth and tip up furnaces. **May 7, 2018**

**Dean Louis Russell V.** On May 1 Louis Russell V. was born to Dean Russell Junior and his wife. Dean Russell Junior is the son of Dean Russell Senior and the two are amongst the best known heat treat reps in the US, having repped companies such as Ipsen and Dry Coolers for many years. Congratulations to the whole family.



## Jak Kozma, AFC-Holcroft Retirement

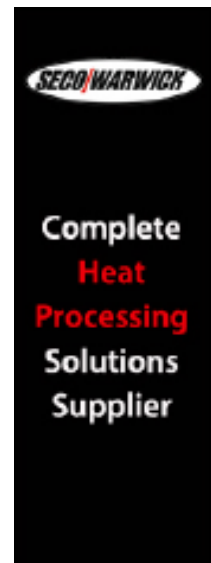
Many readers of The Monty will recognize the name Jak Kozma. Kozma served for many years at AFC-Holcroft in various engineering and project management capacities, which brought him in contact with some of the company's biggest clients. He was at times involved with some of AFC-Holcroft's more technically complex projects and systems throughout his career. Now after 50-some years working in the furnace/thermal processing systems business, Kozma is retiring. **May 7, 2018**



*"Kozma was literally born into the business, specifically the J.A. Kozma Company, founded in Detroit in 1928 by his grandfather. He is fond of saying he was born in a furnace, and once the heat got in his blood, there was no quenching it. His life's work has been spent in the furnace industry, and even in childhood, his goal was to become a successful furnace chief engineer.*

*Following his graduation from the University of Michigan in the early 1970's, Kozma worked in the family furnace business but eventually moved on to a heat treat and forge plant as a plant engineer, and then onto several different furnace manufacturers before joining Holcroft (now AFC-Holcroft) in 1987. As a global company, AFC-Holcroft afforded Kozma many opportunities to travel and see the world as part of his assignment. In typical style, one of his favorite recollections was a return trip to Moscow's Red Square, with the specific goal of playing Frisbee in Red Square while wearing his beloved University of Michigan logo ball cap – much to the bewilderment of the local population and the annoyance of Russian security officials.*

*"Looking back on my career, I now realize that I loved every minute along the way, filled with many opportunities, challenges, successes, and yes – some failures" said Kozma. "For me, working hard and always staying focused allowed me to learn and grow in the furnace industry I was born into. My bonus was meeting and working with so many talented and interesting people and having fun along the way. I can honestly say that I fulfilled my childhood dream to be a successful furnace chief engineer and more (in my mind anyway), and for that I am extremely satisfied."*



[www.secowarwick.com](http://www.secowarwick.com)



## ALD Thermal Treatment, Ramos Arizpe, Mexico

Arguably one of the largest and most successful commercial heat treaters in North America is ALD Thermal Treatment (ALD TT) with plants in Port Huron, Michigan, USA and Ramos Arizpe, Mexico. Both plants have a very strong focus, vacuum carburizing of automotive transmission components. The Ramos, Mexico plant is worth mentioning today for a number of reasons;

First off Tuesday, August 21, 2018 the plant will be celebrating their 10th anniversary with a big party, a plaque and announcements about future plans. At the same time a symposium will be held for individuals and companies interested in learning more about Low Pressure Carburizing with High Gas Pressure Quenching, its benefits and the theory behind it. We understand this is open to anybody who would like to attend but please verify that before you pay for your plane tickets. Also worth mentioning is that our good friend Hector Ibarra who was Director of Operations has been promoted to Vice President Business Development North America (although he will continue to be responsible for all Mexico Operations plus the North America Sales teams). Additional changes include hiring two new sales people, Chuck Sefcovic, based in Port Huron who will handle the USA and Canada and Edwin Orozco who will be covering Mexico. We look forward to providing you with photos of the event in August. **May 4, 2018**



## EXCO Colombia

While you don't see many fluidized bed heat treating systems anymore the companies that utilize them seem to like the technology. Such is the case with extrusion mold company EXCO in Columbia, South America who uses this Procedyne system to heat treat their dies. *May 4, 2018*



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## Tratar, Colombia

We now visit the largest commercial heat treater in Columbia, South America a company by the name of Tratar who we mentioned last week because of their plant in Lima, Peru. Tratar was founded in 1983 in Medellin, Columbia by Roberto Bernal which means the firm is celebrating their 35th anniversary. In 1998 a second plant in Bogota, Columbia was started with the Lima plant added in 2009. Each of the plants is reasonably similar in that they feature a mix of pit carburizing furnaces, box furnaces, a fluidized bed furnace in the case of Medellin and plasma nitriding systems in Lima and Medellin.



Medellin has roughly 25 employees between their machining and heat treating operations and Bogota has 14 employees. Like commercial heat treats around the world (and there is little difference anywhere in the world-trust us) the plants run 24 hours a day/7days a week. We mentioned the company was founded by Roberto Bernal-Roberto is still heavily involved but as is the case with many companies in the heat treat industry the next generation is taking over. Andres and Jimena Bernal (son and daughter of Roberto) are now doing much of the day to day running of the business. Both are generally in attendance



at ASM and FNA shows in the USA and the annual heat treat show in Germany in October of each year. **May 3, 2018**



*From Left to Right; Tahana Velez, Andres Bernal, Gord Montgomery, Roberto Bernal, Jimena Bernal, Steven Sossa*



*From Left To Right; Jose Domingo Guerra, Jimena Bernal, Roberto Bernal, Andres Bernal, Francisco Monsalve, Steven Sossa, Lina Carmona*

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## Heat Treating Technologies Update

Last week we had a news item about commercial heat treater Heat Treating Technologies in Lima, Ohio adding another batch IQ furnace. The press release we received mentioned a complete batch IQ line with an estimated value of \$3 million USD. At the time we suggested that perhaps this figure was incorrect. We received this very polite note from the company with these comments. We are very happy to mention this and impressed by the growth of the company. **May 3, 2018** *"You are correct in your assumption that the story was incorrect and we appreciate you noting so on your website! We have received one 36 x 72 Surface Combustion batch furnace and will be installing one additional draw furnace and 1 spray*

wash. We will be receiving 2 more 36 by 72 batch furnaces over the next 2 months in addition to the draw and spray wash. When all is said and done we will have 8 batch furnaces, 6 draw furnaces and 4 spray washes. The end result is that we have doubled our capacity over the past three years. Regards, Amberly Deibel”



**Heat Treating Technologies Adding Batch IQ.** Commercial heat treater Heat Treating Technologies of Lima, Ohio (owner Rick Diebel) is adding yet another Batch IQ furnace to the 8 the company already has as we can see below. With all due respect to everybody involved we believe that somewhere along the line this story got slightly distorted as we have yet to see a batch IQ line worth \$3 million USD. **April 25, 2018**

*“Business is good for an Allen County industry as they’re investing millions into their company. Heat Treating Technologies on East 4th Street, getting a delivery that will meet the demand they have been facing. At a cost of 3-million dollars, a new draw furnace and quench tank is a big step for the company that started at this location back in 1993. They see the investment as a good move with the quality workforce that they have and the increasing demand for their services. “We provide heat treating services and what that means is that it’s a thermal process that we put the steel through that makes it harder and more durable in cars, automotive parts, agriculture, trucking,” explained Amberly Deibel, Heat Treating Technologies. Deibel says the expansion will bring with it at least 10 new jobs.”*

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## **Fred Hamizadeh, American Axle & Manufacturing**

We have always considered American Axle & Manufacturing to be one of the largest captive heat treaters in North America and consequently one of the larger ones in the world since they are a global company. This would make Fred Hamizadeh, who was Senior Manager, Heat Treating – Driveline Manufacturing Services for the company a very influential individual in the heat worldwide heat treating industry. His name comes up today because we see that he recently became a Director for the company. What exactly this means we aren’t sure but because of Fred’s presence in the industry we feel this change is worth mentioning. **May 3, 2018**

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## Ion Heat, Colombia, South America

Compared to builders of batch IQ furnaces (sealed quench), vacuum furnaces or even mesh belt furnaces the number of builders of Plasma (Ion) Nitriding furnaces is very short-off the top of our heads we can only think of a handful, virtually all being based in Europe. An exception to this is Ion Heat a relatively new company which is based in Colombia, South America. In 2008 commercial heat treater TRATAR with plants in Peru and Colombia, started an R & D project with the goal of developing a simple, dependable Plasma nitriding system. After several years of testing Ion Heat was formed in 2012 and the end result is the company has a number of systems around the world including North America, South America and Asia. Ion Heat now has almost 50 employees and while best known for their Nitriders the firm also builds atmosphere furnaces, furnaces for third parties and is involved in a large vacuum furnace project. This photo shows part of the Ion Heat team as we saw them this week. *May 2, 2018*



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## Picture Time

From time to time we reach into our photo archives and see what we can pull out in the way of interesting photos of the heat treat industry from years gone past. This is what we dug out today. *May 2, 2018*



*Gord Montgomery on the left with Ron Prattis and his son on the right. Ron has been with Bodycote in Kitchener, Canada for many years now-good man.*



*Bob Fincken, SSI, Kyle Favors, HTSU and David Carpenter of Southwest Specialty Heat Treat Inc., of Virginia*

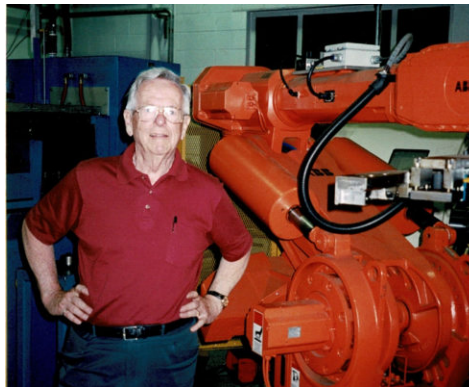


*Tony Wu who was with ALD at the time. Tony has been with Bodycote in China for a number of years now.*





*Esteban Aguilar Garcia of CRIO, Damian Bratcher, SSI and Eric Jossart of Atmosphere Engineering at Associated Spring in Monterrey, Mexico*



*Phil Dennis, Founder of H & S Heat Treating in Port Robinson, Ontario, Canada. Phil passed away a number of years ago but just hearing his name puts a smile on our face. A top notch individual.*

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# BATCH FOR SALE

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## ***Quick Jump To Items:***

- Item # B449** Air Atmosphere Box Furnace 2,000 F
  - Item # B448** Tip Up Furnaces (3 Available)
  - Item # B447** Surface Combustion Batch IQ Furnace
  - Item # B446** Surface Combustion "Super 30" Batch IQ Furnace
  - Item # B445** Surface Combustion "Super 36" Furnaces (3 available)
  - Item # B444** BOREL Furnace 550 °C
  - Item # B443** SOLO Heat Treatment Line
  - Item # B442** SOLO Quenching Machine
  - Item # B441** GM Batch IQ with Top Cool
  - Item # B439** Surface "Super 36" Allcase
  - Item # B438** Holcroft Batch IQ Furnace
  - Item # B437** Ipsen Recirculating Box Furnace
  - Item # B436** 36" x 60" Pit Gas Nitrider
  - Item # B426** Plasma Nitriding Unit 1000 kg Capacity
  - Item # B425** Box Furnace 2000 F
  - Item # B418** Lindberg High Temperature Oven 36" Cubed
  - Item # B415** J.L. Becker Car Bottom 1800 F
  - Item # B399** Car Bottom Furnace 10' x 12' x 8'
  - Item # B398** Sauder Batch IQ Line 24" x 24" x 36"
  - Item # B397** "Lift-Off" Atmosphere Box Furnaces (2)
  - Item # B374** Atmosphere Box Furnace 2100 F
  - Item # B352** Pacific Scientific Box Furnace
-

## ITEM # B449

### AIR ATMOSPHERE BOX FURNACE 2,000 F

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

**Asking \$60,000 USD.**



## ITEM # B448

### TIP UP FURNACES (3 AVAILABLE)

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

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





## ITEM # B447

### SURFACE COMBUSTION BATCH IQ FURNACE

**Surface Combustion Batch IQ Furnace.** Working dimensions of 30" wide X 48" deep X 24" high. Built in 1979. Gas fired and running endo atmosphere. Set up for Carbo Nitriding with ammonia and Carburizing. Control panel new in 2005, SSI controls. New alloy and brickwork in 2016. Comes with SBS quench oil cooler and SBS trash can oil filter. Installed and in operation. Very good condition.

**Asking Price: 50,000 USD**



## ITEM # B446

### SURFACE COMBUSTION "SUPER 30" BATCH IQ FURNACE

**Surface combustion batch IQ furnace.** Working dimensions of 30" X 48" X 30". Gas fired. Fairly new SSI controls, furnace is set up for Carbo Nitride and carburizing. Gas fired with and currently running endothermic atmosphere. 2500 gallon quench tank. Dual quench cylinders. Alloy was last replaced and brick work repaired in 2016. It is currently in operation and has no issues. Included are a SBS oil cooler and SBS trash can oil filter. Furnace uses a rear handler in the furnace to transfer loads in and out. Very good condition.

**Asking Price: 85,000 USD**



## ITEM # B445

### SURFACE COMBUSTION “SUPER 36” FURNACES (3 AVAILABLE)

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



## ITEM # B444

### BOREL FURNACE 550 °C

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

**Price on request [jordan@themonty.com](mailto:jordan@themonty.com)**



## ITEM # B443

### SOLO SWISS HEAT TREATMENT LINE

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

**Price on request** [jordan@themonty.com](mailto:jordan@themonty.com)



## ITEM # B442

### SOLO QUENCHING MACHINE

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

mounting and commissioning by the manufacturer (SOLO). Located in France. Good condition. All manuals included.

**Price on request [jordan@themonty.com](mailto:jordan@themonty.com)**



## ITEM # B441

### GM BATCH IQ WITH TOP COOL

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

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

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

**Asking Price: \$150,000.00**





## ITEM # B439

### SURFACE "SUPER 36" ALLCASE

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

**Please call for pricing.**



## ITEM # B438

### HOLCROFT BATCH IQ FURNACE LINE

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

**Asking \$125,000 USD for everything.**



## ITEM # B437

### IPSEN RECIRCULATING BOX FURNACE

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

**Asking Price: \$39,500.00**



## ITEM # B436

### 36" X 60" PIT GAS NITRIDER

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

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



## ITEM # B426

### PLASMA NITRIDING UNIT 1000 KG CAPACITY

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

**Asking 98.000 Euro.** Located in Turkey.



## ITEM # B425

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

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

**Asking \$85,000 USD.**



## ITEM # 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. 240V, 3-phase 60hz. Honeywell Truline round chart recorder, model DR45AT and Watlow F4 digital control. Air operated vertical lift front door. Heating is provided by Lindberg MPH heating elements. Recirculating fan is mounted in the bottom. Furnace can be used for hardening, carburizing, carbo-nitriding, normalizing, and annealing. Includes retort box measuring 34x34x32 with gas connection. Excellent condition. Only used in the jet aviation industry by 1 owner. The retort was purchased with the furnace but was not actually used. Retort is brand-new. Unit has been well taken care of. Also included is a Clark Hardness Tester, Model CPT.

**Asking \$21,000 USD for both.**



## ITEM # B415

### J.L. BECKER CAR BOTTOM

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



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

**Asking Price: \$95,000.00 USD.**



## ITEM # B399

### CAR BOTTOM FURNACE

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

**Asking \$85,000 USD.**



## ITEM # B398

### SAUDER BATCH IQ LINE

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

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

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

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

Quench: 106" x 10'H x 72"

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

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

Misc. skids, flow panel, SBS, spare parts

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



## ITEM # B397

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

**"Lift-Off" Atmosphere Box Furnaces (2 available).** Manufactured by Drever. Effective working dimensions of 10'6" Wide x 35' Long x 6' High. Gas fired-12,000,000 BTU/Hr. Max. Operating temperature of 1450F. Description; Ceramic Fiber Lined, Vertical Rising Atmosphere "Lift-Off" Furnace complete with (26) U-Shaped Radiant Tubes, North American Burner System, (4) Top-Mounted Alloy Circulating Fans, (4) Zones of Control, Stationary Hearth, "Knife-Edge" Atmosphere Seal, and Hydraulic Lifting Cylinders on each end of furnace. Furnace is capable of 100,000 lb. loads. Instrumentation; Free-Standing Control Panel with Honeywell PLC Digital Temperature Controller, and Honeywell Flame Safety System. Very good condition. Overall dimensions of 15'11" Wide x 41' Long x 13'6"

High. Approximate weight 70,000 pounds. Units each can hold up to 100,000# loads and were used prior for tempering/normalizing wire rod and bar stock. Both of these have top mounted recirculating fans and are "atmosphere capable", good for FNC work.

**Asking \$325,000 USD each.**



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### 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.**



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### ITEM # B352

## PACIFIC SCIENTIFIC BOX FURNACE

**Pacific Scientific Box Furnace.** Working dimensions of 72" wide X 120" long X 48" high, Gas fired radiant tube, maximum operating temperature of 2050F. Air operated vertical lift

door, fiber lines, new refractory piers (12), hi-temp horizontal radiant tubes (6 above, 6 below), full safeties, side exhaust guard. Free standing control panel-rewired panel with Honeywell Tru-Trend circular chart and Honeywell digital controllers and overtemp. Atmosphere capable. Comes with spare radiant tubes. Very good condition.

**Asking \$70,000 USD.**





# CONTINUOUS FOR SALE

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## ***Quick Jump To Items:***

- Item # C338** Cast Link Belt 3000 lbs/hr
- Item # C337** BTU-TCA Series Belt Conveyor Furnace
- Item # C335** Compact Belt Furnace
- Item # C334** Press Quenching Cell
- Item # C331** Lindberg Pusher Furnace
- Item # C330** Mesh Belt Furnace Line
- Item # C329** CI Hayes Atmosphere Belt Furnace
- Item # C328** CI Hayes Atmosphere Belt Furnace
- Item # C327** Rogers Engineering Continuous Brazing Furnace
- Item # C325** Sinterite Mesh Belt Furnace 1180 C
- Item # C324** C.I. Hayes Mesh Belt Furnace 12" Wide Belt
- Item # C323** Aichelin Cast Link Furnace Line 750 lbs/hr
- Item # C322** Surface Combustion Rotary Hearth Line
- Item # C321** Austempering System 500 lbs/hr
- Item # C319** CI Hayes High Temperature Pusher Furnace
- Item # C317** CI Hayes High Temperature Pusher Furnace
- Item # C314** Roller Hearth (Atmosphere) 4800 lbs/hr
- Item # C308** AFC Mesh Belt Furnace 54" Wide Belt
- Item # C301** Cast Link Belt Line 4000 lbs/hr
- Item # C296** C.I. Hayes High Temperature Tube Furnace
- Item # C283** Rotary Hearth Furnace System
- Item # C269** CI Hayes Mesh Belt Furnace 12" Wide Belt
- Item # C265** Sunbeam Pusher Carburizer 3000 lbs

## ITEM # C338

### CAST LINK BELT 3000 LBS/HR.

**Cast Link Belt 3000 lbs/hr.** Built by Electric Furnace Company in the early 80's. The line consists of a loader, furnace, quench and temper. Maximum operating temperature is 1700F with 2 zones of control. Honeywell instruments. Oil or Polymer quench with a few spare tubes available as well. 36" wide belt for furnace and 48" wide belt for temper. High heat length is 25' and temper length is 24'. Capable of 3000 lbs/hr.

**Asking 50,000.00 USD**



## ITEM # C337

### BTU-TCA SERIES BELT CONVEYOR FURNACE

**BTU-TCA Series Belt Conveyor Furnace.** Manufactured by BTU this is a mesh belt furnace with a metallic muffle and a 120" heating chamber. 4" clearance above the belt. 18" wide belt, 10 Zones of control. Maximum operating temperature of 1100C. 24" long loading/unloading tables. OAL: 29.0 Ft. Microprocessor controls. 32.5 KW, 440/3/60. Overtemp. Protection. Water cooling sections. N2 curtains front and back with burn-offs. Protective atmosphere: DA with N2 purge. Very good condition.

**Asking \$16,500 USD or Best Offer.**



BTU	International	
	N. BELLERICA, MA USA 01862	
SERIAL	806A-1	
MODEL	BTU-10-1200C	
ATMOSPHERE	EXPLOSIVE	
VOLT	440	
AMP	37	
KVA	16.5	
	IN RUSH	
AMP	SEC.	
MAX TEMPERATURE	1100°C	
SHIPMENT DATE	08/01/80	
Some or all of the following patents may apply to this furnace:		
3,347,100	3,314,788	3,768,210
3,866,046	3,861,400	3,768,210
3,811,476	3,866,046	3,768,210
3,866,046	3,714,300	3,768,210
3,866,046	3,866,046	3,866,046

## ITEM # C335

### COMPACT BELT FURNACE

**Compact belt furnace** 321-7-90 6677 1000°C. Built by Solo of Switzerland this is a SOLO 321-7-90 model. This furnace was manufactured in 1990. Composition: Loading frame, heating part with frame, cooling part with frame, unloading frame, driving system, conveyor belt, NH3 cracker 3m3/h, distribution for treatment and cabinet gas, operator panel. Dedicated for annealing under cracked ammonia, brazing and hardening. Max. temperature of 1000 °C Heated length: 900 mm, cooled length: 1500 mm, channel section: 80 x 40 mm, Main voltage: 3 x 380 V – 50 Hz / TN, power input: 10,5 kW, gas generated: 75% H2 and 25% N2 (NH3), effective height with belt: 30 mm, conveyor belt width: 70 mm, external dimensions: L 5300 mm x l 800 mm x H 1250 mm. Perfect condition, ll manuals included. Located in France.

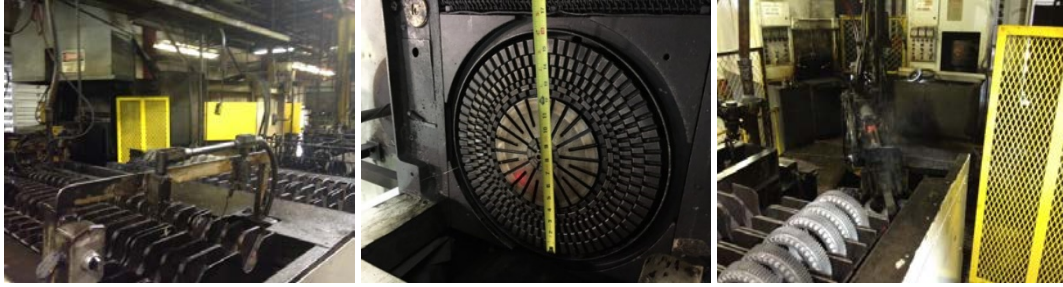
**Price on request [jordan@themonty.com](mailto:jordan@themonty.com)**



## ITEM # C334

### PRESS QUENCHING CELL

**Press Quenching Cell.** Complete Press Quenching cell which consists of a rotary hearth furnace, two Gleason press quench units a robot and an automatic unload table. Manufactured by QPS (Quench Press Specialists) the rotary hearth furnace is electrically heated with a 12' working diameter, is brick lined and has an endo flow panel and a single door. The two press quenches are Gleason Model 529 units. Maximum diameter of parts 10 ½", maximum height 4". Total pressure 49,500 pounds. Floor space required 73.5" X 130", height 90". Net weight 8,500 pounds. Everything was manufactured in the late 1980's. System is complete and in good condition. Vendor is asking \$155,000 USD for everything but will sell unit individually. Videos of the system in operation are available upon request.



## ITEM # C331

### LINDBERG PUSHER FURNACE

**Lindberg Pusher Furnace.** Lindberg pusher furnace S/N JW030855A. Gas fired with 16 Burners, Eclipse TFP-030, 1,415,000 BTU/Hour. Maximum operating temperature of 1750F. Brick Lined Hearth + Mineral Fiber walls and ceiling. Currently used for annealing but also set up for atmosphere heat treating. (4) Zones of Control (3 heating and one cooling), Burners on top, Air cooled and Water cooled. Uses 24" X 48" trays. 1 tray in entry purge, 5 in high heat zone, 1 in transition zone, two in air cooling zone, and one in water cooled zone. As set up for annealing at 1550F the furnace is currently capable of 2400 pounds per hour. Includes chiller and spare burner tubes. OVERALL DIMENSIONS:

High Heat Chamber: 44.5" Wide x 43" High x 270" Long.

Transition Chamber: 36" Wide x 40.5" High x 35" Long.

Air Cooling Zone: 50" Wide x 62" High x 96" Long.

Water Cooling Zone: 52" Wide x 40" High x 68" Long.

Currently installed but not in operation. Complete and in good condition.

**Asking \$49,000 USD.**



## 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.**



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### 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**



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### 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 (N<sub>2</sub>, H<sub>2</sub>). Footprint: 9'W x 54'L (90'L Belt), 10'H + ductwork. Extra set of cooling muffles. Please call for pricing.



## ITEM # C323

### AICHELIN CAST LINK FURNACE LINE

**Aichelin Cast Link Furnace Line.** The line consists of a loading table, cast link belt hardening furnace, oil quench, cross conveyor, post wash and two continuous tempering furnaces. High belt is 24" wide X 300" long with a capacity of 336 Kg/h. Nitrogen/Methanol atmosphere. Electrically heated 300 kW. Operating temperature of 1650F. Quench oil tank holds 7,000 litres. Air/oil quench oil cooler. Post wash has oil skimmer. Both tempering furnaces are electrically heated, 57 kW each. Belt widths 20" X 250" long. Maximum



operating temperature of 575F. Installed in 2005 and currently used for automotive bearings. Complete installed and in operation until March 2017. Excellent condition.

**Best offer.**



## ITEM # C322

### SURFACE COMBUSTION ROTARY HEARTH FURNACE LINE

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

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



## ITEM # C321

### AUSTEMPERING SYSTEM

**Austempering System.** Ipsen Model SG500, S/N52822. Shaker hearth style hardening furnace is capable of 500 pounds/hour, 1850F operating temperature, gas fired 800,000



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

**Asking \$20,000 USD or best offer.**

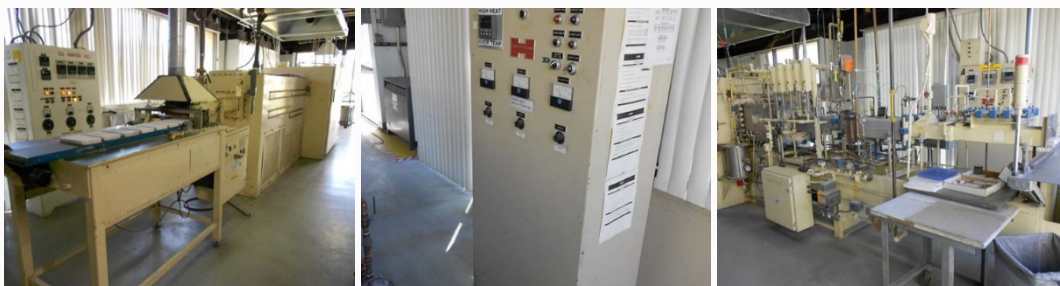


## ITEM # C319

### CI HAYES HIGH TEMPERATURE PUSHER FURNACE

**CI Hayes High Temperature Pusher Furnace.** C.I. Hayes model MY-040848-94PH high temperature pusher furnace. 4" opening above the hearth, 8" tray width. Max. Temp: pre-heat 1100 C, High Heat 1700 C. 94" long preheat, 1 control instrument/1 zone, 15 KW@440/3/60, metallic heating elements. 48" high heat, 1 instrument, 3 control zones, 45 KW@440/3/60, molybdenum heating elements. 48" metallic front tunnel with nitrogen curtains and burn off. 3 cooling sections. each 36" long, 1 section is insulated and all are water jacketed. Rear tunnel with nitrogen curtains and burn off. Multiple atmosphere inlets, for hydrogen/dissociated ammonia with nitrogen purging. Pusher screw drive. Atmosphere bubbler. High heat chamber recently rebuilt. Overall Dimensions; 6'H x 4'-6"W x 39'L (Approx.)

**Asking \$100,000 USD.**



## ITEM # C317

### CI HAYES HIGH TEMPERATURE PUSHER FURNACE

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

**Asking \$110,000 USD.**



## ITEM # C314

### ROLLER HEARTH FURNACE (ATMOSPHERE)

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

**Asking \$225,000 USD.**



## ITEM # C308

### AFC MESH BELT HARDENING FURNACE

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

**Asking \$75,000 USD.**



## ITEM # C301

### CAST LINK BELT QUENCH AND TEMPER LINE

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



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

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

The sequence of this furnace is as follows:

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

Includes:

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

Very good condition, available immediately.

**Asking \$650,000 USD.**



**ITEM # 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 1700°C, 10.5 KW, Single Zone Control



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

**Asking Price \$21,000 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 solid state digital readout controller and overtemp for each of three zones, includes volt and amp meters. Full alloy muffle in hot zone. 20' long sealed water jacketed cooling. Globar heating elements over and under the belt. (3) zones of control. (4) argon flowmeters. Dayton AC inverter provides adjustable belt speed. Updated SCR controls. Muffle and belt are new. Very good condition.

**Asking \$39,000 USD.**



## ITEM # C265

### SUNBEAM PUSHER CARBURIZER

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

**Asking \$40,000 USD.**



# DRAW/TEMPER FOR SALE

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

[Contact Us](#)

## ***Quick Jump To Items:***

**Item # T353** Williams Temper Furnace

**Item # T351** Mesh Belt Temper Furnace

**Item # T350** Sunbeam Mesh Belt Temper

**Item # T349** Recirculating Box Type Draw Furnace

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

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

**Item # T341** Temper Furnace

**Item # T340** Safed/Borel Annealing Furnace

**Item # T339** Box Tempering Oven

**Item # T336** Mesh Belt Temper Furnace 48" Wide

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

**Item # T325** 3-Station Despatch Temper Furnace

**Item # T321** Grieve Conveyor Oven

**Item # T320** Pifco Conveyor Oven

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

**Item # T303** Pifco Temper Furnace

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

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

## ITEM # T353

### WILLIAMS TEMPER FURNACE

Williams Temper Furnace. Indirect gas fired, 750C / 1380F max temp., 36" wide x 19' heated length, chain drive mesh belt furnace. No atmosphere. In good working condition.

**Asking 29,000 USD**



## ITEM # T351

### MESH BELT TEMPER FURNACE AVAILABLE

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

**Asking \$20,000 USD.**



## ITEM # T350

### SUNBEAM MESH BELT TEMPER

**Sunbeam Mesh Belt Temper.** Manufacturer: Sunbeam. Inside Dimensions: 8" x 36" wide belt x 14' heating. Heated: Gas Fired, (4) North American nozzle mix burners. Temperature:



1250 deg.F. Model Number: F-246-67. Serial Number: 35214. Temperature Controls: Free standing enclosed panel. Solid state digital readout indicating controller & overtemp. Description & Features: Brick lined. Tight weave mesh belt. Four side mounted burners fire above the work zone. Two 1300 deg. Garden City top mounted recirculating fans. Complete combustion controls and safeties. Condition: Very Good, needs minor brick repairs

**Asking Price: \$35,000.00**



## ITEM # T349

### RECIRCULATING BOX TYPE DRAW FURNACE

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

**Asking Price: \$39,500.00**



## ITEM # T343

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

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

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

**Asking \$49,900.00 USD.**



## ITEM # T342

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

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

**Asking \$16,500 USD.**



## ITEM # T341

### TEMPEL FURNACE

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

**Asking \$91,000 USD.**



## ITEM # T340

### SAFED/BOREL ANNEALING FURNACE

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

**Price on request.**

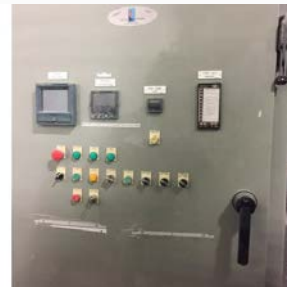


## ITEM # T339

### BOX TEMPERING OVEN

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

**Asking price is \$72,500 USD.**



## ITEM # T336

### MESH BELT TEMPER FURNACE 48" WIDE

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



**Asking \$29,500 USD.**



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### 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.**



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### ITEM # T325

#### **STATION DESPATCH TEMPER FURNACE**

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

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



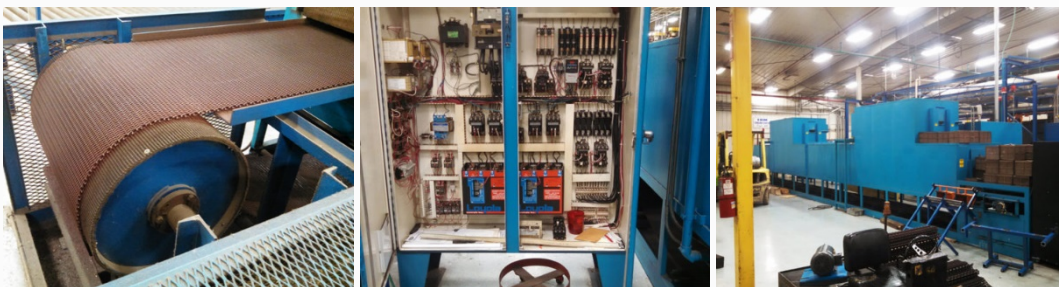
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### ITEM # T321

## 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 condition.

**Asking Price: \$42, 000 USD.**



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### ITEM # T320

## PIFCO CONVEYOR OVEN

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

**Asking Price: \$59,000 USD.**



**ITEM # T318**

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

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

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

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

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

**Asking Price: \$72,500 USD each.**





## ITEM # T303

### PIFCO TEMPER FURNACE

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

**Asking Price: \$38,000 USD.**



## ITEM # T290

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

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

**Please call for pricing.**





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## ITEM # T286

### LINDBERG BOX TEMPER

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

**Asking Price: \$65,000 USD**



# GENERATORS FOR SALE

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

[Contact Us](#)

## ***Quick Jump To Items:***

**Item # G201** Ammonia Dissociator 250 SCFH

**Item # G198** Endothermic Generator 3000 CFH

**Item # G197** Ammonia Dissociator 1000 CFH

**Item # G196** Surface Combustion 5000 CFH Endo Generator

**Item # G189** Surface Combustion 2400 CFH Endo Generator

**Item # G178** Ammonia Dissociators 3000 CFH

**Item # G176** Surface "Multi-Bottle" Endo Generators

**Item # G173** Lindberg Endo Generator 4500 CFH

**Item # G169** Gasbarre Endo Generator 3000 CFH

## **ITEM # G201**

### **AMMONIA DISSOCIATOR 250 SCFH**

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

**Best Offer**



## ITEM # G198

### 3,000 CFH ENDOTHERMIC GENERATOR

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

**Asking \$22,500.00 USD.**



## ITEM # G197

### AMMONIA DISSOCIATOR

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

**Asking Price \$11,500.00 USD.**

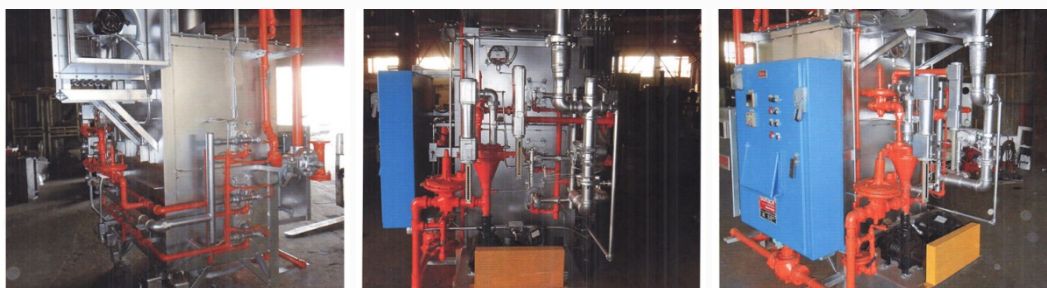


## ITEM # G196

### SURFACE COMBUSTION 5000 CFH ENDO GENERATOR

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

**Asking \$31,500.00 USD.**



## ITEM # G189

### SURFACE COMBUSTION 2400 CFH ENDO GENERATOR

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

**Asking \$59,000 USD.**



## ITEM # G178

### AMMONIA DISSOCIATORS (4 AVAILABLE)



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

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

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

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

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

**Asking \$29,500.00 USD each.**



**ITEM # G176**

## **SURFACE "MULTI-BOTTLE" ENDO GENERATORS**

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

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

**Asking \$75,000 USD.**



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### 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.**



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### ITEM # G169

### GASBARRE/SINTERITE FURNACE DIVISION ENDO GENERATOR

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

meters include: Natural Gas 0-1000 CFH, Air 0- 2500 CFH, (3) Mixed Gas 0-1500 CFH and Endo 0- 3500 CFH. Step down transformer for reduced voltage to the heating elements. Electrically heated 3 retort generator. Refractory lined shell with vertically mounted retorts. Total of twelve (12) silicon carbide heating elements, 6 on each side are mounted through the chamber for good uniform heating of the alloy retorts. The natural gas and air pass through a Waukee "mixer" valve then into the Waukee gas pump. Mixed gas enters the 3 "mixed gas" flow meters, through the 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.

[Contact Us](#)

## ***Quick Jump To Items:***

**Item # I176** Radyne Scanner and Power Supply

**Item # I175** Inductoheat /Lepel Induction Power Supply

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

**Item # I164** Ajax Tocco Induction Power Supply Unused

**Item # I160** Ajax Tocco Power Supply Unused

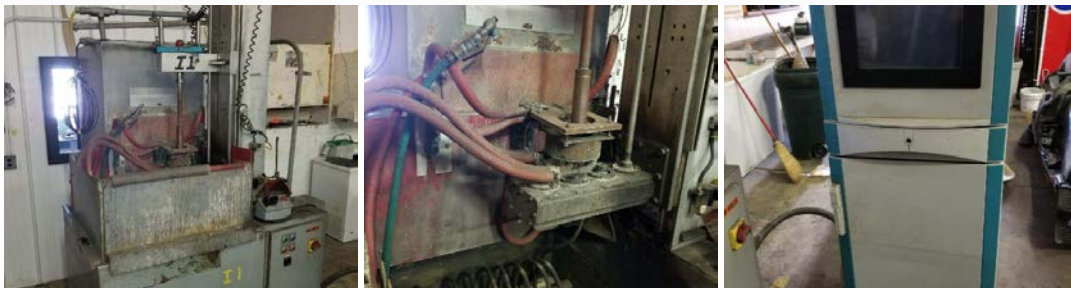
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## ITEM # I176

### RADYNE SCANNER AND POWER SUPPLY

**Radyne Scanner and Power Supply.** Built by Radyne this is a Model 125TC10 unit, Serial Number 93118. 125 kw, 7-11 khz. Scanner has a travel length of 48". Heat Stateion is a model #14226.

**Asking \$9,900.00 USD**



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## ITEM # I175

### INDUCTOHEAT /LEPEL INDUCTION POWER SUPPLY

**Inductoheat /Lepel Induction Power Supply.** This is a Lepel/ Inductoheat SP5-40 kW, 3/10 kHz SCR type induction heating power supply with a separate Heat Station (I believe this could be operated at 3 kHz but the heat station is currently arranged for 10 kHz). This



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

**Asking \$19,500.00 USD**



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### ITEM # I174

## AJAX/TOCCO INDUCTION HEATING POWER SUPPLY & HEAT STATION

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

**Asking \$129,000 USD.**

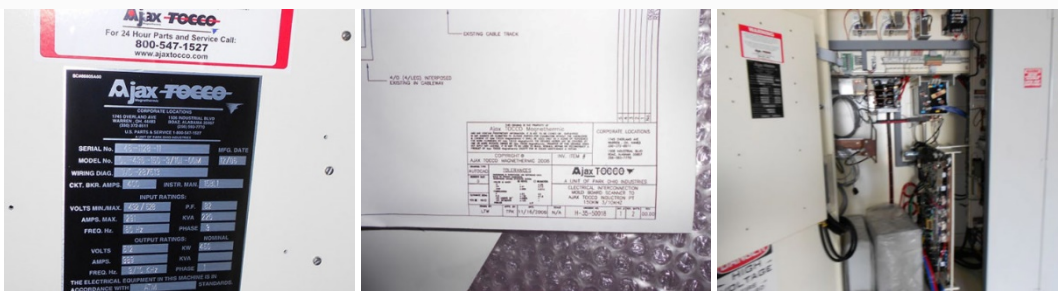


## ITEM # I164

### AJAX TOCCO INDUCTION POWER SUPPLY

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

**Asking \$33,000 USD.**

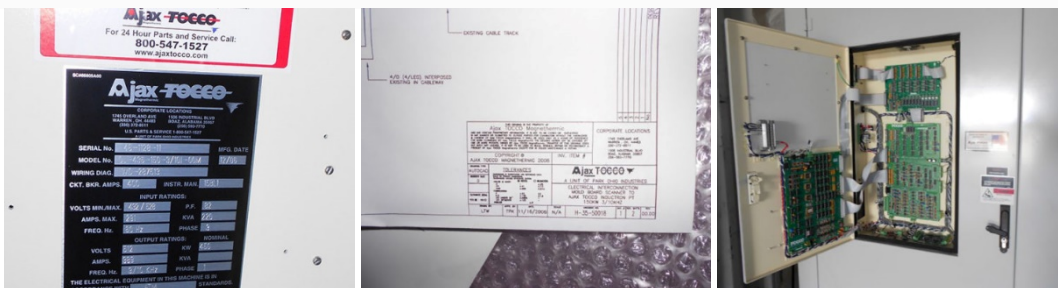


## ITEM # I160

### AJAX TOCCO POWER SUPPLY (UN-USED)

**Ajax Tocco Power Supply (un-used).** Ajax Tocco Inductron PT power supply, capacity: 450kW. Frequency: 3-10 kHz. Output Voltage: 400 \*. Year of manufacture: 2006. This unit was never installed and is unused. \*Price quoted from Ajax Tocco to convert output voltage from 400 to 800 including parts and labor is \$15,230. New this unit was \$86,000 USD, [http://www.ajaxtocco.com/applications/documentlibrary/Inductron%20PT\\_092003.pdf](http://www.ajaxtocco.com/applications/documentlibrary/Inductron%20PT_092003.pdf)

**Asking \$39,000.00 USD.**



# LAB EQUIPMENT FOR SALE

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## ***Quick Jump To Items:***

**Item # L8** Clark Micro Hardness Tester

**Item # L7** Leco Micro Hardness Tester

**Item # L3** Laser Diffraction Particle Size Analyzer

**Item # L1** Detroit Testing Brinell Hardness Tester

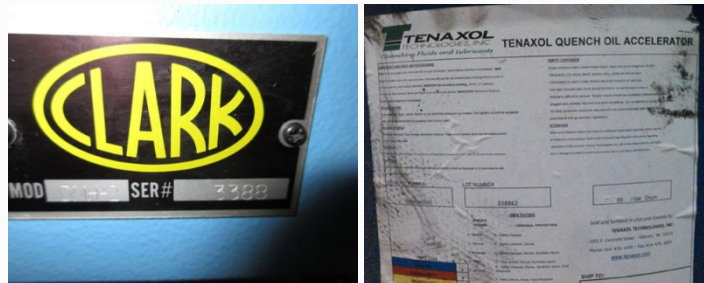
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## ITEM #L8

### 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.



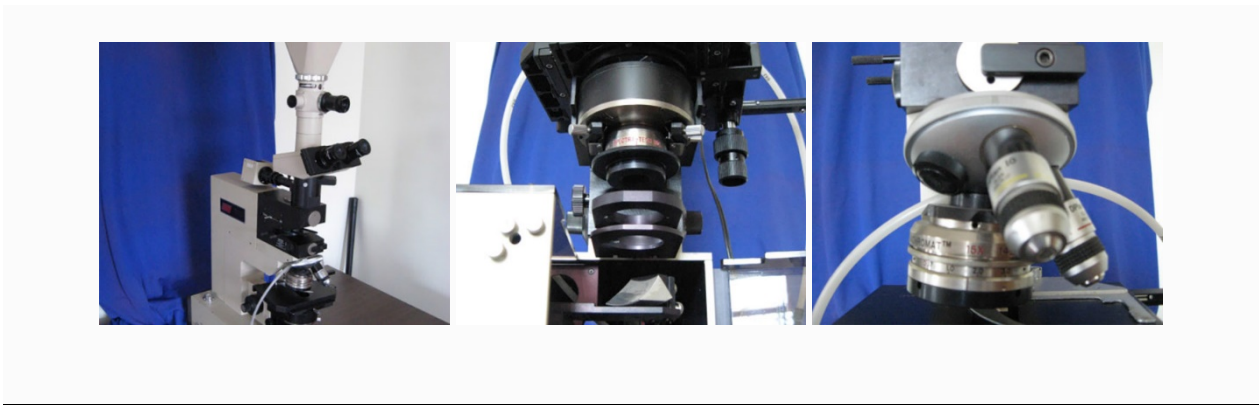
## ITEM # L1

### SPECTRA-TECH 0044-003 INFRARED MICROSCOPE

**Spectra-Tech 0044-003 Infrared Microscope.** Model WHK 10X 201, Reflected & Transmitted light, multiple objectives, Polaroid 4x5 attachment.

**\$6,500.00 USD.**





# MISCELLANEOUS FOR SALE

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

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## ***Quick Jump To Items:***

- Item #M420** SBS "Quench Airs", (9 available)
- Item #M417** Soluble Oil Dunk Tank
- Item #M416** Wheelabrator 6' Diameter
- Item #M415** Surface Combustion Parts Washer
- Item #M414** Vacuum Residual Gas Analyzer (3 available)
- Item #M413** Gleason Press Quench Units (2 available)
- Item #M412** Atmosphere Engineering "Endoinjector"
- Item #M411** SBS Quench Oil Coolers (2 available)
- Item #M408** Surface Combustion Power Loading Table 30" Wide
- Item #M406** Surface Combustion Parts Washer
- Item #M400** Nitrogen Generating System 99.999 Purity
- Item #M396** Surplus Cast Link Belt HT Material
- Item #M381** Water Cooling System
- Item #M380** Bronco Wheelabrator 36" Meshbelt
- Item #M370** SBS Quench Airs 3 Fan Units
- Item #M366** Wheelabrator Rubber Belt Tumblast
- Item #M363** SBS Large 3 Fan Unit
- Item #M348** Ipsen Dunk/Spray Washer 36" x 48" x 24"
- Item #M346** SBS Quench Air Single Fan Unit
- Item #M341** AFC Charge Car 36" x 48" Tray
- Item #M334** Berg Water Chiller Nearly New
- Item #M314** Holcroft Dunk/Spray Washer 24" x 24" x 36"

## ITEM #M420

### SBS "QUENCH AIRS", (9 AVAILABLE)

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



## ITEM #M417

### SOLUBLE OIL DUNK TANK

#### **Soluble Oil Dunk Tank**

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

**Asking \$8,000 USD.**



## ITEM #M416

### WHEELABRATOR 6' DIAMETER

**Wheelabrator 6' Diameter.** 6" Diameter table blast wheelabrator. 30 HP belt drive. Installed and in use until March 2018. Recently reconditioned with rebuilt auger. Brand

New wheel and wheel housing. Good controls with pneumatic operated control and timer to shut down wheel and notify operator when cycle is complete. Very reliable machine in excellent condition. Table is mounted on the door with full access for overhead crane.

**Asking \$75000.00 USD.**



### ITEM #M415

## SURFACE COMBUSTION PARTS WASHER

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

**BEST OFFER**



### ITEM #M414

## VACUUM RESIDUAL GAS ANALYZER (3 AVAILABLE)

**Vacuum Residual Gas Analyzer (3 available).** Pfeiffer Vacuum PrismaPlus QMG220 Compact Mass Spectrometer, Mass Range 1-200 amu, Catalog # PT M06 211 111, Residual Gas Analyzer. Unused these were new in Dec. 2015 and are still in original factory packaging. Warranty expired, but still factory supported. Each set consists of the following;  
1. 1 Each, Quadrupole electronics QME220, P/N PTM28612



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

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

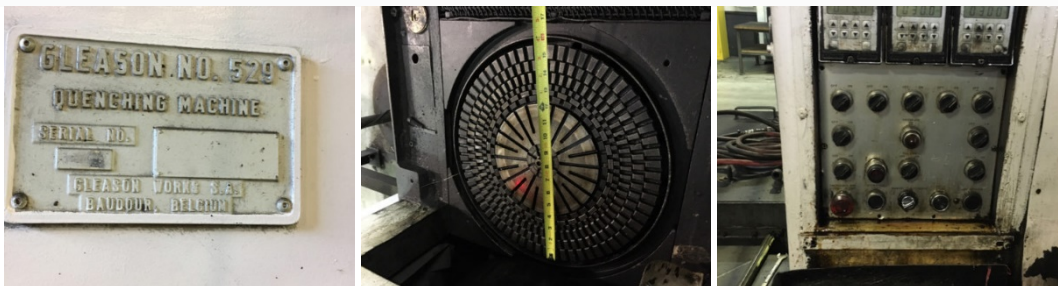


## ITEM #M413

### GLEASON PRESS QUENCH UNITS (2 AVAILABLE)

**Gleason Press Quench Units (2 available).** Available are two Gleason press quenching units Model 529. Maximum diameter of parts 10 ½", maximum height 4". Total pressure 49,500 pounds. Floor space required 73.5" X 130", height 90". Net weight 8,500 pounds.

**Units are complete and ready to go. Best offer.**



## ITEM #M412

### ATMOSPHERE ENGINEERING "ENDOINJECTOR"

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

**Asking \$6,500.00 USD.**



## ITEM #M411

### SBS QUENCH OIL COOLERS (2 AVAILABLE)

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

**Asking \$13,500.00 USD Each.**



## ITEM #M408

### SURFACE COMBUSTION POWER LOADING TABLE 30" WIDE

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

**Asking Price: \$1,000 USD**



## ITEM #M406

### SURFACE COMBUSTION PARTS WASHER

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

## ITEM #M400

### NITROGEN GENERATING SYSTEM

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

**Asking \$82,500.00 USD.**



## ITEM #M396

### SURPLUS CAST LINK BELT

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

**Please call for pricing – Gord: 905.271.0033**



## ITEM #M381

### WATER COOLING SYSTEM

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

**Asking \$7,500.00 USD.**





## ITEM #M380

### WHEELABRATOR - BRONCO

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

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



## ITEM #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 #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.**



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### 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.**



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### ITEM #M314

### HOLCROFT DUNK/SPRAY WASHER

**Holcroft Dunk/Spray Washer.** Model GPWS 24-36-24. Electrically heated, 480/3/60/50 amps. Working dimensions of 24" wide X 24" high X 36" deep. External dimensions of 96"W X 143" high X 124" long (91" without skimmer attached). This is a standard



dunk/spray washer with 4 Warren Electric immersion heaters. Spray nozzles are arranged over and all sides of the wash area. Load height is 51" from floor to top of rollers. Wheel centres are 14-1/2". Controls are mounted and wired on the right hand side of the washer and includes all necessary pushbuttons and signal lights. There is a dunk cycle timer and spray cycle timer. A Honeywell UDC 2000 digital temperature controller controls wash temperature. Good condition. **Asking \$18,500.00 USD.**



# VACUUMS FURNACES FOR SALE

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

[Contact Us](#)

## ***Quick Jump To Items:***

- Item # VF337** Oil Quench Vacuum Furnace
- Item # VF336** C.I. Hayes Vacuum Furnace
- Item # VF335** ALD Vacuum Carburizing Furnace
- Item # VF334** Degussa Vacuum Hardening Furnace
- Item # VF333** Low Temperature Vacuum Tempering Furnace
- Item # VF332** IVA Vacuum Furnace 6 Bar
- Item # VF331** High Temperature Vacuum Furnace 2300 °
- Item # VF330** Surface 2-Bar Quench Vacuum Furnace
- Item # VF328** Abar Ipsen Model HS-26 Vacuum Furnace
- Item # VF327** Surface Combustion Vacuum Temper Furnace
- Item # VF326** Ipsen 924 Vacuum Furnace
- Item # VF321** Ipsen Vacuum Furnace
- Item # VF320** High Temperature Vacuum Furnace
- Item # VF319** Vacuum Induction Melting System
- Item # VF317** Twin High Temperature Vacuum HT Sintering Furnaces
- Item # VF316** AVS Vacuum Furnace 24" x 24" x 48"
- Item # VF315** AVS Vacuum Furnace (Rebuilt)
- Item # VF314** Ipsen Bottom Load Furnace 60" x 96"
- Item # VF313** Top Loading Vacuum Furnaces 2100 C
- Item # VF312** Vacuum Furnace 2400 C
- Item # VF307** Bottom Loading Vacuum Furnace 48" x 60"
- Item # VF299** Sunbeam Vacuum Furnace 36" x 120"
- Item # VF294** Vacuum Annealing Furnace 8" x 90"
- Item # VF289** Ipsen Vacuum Temper 12" x 16" x 24"
- Item # VF282** AVS Vacuum Debinding/Sintering Furnace
- Item # VF271** Sintering/De-Wax Furnace 1400 C

**Item # VF267** Semi-Continuous Titanium Diffusion Bonding Hot Press

**Item # VF266** Kinney 75 CFM Vacuum Pump

**Item # VF243** 35" Diffusion Pump

**Item # VF242** 35" Diffusion Pump

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## ITEM # VF337

### OIL QUENCH VACUUM FURNACE

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

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



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## ITEM # VF336

### C.I. HAYES VACUUM FURNACE

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

**Asking Price: \$20,000**



## ITEM # VF335

### ALD VACUUM CARBURIZING FURNACE

**ALD Vacuum Carburizing Furnace.** Loading Dimensions : Width 400 x Length 400 x Height 400 mm. Loading Capacity : 80 kg max. Cooling Fan Motor : 75 kW, 3000 rpm for 10 bar N<sub>2</sub>. Vacuum System : Leybold SV100 Mechanical Pump. Leybold WA501 Roots Pump. Leybold E250 Mechanical Pump. Leybold WA1001 Roots Pump. Vacuum Level :  $<5 \times 10^{-2}$  mbar. Leak Rate :  $<5 \times 10^{-3}$  mbar l/s. Heating Zone : 120 kW, 2 zones. Plasma Chamber : 60 kW, 1 zone. Diffusion Zone : 180 kW, 3 zones. Max. Temperature : 1250 °C (Heating chamber). Operating Temperature : 800-1100°C. Process Gases : Nitrogen, Methan, Argon, Hydrogen. Installed Power : 700 kVA, 3x400V 50 Hz. Manufacturing Year : 2002.

**Price: FOT/Germany : 75.000. Euro**



## ITEM # VF334

### DEGUSSA VACUUM HARDENING FURNACE

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



**Price : FOT / Germany Euro 60.000**



**ITEM # VF333**

### **LOW TEMPERATURE VACUUM TEMPERING FURNACE**

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

**Price : FOT/Germany Euro 28.000**



**ITEM # VF332**

### **IVA VACUUM FURNACE 6 BAR**

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

**Price : FOT/Germany Euro 28.000.**



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## ITEM # VF331

### HIGH TEMPERATURE VACUUM FURNACE 2300

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

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

**Asking \$19,950.00 USD**



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## ITEM # VF330

### SURFACE 2-BAR QUENCH VACUUM FURNACE

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

**Asking Price: \$119,000**



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**ITEM # VF328**

### **ABAR IPSEN MODEL HS-26 VACUUM FURNACE**

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



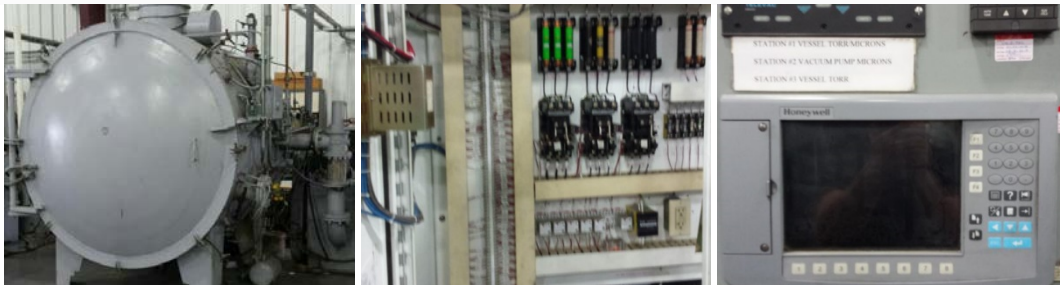
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**ITEM # VF327**

### **SURFACE COMBUSTION VACUUM TEMPER FURNACE**

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

**Asking Price: \$85,000 USD**



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**ITEM # VF326**

## **IPSEN 924 VACUUM FURNACE**

**Ipsen 924 Vacuum Furnace.** Ipsen VFC-924-R Vacuum Furnace. Working dimensions of 32" wide X 53" deep X 26" high. Maximum operating temperature of 2400F, recently surveyed from 1400-2000F at +-25F. Stokes vacuum pumps and Varian Diffusion pump. One zone of control. Honeywell controllers. Good operating condition, currently installed but not in use. 480 Volts.

**More details and asking price available upon request.**





## ITEM # VF321

### IPSEN VACUUM FURNACE

#### **Ipsen Vacuum Furnace:**

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

**Price: \$58,000 USD.**



## ITEM # VF320

### HIGH TEMPERATURE VACUUM FURNACE

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

**Asking \$100,000 USD for everything.**



## ITEM # VF319

### VACUUM INDUCTION MELTING SYSTEM

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

**Asking \$285,000 USD.**



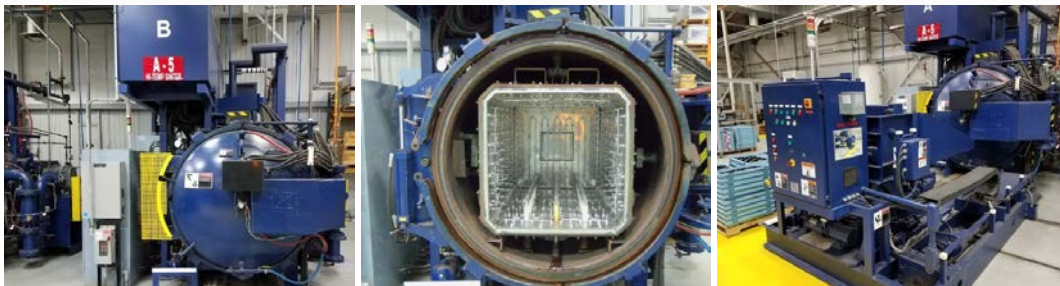
## ITEM # VF317

### TWIN HIGH TEMPERATURE VACUUM HT & SINTERING FURNACES

**Twin High Temperature Vacuum HT & Sintering Furnaces.** Two each Seco/Warwick Model V40-35/48 Vacuum Furnaces, 1500C (2732 F) Max. operating temperature, 1600C (2912F) burn-out temperature, Work Zones: 600mm x 650mm x 1200mm (23.6" x 25.6" x 47.2"), Design uniformity +/- 10C, but with elements on all 6 sides we would expect much

better uniformity, One furnace hot zone is in excellent condition and the other is nearing time for replacement, All-Metal Hot Zones (Layers: 1 Tungsten, 7 Moly, 1 Stainless Steel), Low voltage Tungsten Heating Elements, Moly hearth, Load Rating: 2850 lb. (1300 Kg), Power: 480V/3Ph/60Hz, 390 kW SCR Heating Input with 3-zone control, 420 kVA total power, Stainless steel chamber, water jacket and hot zone plenum, Controls are CompactLogix PLC with computer, touch screen and SCADA software, Leybold TTR91 pirani vacuum sensor, Edwards (Stokes) 212J mechanical pump with Edwards 607 booster pump, Gases set up for Argon cooling and hydrogen purge, Hydrogen mass flow controller, Gas quench pressure rating is 1.05 Bar absolute. Mezzanine-mounted power supplies for minimal floor space requirement. Both furnaces (2), factory loader and existing spare parts are included at this price. Disassembly and Loading: Buyer's responsibility. Built in 2010 these furnaces were only used for 1 year. Excellent condition!

**Asking \$275,000 USD for Both.**



## ITEM # VF316

### AVS VACUUM FURNACE

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

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



## ITEM # VF315

### AVS VACUUM FURNACE (REBUILT)

**AVS Vacuum Furnace (Rebuilt).** Model HMF-24-24-48-1100, Hot Zone: 24" x 24" x 48" deep, Moly with moly elements. Controls new in 2015. Operating temperature of 2400F. Pumps: Cryotorr high vacuum pump; Turbovac MAG 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 # 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 # VF299

### SUNBEAM VACUUM FURNACE

**Sunbeam Vacuum Furnace.** Model # 40236, Serial Number F-170-82. Working dimensions of 36" wide X 120" long X 36" high. Maximum operating temperature of 2552F (1400C). 460 volts, 400Kw, 3 phase. Honeywell digital program control, Honeywell digital overtemperature control, Honeywell strip chart (inoperative) and Granville-Phillips 375 Convectron vacuum controller in enclosed panel. Double walled water cooled horizontal

load vessel. Interior has a molybdenum liner with graphite heating elements on both walls, roof and floor. 20 HP cooling fan mounted in rear. Pumping system consists of a Stokes 412-11 mechanical pump with Roots booster. Power to the heating elements is through VRT's. A battery powered loader is included. Some of the heating elements were damaged during shipment and will need to be replaced by buyer.

**Asking Price: \$95,000 USD.**



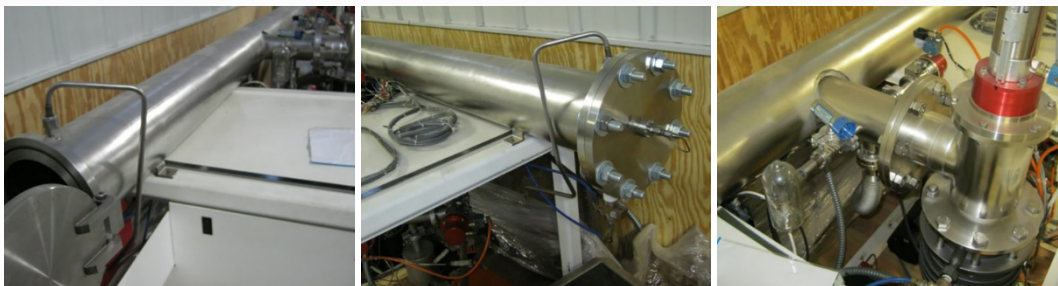
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## ITEM # VF294

### 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  $1 \times 10^{-6}$  Torr. Maximum vacuum level to operate in continuous duty is  $5 \times 10^{-8}$  Torr. The unit was designed to use N<sub>2</sub> 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.**



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## 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**



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## 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  $1.0 \times 10^{-1}$  mbar, operating pressure 1000 mbar. Maximum vacuum level  $5.0 \times 10^{-2}$  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  $\pm 8$ C. 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.**



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## ITEM # VF282

### AVS VACUUM DEBINDING/SINTERING FURNACE



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

**Asking Price: \$169,000 USD.**



**ITEM # VF271**

## **SINTERING / DE-WAXING FURNACE**

**Sintering / De-Waxing Furnace.** Horizontal sintering furnace with wax condenser 1470°C operating temperature. Water cooled 304 stainless steel chamber with mild steel flanges. Graphite hot zone – 24” wide x 18” high x 36” deep, with hearth rails. Graphite retort – 4 to 5 cubic foot work space, shelves, graphite rollers, de-wax tube and -cooling. 5 HP recirculation cooling fan system – cooling flaps in insulation and retort. Wax condenser assembly with hot water circulation system and removable wax receiver pot. Power supply – transformer-type, low voltage secondary, nominal 250 kW. Vacuum pumps – Stokes 212-

H, 150 cfm rough pump, Roots 615, 1600 cfm booster. Dynamic partial pressure gas system. Unit can be seen in operation and is available for immediate delivery.

**Asking Price: \$299,000 USD.**

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## 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<sup>-5</sup> Torr in 20 minutes 300 kW heater power (Hunterdon) Moly Hot Zone Mounted on roll out frame

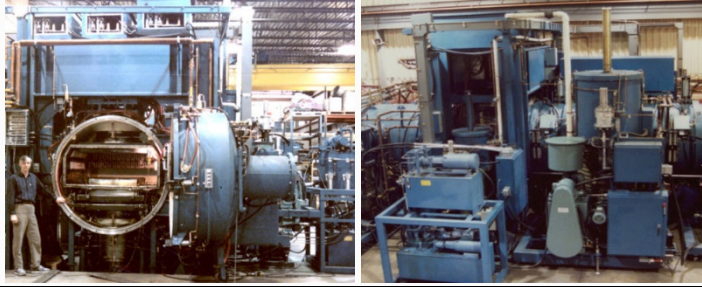
Bonding Chamber. 20" diffusion pump / 100 CFM holding pump Moly Pin walking system rated for 2720 kg load 44" w x 54" d x 20" high product size in batch mode 44" w x 54" d x 6.5" high product size in semi continuous mode Constant 1100°C Heated Platens, Moly pressing surface 1000 tons of force, up pressing 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<sup>-5</sup> Torr in 20 minutes Fast Backfill Port Mounted on roll out frame

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

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

**As is \$890,000.00 USD**



## ITEM # VF266

### KINNEY 75 CFM VACUUM PUMP

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

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



## ITEM # VF243

### 35" DIFFUSION PUMP

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

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



## ITEM # VF242

### 35" DIFFUSION PUMP

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

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

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





# HEAT TREAT CENTRAL

- High Quality Low Cost Base Trays
- **Investment cast only**
- Fast Delivery for in-stock trays<sup>1</sup>
- **Surface Combustion Allcase Tray**
- UBQ Furnace Tray
- **Site-specific custom trays**
- Based on existing castings
- **No setup or pattern fees<sup>2</sup>**
- Industrial alloy grades available
- **HU, HT, Super NA22H, ...**

Please send your enquiries to:

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

<sup>1</sup>While supplies last

<sup>2</sup>Applies to standard design trays only. Some restrictions apply.

©Heat Treat Central

# Moly

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

**Bob and Ben Grammer welcome the opportunity to help with your requirements [Sales@gvtinc.com](mailto: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.

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### **AFC-Holcroft**



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

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

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### **ALD Vacuum Systems**



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

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

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## Cooley Wire Products



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

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

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## Custom Electric Manufacturing



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

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

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## Dry Coolers



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

<http://drycoolers.com/>

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## Grammer Vacuum Technologies, Inc. (Molybdenum)

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

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

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## Graphite Materials



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

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

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## Heat Treat Central



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

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

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## Idemitsu



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

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

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## South-Tek



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

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

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## Super Systems



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

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

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# 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](mailto: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 # 0357** Quality Control Manager

**Item # 0352** Senior Applications Engineer

**Item # 0351** Technical Sales Associate

**Item # 0349** General Manager of Commercial Heat Treating Business

**Item # 0345** Multiple Positions Available

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### ITEM # 0357

#### QUALITY CONTROL MANAGER

FPM Heat Treating was founded in 1979 on the vision of providing unsurpassed service and quality heat treating to the manufacturing community. We are one of the largest independent commercial heat treaters in the Greater Midwest Region.

#### **Job Title: Quality Control Manager**

Department: Milwaukee, WI – Quality Department

Shift/Work Hours: Day Shift

Reports to: Bob Ferry VP Quality & Rich Weber General Manager FPM-Milwaukee

FLSA: Exempt – Salaried

Rate of Pay: Based on quality assurance knowledge and heat treating experience

**Characteristics:** High energy, results oriented individual with good communication skills. Works well in a team environment and has a customer focus.

**Job Description:** Plans, coordinates and directs the quality management system designed to ensure continuous improvement and flow of product consistent with established ISO 9001 standards by performing the following duties personally or through subordinates.

**Essential Duties & Responsibilities include the following:** Well versed in Quality Management Systems specifically ISO 9001 and maintains all Quality System Documentation. Communicate well with Customers and is lead person on quality audits. Collects and analyzes data using statistical methods and product specifications to determine conformance with standards and propose continuous improvement. Formulates and maintains quality control objectives and coordinates objectives with production procedures in cooperation with site managers to maximize product quality and minimize costs. Supervises employees engaged in inspection and testing activities to ensure good control over inspection materials, facilities and customer products. Leads continuous improvement efforts to improve product quality and reduce costs. Investigates all customer complaints regarding quality. Utilizes 8-D or 5-Why methodology to drive to Root Cause Analysis and Corrective Action. Initiates and manages APQP and PPAP submission programs. Develops and implements training plans to cross train and upgrade associate skills. Maintains the Quality System on site with monthly reporting of Quality Metrics Analysis for Continuous Improvement.

**Education and/or experience:** Bachelor's Degree in Metallurgy or Materials Science and has accredited Quality Training. 3-5 years' experience in maintaining a complete Quality System.

**Other skills and abilities:** ASQ Certified Auditor or Certified Quality Engineer Preferred. Fundamental understanding of Heat Treatment. Strong interpersonal skills and ability to work cross functionally. Proficient in the use of Microsoft Excel and Word. Be self-motivated, detail oriented and possess good verbal and written Communication Skills.

**METHOD OF APPLICATION.** Submit resume with salary history to Robert Knorrek, Director of Human Resources at rknorrek@fpmht.com. FPM Heat Treating. Corporate Headquarters. 1501 South Lively Blvd. Elk Grove Village, IL 60007. Phone: (847) 228-2525. Fax: (847) 228-5912.

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## ITEM # 0353 PLANT MANAGER



Brad Foote Gearing, a division of Broadwind Energy, is searching for a Plant Manager to join our team in Pittsburgh, PA. The Plant Manager will have oversight for all production personnel at a particular location. This position will be responsible for training, leading and teaching the hourly workforce as well as the supervisors that report to this position.

**RESPONSIBILITIES AND ESSENTIAL FUNCTIONS** • Ensure shop personnel are properly trained • Ensure process control throughout all stages of production • Implement corrective actions to eliminate incidents of nonconformance • Select and hire qualified personnel to meet production requirements • Schedule working hours and number of shifts to meet production requirements • Interact with peers and maintain good working relationships • Properly and efficiently manage area of responsibility, coordinating head count requirements through Industrial Relations, in order to meet production



requirements on a timely basis • Continually train and upgrade work force • Maintain equipment such that parts can be accurately manufactured in an efficient manner • Initiate and monitor in-plant training • Ensure that perishable tooling is replaced as required to meet customer demand • To ensure that all products of Brad Foote Gear are manufactured within the parameters established by out ISO 9001 quality guidelines

**QUALIFICATIONS Academic/Experience/Credentials/Certifications** • Undergraduate technical degree or equivalent work experience • Preferred at least 1 years operating various metal working machine tools and related support equipment • Preferred at least 5 years of supervisory experience as first line manager

**Specialized Skills/Knowledge/Ability** • Sound knowledge of gear generating methods of manufacture

Brad Foote Gearing is proud to be an Equal Opportunity Employer. To learn more, please visit our website at [www.bwen.com](http://www.bwen.com). Please send resumes to: [Rocio.Guzman@bwen.com](mailto:Rocio.Guzman@bwen.com).

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## **ITEM # 0352**

### **SENIOR APPLICATIONS ENGINEER**

Job Title: Senior Applications Engineer. Worldwide supplier of industrial furnace equipment located in the Great Lakes region (USA) is seeking an experienced Senior Applications Engineer to become a part of our team. Responsibilities:

- Size Continuous and Batch Heat Treating Furnace systems and companion equipment
- Estimate mechanical, electrical and programming, and process engineering design hours.
- Estimate steel fabrication labor and materials required for manufacturing and assembly
- Estimate heat resistant alloy components for high temperature applications
- Estimate refractory labor and materials for thermal insulation systems
- Estimate convection heating and recirculation systems for heating and process uniformity
- Estimate gas and electric heating and cooling systems, sizing components and assembly labor
- Estimate conveyors and mechanical drive systems and assembly labor hours
- Estimate process control systems for automation, temperature, combustion, atmosphere, electrical, pneumatic and hydraulic control systems with control panels and assembly labor
- Prepare proposal documents and drawings for sales and customer
- Prepare monthly sales reports
- Process order entries into computer database to establish budgets
- Report estimated cost to actual cost to manufacture and maintain standard equipment pricing

Experience:

- 4 year degree and/or 5 years of heat treating work experience preferred.

Compensation includes a full benefits package, competitive wages and bonus package. Send letter of interest/resume/CV to: [jobresume@mindspring.com](mailto:jobresume@mindspring.com)

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## ITEM # 0351

### TECHNICAL SALE ASSOCIATE

Major manufacturer of industrial heat treating equipment, located in the Great Lakes area (USA), is interested in candidates for long-term career opportunities in the capital equipment sector. Currently seeking candidates for the following:

**Technical Sales** – We are seeking a Technical Sales Associate to become a part of our team to answer queries, provide pre-and post-sales technical advice and support our products.

**Responsibilities:**

- Provide support to the Sales and Application Engineering Group as well as to advance the development of new technology.
- Evaluate modular products with the group.
- Manage the transfer of technical information to our international licensees.
- Assist engineering and service with technical problems.
- Identify and establish new business
- Organize sales visits
- Connect with existing customers
- Prepare proposals and quotations
- Negotiate contracts, terms and conditions
- Review cost and sales performance
- Provide product education and advice
- Attend trade exhibitions, conferences and meetings
- Ensure that sales targets are met
- Conform to all policies & procedures within the company.
- Travel domestically and internationally as required to support new equipment sales activity.
- Interface with Sales Reps and Partners as required.
- Perform additional duties as assigned.

**Qualifications:**

- Engineering degree BSME, thermal minor preferred or comparable experience in industrial capital equipment sales
- Ability to read and interpret blueprints
- Strong computer skills
- Strong problem solving and critical thinking skills.

Compensation includes a full benefits package, competitive wages and bonus package.

Send letter of interest/resume/CV to: [jobresume@mindspring.com](mailto:jobresume@mindspring.com)

**ITEM # 0349**  
**GENERAL MANAGER OF COMMERCIAL HEAT TREATING  
BUSINESS**

**General Manager of Commercial Heat Treating Business.** Job Description:

- Full responsibility and authority for the successful operation of all functions of the business.
- Fluent in: heat treating, quality, developing and motivating people, safety / environmental, equipment, developing / executing strategic plans, managing P&L / Cash Flow, customer relations and concise report writing.
- Report to President (senior officer)
- Support from group engineer, accountant, finance, legal and Board of Directors

This is an opportunity to be as close to your own boss as you can get without taking the personal risk of starting your own company. Salary / Bonuses / Stock Options / Benefits commensurate with the position and performance.

Please submit resume to be considered for interview. [Hubbardj1@aol.com](mailto:Hubbardj1@aol.com)

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**ITEM # 0345**  
**MULTIPLE POSITIONS AVAILABLE**

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

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

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

# SEEKING EMPLOYMENT ADVERTISING

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

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## ITEM # SE 001

### MANUFACTURERS REP LOOKING FOR LINES TO ADD

**Manufacturers Rep Looking for Lines to Add.** I have been a Manufacturers Representative in the US Midwest for 30+ years and I am looking for a few lines to represent on a commission basis. The lines have to compliment the Thermal Processing Industry. Please contact me for more information at [216 217- 7769](tel:2162177769) [rosannemccay@gmail.com](mailto:rosannemccay@gmail.com)

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## 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](http://www.themonty.com).

**Gord Montgomery,**  
W.G. Montgomery Limited  
Phone: 905 271-0033  
Fax: 905 271-9324  
Email: [gord@themonty.com](mailto:gord@themonty.com)

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