

HEAT TREAT NEWSLETTER
Everything to do with heat treating



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MOLY

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INTRODUCTION

In addition to our very complete coverage of the worldwide heat treating this, the November 2017 issue of ***"The Monty"*** includes over 60 pages of used equipment listings. This ranges from Batch IQ furnaces to Vacuums, Pushers cleaning systems and tempers-pretty well every item required by a captive or commercial heat treat operation. If you have surplus equipment available we would like to work with you to find a home - our non-exclusive sales agreement is the most reasonable in the industry - let us know your questions.

Best regards,
Gord

HEAT TREAT NEWS

ASM Heat Treat Show Columbus, Ohio Continued Below are more pictures from the ASM Heat Treat Show. **October 31, 2017**



The Eurotherm Team



Janusz Kowalweski, Ipsen, Shinsuke Yamada, Tamayakin Company, Japan



Michael Rebula of Koyo Bearings Dahlonega, Georgia, Gary Berwick, Dry Coolers



*The UPC team including Eric and Jason Jossart of Atmosphere Engineering now part of the
UPC Group*



Jack Kalucki, Nitrex and Lilia Jasso, Administrative Manager at Nitrex Querétaro, Mexico.



*Kowalski Heat Treat sponsored this food truck at Wednesday's Taste of Columbus. This
involved dancing with the food people and a great deal of fun!*



Used Equipment

Please take a look at our most recent used equipment offerings. If you see anything you like don't hesitate to get in touch with us at jordan@themonty.com or 905-271-0033. **October 30, 2017**

Item # B437 Closure Of A Heat Treat Plant

Item # VF330 Surface 2-Bar Quench Vacuum Furnace

Item # VF329 Abar Ipsen HR46 X 72

Item # I174 Induction Heating Lift & Rotate System

Item # VF328 Abar Ipsen Model HS-26 Vacuum Furnace

Item # T346 Despatch Oven 72" X 48" X 48"



Business Opportunities

Please take a look at our most recent employment offerings. If you see anything you like don't hesitate to get in touch with us at jordan@themonty.com or 905-271-0033. **October 30, 2017**

Item # 0338 Service Technician

Item # 0337 Product Manager

Item # 0336 Account Manager

Item # 0335 Inside Sales DTR

Item # SE 001 Manufacturers Rep Looking for Lines to Add

Monday Morning Briefing

First up we talk about the **ASM** heat treat show in Columbus, Ohio last week. Our take was that it was well organized, interesting and had virtually every industry supplier of note in attendance however we heard very mixed things from the exhibitors which ranged from very disappointing in terms of the number of visitors right on up to well worth the time and expense. A manufacturers rep from the US Midwest, **Mr. Tom Martin** sent us this summary; *"It was great seeing you and meeting your son! For me the show was an overwhelming success. But, between 10-11 first day, I am thinking to myself, what is going on, where are the people. An asm gal told me she thought it had to do with how the educational sessions were time slotted. It got better around 11:15 on through the day. I changed my plan on Wed. It was slow so I walked the Gear side of the convention. This proved productive and profitable. I went back and forth about Thursday. at the end of Wed, I decided to drive home."* We have a number of photos from the show which we will be adding over the course of the week but for this morning we have only this one, Gord Montgomery and **Mr. Steve Toltesi**, Senior Supplier Development Engineer at **Eaton Vehicle Group**.



If you scroll down this page to a news item from early last week you will find an item asking if it is the end of the line for Flame Hardening. We are very glad we posted this as it lead us to meet a young fellow by the name of **Andrew Orr** of **Penna Flame** in PA who guess what-specializes in flame hardening. Andre showed us a whole new world of Flame Hardening which we didn't know existed; *"Mr. Montgomery, It was a pleasure meeting you and your son, Jordan, Tuesday afternoon at the ASM Heat Treat show in Columbus. I'm glad*

we were able to discuss flame hardening so I could shine a different light on the craft. As I mentioned, Penna Flame Industries is a family owned company, in its third generation, founded by my grandfather in 1968. I'm sure Gary Orr would be extremely impressed with the technological advances we have implemented over the years. In 2007 we purchased our first robotic arm and have since added three more to our team. The robots have opened the door for us to process a variety of products we would have never been able to do in the past. The entire process is controlled from start to finish with digital regulators for gasses and quench pressures. This brings great precision and repeatability to a process which is often viewed as archaic and out of control. We offer many other processes still controlled manually as well and they too are monitored by technology such as digital regulators, Eurotherm recorders, non-contact infrared pyrometers, and our newest addition of a thermal imaging camera. This camera is utilized on our brand new spin hardening machine which can process parts up to 80" in diameter and 20,000 pounds. I have included a few pictures to go along with my message and you are welcome to visit our website to find out more about us: www.pennaflame.com. We are very much looking forward to your upcoming visit. We are also excited for the future of flame hardening and our company as we celebrate our 50th anniversary on April 1, 2018!"



Our favorite CQI-9 guy **Mr. Pete Batche** has made a change. For quite some time he was Heat Treatment Technical Specialist at **Akebono Brake** in Kentucky, however very recently he moved on to **Emerald Steel** in the Detroit area of Michigan where he is Quality Manager/Metallurgist. Another fellow we have always been very partial to is **Mr. Scott Mackenzie** who for as long as we can remember has been working with **Houghton**

International the quench oil people. Pete recently earned a new title, Sr. Research Scientist-I certainly hope he is getting paid in accordance with this very impressive title. Furnace manufacturer **Lindberg** recently landed a nice order for a pit nitridor from a company in Alberta, Canada by the name of **Apollo Machine**. Speaking of new orders the **Watervliet Arsenal** in NY is making a very large investment in their long standing heat treating department. Beyond these basic facts we don't expect to hear anything since this is a military endeavor; *"The U.S. Army is making a \$41.7 million investment in its manufacturing center at Watervliet, N.Y., to position the Arsenal to better support the emerging readiness needs of U.S. and foreign militaries, said the Arsenal commander. This is not the same Arsenal that it was when I took command in July 2016," said Col. Joseph Morrow. "Due to a significant and recent rise in sustainment and modernization readiness needs of our Army and of our allies, we must nearly double our current manufacturing capacity in the next four years. "When the average age of the Arsenal's plant equipment is more than 30 years old, which includes nearly 650 machines and heat treatment facilities, it is becoming more difficult every day to meet the increased readiness needs of our troops," said James Kardas, an Arsenal industrial engineer who will oversee the equipment modernization program. The Watervliet Arsenal (pronounced water-vleet") is an Army-owned-and-operated manufacturing facility located in Watervliet, New York. The Arsenal is the oldest, continuously active arsenal in the United States, having begun operations during the War of 1812. The Arsenal is a subordinate command to the TACOM Life Cycle Management Command and the Army Materiel Command."*



And to round things out we have this press release from controls company **UPC**: **UPC Pro** is a go-to app for calculations relating to alloy factor, carbon/oxygen, endo generator, nitriding, nitrogen-methanol, resistance thermometers, shim test, thermocouple conversion, and Waukee Flo-meter. The app is intended to serve as a reference in the course of a heat treater's daily work, whether developing heat treat recipes or corroborating process data.

What's possible with **UPC Pro**?

- Calculate various parameters such as alloying factors for carbon uptake in steels, gas composition and potentials for endo generators, carburizing, nitriding and nitrocarburizing furnaces;
- Set flows for direct injection of nitrogen and methanol, but also for conversion of signals from thermocouples and RTDs to temperature;
- Calculate carbon potential from shim weight;
- Select the right Waukee flow meter for your application, and more. For more information or to download on your mobile device, visit <http://group-upc.com/publicationsdownload/upcpro>.

ABOUT UPC; UPC provides process control, flow control, and automation solutions to furnace OEMs and customers with thermal processing equipment and operations. The company is now comprised of five brands – Atmosphere Engineering, Furnace Control Corporation, Marathon Monitors, Process-Electronic, and Waukee Engineering – with products ranging from probes, analyzers, flow meters, programmable controllers, generator mixing control systems, SCADA to complete turnkey systems. | www.group-upc.com” **October 30, 2017**



HK17/Cologne, Germany

Our attention this week has been focused on the ASM heat treat show in Columbus, Ohio but we are not going to neglect the ongoing show in Cologne, Germany which from what we hear is a success. We have these photos to present to you; **October 27, 2017**



Rohde Team; Sebastian Bischoff, Raphael Raatz, Raphael Nees, Natasha, Joern, Konstantin Rohde, Andreas Wiesemann, Martin Eschbach



Natasha, Joern and Konstantin Rohde in the HEESS booth along with Thomas Streng



IWT



Furnace Manufacturer Ipser is always a strong exhibitor



Part of the UPC Team including Jens Baumann and Daniel Panny (who was Atmosphere Engineering now part of UPC)



Bodycote Financial Results

The world's largest commercial heat treater, UK based Bodycote just released their trading update covering the three month period from 1 July to 30 September 2017 and below is a very brief summary. The entire report can be found at <http://www.bodycote.com/en> **October 27, 2017**

"Group revenue for the three months ended 30 September 2017 was £169.0m, 16.6% higher than the same period last year and 12.9% higher at constant currency. Organic growth¹ was 9.1% at constant currency, reflecting 9.6% growth in our Aerospace, Defence and Energy business and 8.7% growth in the Automotive & General Industrial business. The year to date organic constant currency growth was 6.2%. The following review of the Group's markets quotes all movements on the basis of organic growth against the same period in 2016 at constant currency: Civil aerospace revenues grew 3.0% and continued to be driven by growth in Western Europe. The recovery in the North American onshore oil & gas market began during the second quarter and continued during the period. The overall growth of our energy revenues was 24.5%. Defence revenues continued to decline in the period. We saw continued growth of 8.3% in the car and light truck market, with strong growth in Western Europe and

our emerging markets, while North American revenues were down. General industrial revenues were 11.0% higher against a weak comparable. General Industrial growth was achieved in all geographies, and was strongest in Western Europe.”



SOLO Swiss Sell Heat Treatment Line in China

*“A new SOLO Swiss automatic heat treatment line Profitherm with 300 kg capacity has been recently installed and commissioned at Dongguang Xinfeng. This new Profitherm 300 heat treatment line, is equipped with 2 carburizing and carbonitriding furnaces (max temp. 1050°C), 3 quench tanks (oil, salt and water), 2 washing machines (oil and salt), 1 salt recovery system, 1 full automatic load and unload robot and 6 loading/unloading tables. This equipment is powered by the software Axron Swiss Process control. Dongguang Xinfeng Factory is a hardware manufacturer located in the Guangdong province of China. With over 70 years’ experience, SOLO Swiss manufactures atmosphere furnaces for metal heat treatment since 1924 which are sold worldwide.” www.solo.swiss **October 27, 2017***



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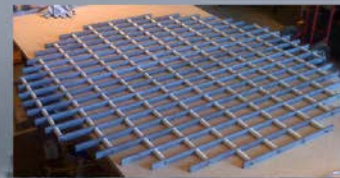
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- Hex Nuts
- Washers
- Moly Tie Wire
- Fabrications
- Grids



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ASM Heat Treat Show Columbus, Ohio Continued

We have now concluded the second day of the ASM Heat Treat show and we are hearing very mixed reactions from exhibitors about the exhibition- anywhere from pretty good to not worth repeating. Nobody is complaining about how well it is organized, rather the complaints are about the number of actual visitors and more importantly (at least from the standpoint of the exhibitors) is whether the visitors are “decision makers”. We have not seen attendance figures so we can’t really say whether these complaints are real or perceived. **October 26, 2017**



Gord Montgomery, Jordan Montgomery, Bill Andreski, Mark Johnston, Jim Senne, Ron Graham, Bill Disler, Jill Ciszewski (AFC-Holcroft)



Bill Jones, Solar, Gord Montgomery. Bill is presenting a copy of his book "The Golden Nugget". In the background is the Golden Goose.



Patti Reeder, Steve Duban, Probey, Gord Montgomery, Steve Thompson (SSI)



Jimena Bernal, Jordan Montgomery, Andrés Bernal. Ion Heat, Plasma Nitriding Systems



Gord Montgomery, Ray Monahan, Harald Roth, KGO, Vacuum Nitriding Systems



Dibalog

Energy Optimization company Dibalog based in Heidelberg, Germany has been busy *(for those of you not familiar with Dibalog they are a long established company offering energy optimization systems based on limiting peak demand charges resulting in lower electrical costs)*. Recently the company upgraded and expanded their system at **ZF** in Coimbatore. ZF is a manufacturer of gears which does a great deal of their heat treating requirements in house. ZF India operates a number of large electrically heated pit carburizing furnaces and the Dibalog system manages and controls the peak electrical demands of the

furnaces. Dibalog has also expanded an installed system which they have at commercial heat treater **Hansen-Balk** in Grand Rapids, Michigan. Hansen- Balk is one of the largest commercial vacuum heat treaters in the US and recently added some new vacuum furnaces which required the Dibalog system to be upgraded and expanded. **October 26, 2017** .



ASM Heat Treat Show Columbus, Ohio

We are reporting from the ongoing heat treat exhibition in Columbus, Ohio. As our readers know this is the largest heat treat show in North America in 2017. Well organized, with a very impressive number of exhibitors the jury is still out on attendance. Our impression is attendance is reasonable, some exhibitors agree but a number have suggested that they are disappointed so far. Having said that it is day 1 of a three day show so time will tell. We offer these photos to start off the show. **October 25, 2017**



Dean Russell Sr, Wayne Samuelson, RBC Bearings, Jordan Montgomery, Michael Cousins, Ipsen



The Ipsen Team



Gord Montgomery, Joe Greene, Boeing R & D Philadelphia



Zach Travis and Chris Zuroski, Donohoo Steel Treating, Iowa, Gord Montgomery



Ben Grammer, Duane Halleck, Cooley Wire Products, Jordan Montgomery

Flame Hardening-The End of the Line?

Flame Hardening is a form of heat treating which involves heat being applied to a part by using oxy-acetylene or another gas. It is heated to the upper critical temperature before the steel is quenched with water. It is a surface hardening process used on medium carbon mild or alloy steels such as 1045, 4140 and 4340 such as crane wheels, cable sheaves and rollers. This is an older technology and very basic with little control over the end result. We mention it today because over the past few years we have seen a number of companies both captive and commercial heat treaters discontinue the process with the most recent one that we have run across being Thermex Metal Treating. There is nothing inherently wrong with the process but is gradually being relegated to the fringes of the heat treating world along with technologies such as shaker hearth furnaces and Fluidized beds. **October 24, 2017**



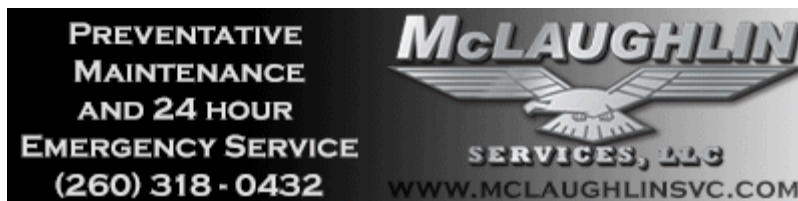
Solar Atmospheres Granted More Boeing Approvals

"Solar Atmospheres is pleased to announce the expansion to its current scope of Boeing approval at its Greenville, South Carolina facility to include the processing of Precipitation Hardening, Corrosion Resistant and Maraging Steel parts to the requirements of Aerospace Material Specification AMS 2759/3. The Greenville facility now has an approved scope of processing for Boeing that includes the following specifications:

- *BAC 5613 – Heat Treatment of Titanium and Titanium Alloys*
- *BAC 5616 – Heat Treatment of Nickel-Base and Cobalt-Base Alloys*
- *BAC 5619 – Heat Treatment of Corrosion Resistant Steel*
- *AMS 2759/3 – Heat Treatment of Precipitation-Hardening, Corrosion Resistant and Maraging Steel Parts*

Steve Prout, President of Solar Atmospheres' Greenville facility states: "We are proud to be able to expand upon our process offerings in support of Boeing and its many suppliers. This

step allows us to once again provide the U.S. Southeast with another regional option for aerospace thermal processes.” With thermal processing in furnaces ranging from those suited for small lots and development cycles to a 6-1/2 foot diameter by 24 foot long vacuum chamber capable of processing up to 50,000 lb loads with a maximum temperature of 2400°F, Solar Atmospheres is backed by AS9100 and Nadcap quality systems to give our customers confidence that their product is being processed to the highest standards. For additional information on our processing options and our capabilities, contact Mike Harper at mikeh@solaratm.com, and visit us at www.solaratm.com, or call 1-855-WE-HEAT-IT.” **October 24, 2017**



Monday Morning Briefing

This week we have the two largest heat treat shows of the year, the ASM exhibition in Columbus, Ohio, USA and HK17 in Cologne, Germany. We at “The Monty” will be in attendance in Columbus and will give you daily updates in the way of photos from the show. Because of our inability to be in two spots at the same time we will have to miss the Germany show this year, however good friends will be sending us some photos and updates about the show. To get us started we selected a few photos from shows gone by, these can be found at <https://www.themonty.com/> Who knows-you might see yourself or acquaintances. In sad news we have this from **Mr. John Hubbard** former CEO of

Bodycote; Lars Wallberg. *"I wanted to let the International heat treating industry know Lars Wallberg passed away 4 October 2017. Lars was a Metallurgical Engineer and President of*



Brukens, which consisted of 16 plants in Scandinavia and 8 plants in Germany, Netherlands, Belgium and Austria. Bodycote purchased Brukens in 1996. The Brukens acquisition was preceded by the acquisition of Hinderliter in North America and followed by the acquisition of HIT in France, Belgium and Italy. As a result of these major acquisitions Bodycote instantly became a world leading heat treating business. Lars stayed with Bodycote for several years expanding the business into the coatings sector before retiring. I got to know Lars when he joined Bodycote. Lars was a smart, hard working and successful heat treater. His strategy in building the Brukens group was executed with vision and skill. His wife Ebba preceded him in death in January 2015; she was the Brukens group accountant. Lars is survived by a daughter Malin and son Jonas. Lars and Ebba had a big interest in horse racing and during many years they owned about 15 race horses. The last several years he also developed a big interest in dogs and very much enjoyed his German Shepherd dog."



In Mexico commercial heat treater Tratamientos Térmicos de Querétaro is investing in a continuous heat treating furnace. Tratamientos Térmicos de Querétaro (or TTQ for short) is a family owned operation which is one of a few heat treaters servicing the booming Querétaro market. Paulo is one of the largest commercial heat treaters in North America and they have been very open about the investments they have been making in their Nashville, TN facility both in terms of equipment and people; *"As a two year effort to expand Paulo Nashville comes to a close, the leadership team has reorganized to prepare for the*

future. **Tom Gundic** has been promoted to Plant Manager for the Nashville plant. Tom has been with Paulo for nearly 13 years. For the past year he has served as the **Operations Manager** for the Nashville plant. Prior to this, Tom spent twelve years at the Cleveland plant continually progressing through many roles from Supervisor to plant leadership. Tom will continue to advance plant technology necessary to support our continuing growth, exceed customer expectations, and build a strong plant leadership team. In building the new leadership team at Nashville, **Nick Rassieur** has accepted the position of Production Manager. Nick was most recently in an operations support role and had taken on plant specific projects. Continuing the development and training of Nick, Rick Loudermilk will provide guidance and mentoring. Nick's role will be crucial in leveraging Paulo's proprietary information systems while meeting customer requirements with urgency. **Rick Loudermilk** is assuming a newly-created position as Process Improvement Manager. In this role he will support operational activities by working with Randall Richard, Training Manager, to enhance heat treating training and provide job specific training. Additionally, Rick will assist with new program development and account management, getting **Dustin Lawhon** up to speed. Rick has been with Paulo for 36 years in progressive leadership positions. He has been instrumental in the plant's success over the years and has built strong customer relationships. Most recently he guided a **multi-year plant expansion** that firmly positions the plant as a market leader."



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SRS in Terre Haute, Indiana who appears to be a manufacturer of wheel rims is auctioning off some equipment November 14th and included is a rotary hearth furnace. It has a 6' diameter, is electrically heated and was made by Modern Equipment whoever the heck that is. **Alpha Sintered Metals** has acquired Precision Compacted Components of Wilcox and St. Marys, Pa., and Precision Made Products of Brunswick, Ohio, in 2016. Now the companies have been combined and rebranded as Alpha Precision Group (APG) and will operate through two divisions. APG Sintered Metals consists of Alpha Sintered Metals' powder-metal operations and Precision Compacted Components; APG Metal Injection Molding consists of Alpha Sintered Metals' MIM operations and Precision Made Products. Each of these companies does some sintering in house. **Fort Wayne Metals** plans to expand its Allen County, Ind.,

operations and create up to 337 new jobs by 2021. The new jobs will be created in all areas of the business, including thermal processing, production and maintenance. The company will invest \$51.1 million to expand and enhance its northeast Indiana operations, which will increase production capacity for precision wire and wire-based components for the medical-device industry and other critical applications.” This press release caught our attention as the company does some heat treating in house, as a matter of fact they added to their vacuum hardening capacity just a couple of years back although we don’t know whether this expansion includes more heat treating capacity or not. **October 23, 2017**

Timken Bearings Polaski, Tennessee

October 11 2016 Bearing producer Timken announced that they were closing their facility in Polaski, TN, a closing which would take approximately 1 year. Sure enough here we are almost exactly one year later and the remaining equipment will be auctioned off November 8 2017. Like most bearing plants this one included an in house heat treating department which includes some older Surface batch IQ equipment, a bell annealer, a Thermal Basic continuous furnace and some other odds and ends all of which probably have some value. **October 20, 2017**



Obtaining Nadcap Accreditation

Many have found each Nadcap audit to be a unique process, depending on specific Prime specifications, processes, equipment and more. Here are some recommended best practices and steps for a smooth audit experience. **Read the article.**



Ipsen Expands Service Offerings

“Starting October 1, 2017, Ipsen has expanded their offerings to include calibration and survey services that adhere to strict Nadcap requirements. As Ipsen continues to focus on providing advanced aftermarket support, this new service will fill a niche demand and help those that need to meet the requirements of highly regulated industries.

Ipsen's technicians will perform NIST-traceable calibrations and periodic testing of heat-treating systems so companies can comply with AMS 2750E, which is recognized as the gold standard for both Nadcap and MedAccred. This includes calibrating and testing the furnace's temperature and vacuum control systems, as well as verifying those systems are operating properly. If any non-conformances are discovered, Ipsen's trained technicians are capable of quickly analyzing, troubleshooting and correcting them.

Key services include:

- *Calibration of the temperature controlling, monitoring and recording instruments*
- *Calibration of vacuum process and recording instruments*
- *Full reports that comply with the requirements of AMS 2750E, complete calibration results (including "As Found/As Left") and data for Ipsen's NIST-traceable standards used*
- *Temperature Uniformity Surveys (TUS) using data acquisition (DAQ) and software fully compliant to ASM 2750E and 21 CFR-Part 11*
- *System Accuracy Tests (SAT)*
- *Certificate of conformance*

To learn more or to schedule a service appointment, contact your local Regional Service Manager at 1-844-Go-Ipsen, Option 1. You can identify your Regional Service Manager at www.IpsenUSA.com/Map.

The ICS (Ipsen Customer Service) Team is the largest in the industry with dedicated Regional Service Managers and highly skilled Field Service Engineers that provide immediate local support. In addition to offering on-site services and support, they provide a full range of aftermarket solutions, critical spare parts, process knowledge and technical support throughout the entire life span of the equipment for any brand. You can learn more about their extensive aftermarket offerings at www.IpsenUSA.com/ICS.

About Ipsen. *Ipsen designs and manufactures integrated heat treatment solutions for a wide variety of industries, including Aerospace, Automotive, Energy and Medical. With an extensive network of global locations in America, Europe and Asia, we continue to provide expert-driven solutions that strengthen heat treatment throughout the world. Learn more at www.IpsenUSA.com." **October 20, 2017***

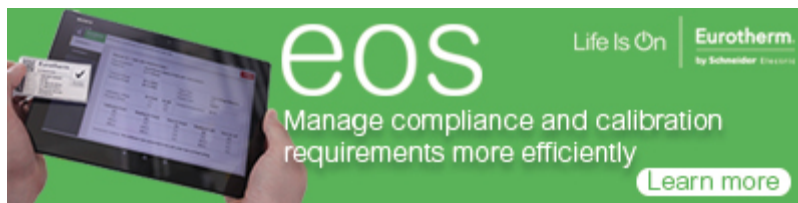


YOUR SUCCESS IS OUR SUCCESS

We've been with you for over a century, supporting you through tough times and quietly cheering you on in the good times, steadfast in our promises, devoted to your success.

In all that time one thing never changed. We remain committed to providing the highest quality product, finding innovative ways to move your company forward, and caring for you as a trusted partner.

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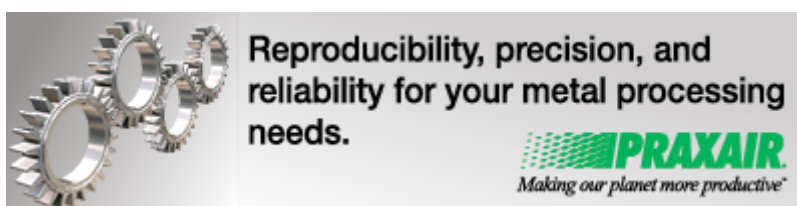
ECM Offenbach, Germany

Furnace builder ECM based in Grenoble, France is opening a sales location in Offenbach, Germany but the story doesn't end there. The Sales Manager is Mr. Gerald Hiller who was with German furnace builder ALD for 17 years and just started with ECM October 1, 2017. It is also interesting that this press release states that sales in 2016 were 80 Mio € which makes ECM a very large player in the worldwide furnace manufacturing industry and as the company mentions one of the last family owned furnace manufacturers. When we think of ECM we think of them for vacuum carburizing systems, however we know that the company has the expertise to build most types of furnaces. **October 19, 2017**

"I would like to announce the new founded ECM GmbH, based in Offenbach/Germany. ECM Grenoble wants to improve their marketing activities in central- and east Europe. Our aim is to serve our customers with the best available service out of Germany. With three very experience gentlemen (50 years' experience in heat treatment) starts ECM GmbH in June 2017. The first field engineer is hired and more man power is in planning. ECM GmbH is offering after-sales-service for ECM and non ECM furnaces for hot zone rework, trouble shooting, PLC / Scada updates and spare part service. The sales team is experiencing to fulfill the automobile and aeronautic specifications for new furnace projects."



- Patrick Pouloux, MD – 21 years' experience (middle position)
- Gerald Hiller, Sales Manager – 17 years' experience (left position)
- Sven Vincken, After Sales Manager – 12 years' experience (right position)
- Email: info@ecmtech-gmbh.de, Tel.: +49 69 667788 065
- About ECM; With a revenue of > 80 Mio € in 2016 is the ECM Group one of the last family driven furnace manufacture. With more than 350 employees manufacture ECM all their vacuum furnaces in house and deliver it worldwide for their customers.

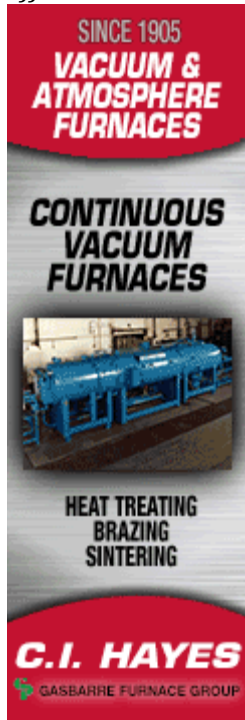


Metaltech to Become Part of the Wallwork Group

"Consett, County Durham based **Metaltech** Ltd is to join the **Wallwork Group**. Both companies specialise in the thermal processing and coating of metals for the aerospace, automotive, medical device and precision engineering sectors. Each brings additional metal treatments that will complement those of the other. Metaltech was founded in 1981 by **Ron Scott**. **Dr Graeme Forster** joined the company in the early 1990's and became managing director. Both are qualified Chartered Engineers and they have been highly successful in growing the company to a skilled staff of 22, serving clients in the UK and internationally.

Dr Forster commented, "Joining Wallwork, a firm founded on the same principles of a business that believes people are its greatest asset, is a positive step as Ron steps out to pursue his

other interests. More importantly, the deal will ensure the future of the business and employees as well as giving Metaltech the wider product portfolio of the Wallwork Group to offer our clients. The fact that the Wallwork Group are committed to continue processing in



the North East was instrumental to the deal”

Luke Collins, a graduate engineer with 12 plus years of experience within the Wallwork Group is to join Dr Forster as site director at Metaltech. Luke explains, “This is a good fit for us and strengthens our range of metal heat treatments, hard coatings processes and customer service promise. Adding a facility in the North East means we can provide an even faster service to customers there and extend our transport service into Scotland, giving greater flexibility within our Manchester, Birmingham and Cambridge sites for further growth.”

Wallwork has plans to invest in the Metaltech site and also base some of its transport operation there. Luke will permanently relocate to be near the Metaltech works. As well as strengthening the geographical reach for Wallwork, the business extends processes such as the induction hardening of metals and adds new processes including Xylan Fluoropolymer Coatings, Molybdenum Disulphide dry film lubricants and Phosphate Coating. It also brings extra capacity to the company’s Plasma Nitriding and Plasox services.” **October 19, 2017**



Luke Collins of Wallwork Group and Dr Forster of Metaltech Ltd



29th Heat Treating Society Conference & Exposition

October 23rd to the 26th will see the largest heat treat show in North America in 2017 being held in Columbus, Ohio, USA. The actual exhibit hall will be open October 24th to the 26th and it is long hours, 9AM-6PM Tuesday, 9AM to 5PM Wednesday and 9AM to 4PM on Thursday. We at "The Monty" will be there and we are expecting attendance to be good. In the meantime we leave you with a few pictures from the last show which was held in October of 2015 in Detroit, Michigan. **October 18, 2017**



The Ipsen Team



The SECO/WARWICK Team



Gord Montgomery, Steve Cropper, Park Thermal



Caption; The Turkish Delegation



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 **Bodycote**

Rexnord Corporation, Indianapolis, Indiana

I believe we mentioned last year that Rexnord a manufacturer of gears, bearings, valves and couplings was closing their facility in Indianapolis. The plant closing garnered a tremendous amount of attention following comments from President-elect [Donald Trump](#) on Twitter, where he wrote “Rexnord of Indiana is moving to Mexico and rather viciously firing all of its 300 workers. This is happening all over our country. No more!” Obviously our interest in this plant has to do with the fact that it had a captive heat treating department. As a footnote to this story several readers send us this tale about one of the heat treat operators who worked at the plant. It makes for rather depressing reading (and is rather long) but it still interesting to hear about the whole story from the perspective of one of the employees effected. https://www.nytimes.com/2017/10/14/us/union-jobs-mexico-rexnord.html?hp&action=click&pgtype=Homepage&clickSource=story-heading&module=photo-spot-region@ion=top-news&WT.nav=top-news&_r=0 **October 17, 2017**



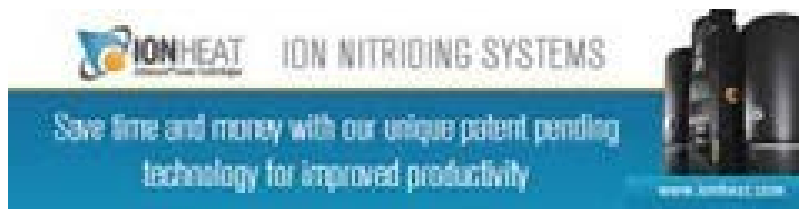
Leybold Increases The Energy Efficiency of its Diffusion Pumps

“The subject of energy efficiency of vacuum solutions plays an important role in all areas of application. Not least for this reason, the vacuum supplier Leybold from Cologne has continuously reduced the energy consumption of its product range in recent years.

Diffusion pumps do not have any moving parts – their principle of operation is based on steamed propellants, thus enabling extremely reliable and low-maintenance operation. In addition, they are robust and offer an excellent cost / performance ratio for high vacuum generation. For decades, these properties have made them the “workhorse” in industrial applications. Many suppliers considered this technology to be mature and accordingly the technical development came to a standstill.



*The vacuum supplier Leybold has recognized the potential to raise this established technology to a contemporary level and has significantly reduced the energy consumption of the established DIP and newly developed DIJ diffusion pump series, with the aid of intelligent technologies and innovations. For further information, please contact: Christina Steigler, Corporate Communications T: +49 221 347 1261 F : +49 221 347 31261 christina.steigler@leybold.com www.leybold.com **October 17, 2017***



Super Systems Inc. Mexico

*"SSI Mexico will be holding their third technical seminar on 25 January 2018 in the Monterrey/Salttillo area. The requirements of CQI-9 and NADCAP will be covered in all the topics. **October 17, 2017***

The topics to be covered are:

- *Atmosphere Verification*
- *Oxygen sensor Troubleshooting*
- *Generator Controls (AutoGen)*
- *Nitriding*
- *Metrology for Heat Treatment*
- *Process Control in Heat Treatment"*



Monday Morning Briefing

We will start off with people “stuff”-first up we see that **Mr. Jin Xia** who was Chief Material Engineer at **Timken Bearings** in Canton, Ohio is no longer with the company although we don’t know where he has moved to. Jin was metallurgist at **Koyo Bearings** (now part of Timken) in Bedford, Quebec, Canada before moving to the Canton location. **Mr. Ross Hill** who was General Manager of the **Bodycote** (commercial heat treating) facility in Newmarket, Canada is now working with another commercial heat treater, **Atlantic Heat Treat** in Ajax, Canada. **David Faglioni** who was with **Heat Treatment Australia** for many years most recently as Business Development Manager at the Brisbane, Australia plant has left the company. He is now Director Of Operations at Universal Metals Australia in Brisbane where he will not directly be involved in heat treating but will be responsible for outsourcing in some cases. **Jim McNeal** who for over 20 years was **International Search Partners** is now Client Solutions Director at The Arbinger Institute. International Search Partners was and still is a recruiting firm in California which specializes in finding people for the heat treatment industry. Jim sold the company a short while ago.

Precision Heat Treat in Surrey, Canada has a new owner, **Mr. Tim Thompson**. Precision Heat Treat is a small commercial shop which was started and run for many years by John Davison and his wife for many years until they decided it was time to retire at which point they started looking at options. Our suggestion at “The Monty” was that they try and interest one of their employees in purchasing the business as in our opinion it would be difficult to find an outside buyer. As it turns Tim

Thompson who owns another commercial heat treat in the area by the name of **Nitrera** stepped up to the plate and bought the company. Last Friday we had a press release about how German furnace builder **ROHDE Schutzgasöfen GmbH** in Hanau will very shortly be shipping a new **Nitriding** furnace to Mexico. At last count 6 readers had asked who the end customer is and our answer to all of them was the same-not a clue. Our good friend **Mr. John Reger** of **Winston Heat Treating** in Dayton, Ohio was just awarded the “Commercial Heat Treater of the Year Award by Industrial Heating Magazine; “The award was presented at the MTI Fall Meeting Awards Dinner on September 16 in San Diego.




www.secowarwick.com


The award given by Industrial Heating Magazine, in conjunction with the MTI Educational Foundation, is awarded to the company who demonstrates high levels of excellence in quality programs, pollution/hazardous waste controls, and community involvement/leadership. Winston Heat Treating owner, John Reger, stated, "This is truly an honor to be recognized by the industry for the hard work that our entire team puts forth every day in serving our customers and making a difference. We love this industry and the impact we make locally and abroad." In the photo below we have from the left; D. Posso, Industrial Heating Magazine, from Winston: K. Fourman, T. Hixson, J. Reger, D. Reger, G. Temple, and outgoing MTI President Tim Levy.



In India **Thermovac Aerospace** will shortly be opening a new, state-of-the-art heat-treatment plant in Bangalore. The plant, which will be AS9100 and Nadcap certified and hold all required OEM quality approvals, will offer a wide range of heat-treatment processes as well as the company's proprietary process for aluminum brazing. The Dabaspeth facility will be Thermovac Aerospace's third plant in Bangalore, which is one of the largest aerospace and automotive manufacturing centers in India. The facility, which is scheduled to be operational by the end of November, will be capable of supporting large aerospace and automotive projects. It will also be involved in the manufacture of vacuum-brazed cold plate for technologically advanced components such as complicated transmissions In Rockwell, Texas aircraft engine repair company **Air Concepts Repair Technologies** is closing their doors and auctioning off the remaining equipment October 23. There is a couple of heat treat ovens including an oven and a vacuum chamber but probably not real



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exciting items to most hear treaters. Furnace builder **CMI Industry Americas** (a division of CMI Group of Belgium) must have landed some nice orders recently as they have announced they need to hire some more people; *“CMI Group and CMI Industry Americas celebrated their rich histories this past week, but the Salem plant is looking to the future, too, announcing plans to hire 15 or more additional employees between now and 2018. “We’re expanding due to some contracts that the company just secured,” Human Resources Regional Manager USA Tricia Myers of the Salem plant said. The positions vary from shop workers to electrical, mechanical and process engineers, which she affirmed are all good-paying jobs. Potential employees can apply online at the company website at cmigroupe.com in the coming week. “CMI has a serious commitment to having an entity in the United States that specializes in furnace design and assembly,” she said. . In Mexico heat treater **Technotrat** with locations in Monterrey and Queretaro will be adding more batch IQ capacity. Technotrat is one of the larger commercial heat treats in the country and offers Salt, Batch IQ, Vacuum and continuous processing. The photo below shows one of their plants as we saw it last year.*



And to round things out for today we have this press release about **Mr. Jim Oakes** of controls company **SSi**; *“At its September Fall Meeting in San Diego, California, the Metal Treating Institute (MTI), the world’s largest network of heat treaters in the world, recognized Jim Oakes from Super Systems in Cincinnati, Ohio with the Award of Industry Merit. This award is given to the MTI member in recognition of their current and on-going commitment to the betterment of the commercial heat treating industry with one of more notable accomplishments. MTI President, Tim Levy, stated during the award ceremony, “It goes without saying that Jim Oakes has contributed a lot to the heat treating industry. He has always been there with his years of experience and support serving at every level in many*

organizations. His service and contributions in the overall heat treating community is second to none. This award is well deserved from his service and accomplishments to the industry.” MTI would like to say Thank you to Jim Oakes for his many years of service and accomplishments to the numerous organizations he has impacted in the heat treating industry. The Metal Treating Institute, established in 1933, is an international non-profit trade association for the heat treating industry. MTI is based in Jacksonville, Florida with members in 38 states and 6 countries.” **October 16, 2017**



ROHDE Sells Nitriding Furnace to Mexican Customer

Furnace builder ROHDE Schutzgasöfen GmbH based in Hanau, Germany sends us this press release about a nitriding furnace the company will shortly be shipping to Mexico. The company takes the opportunity to tell us about the birth of the owners second child, adding a personal note to this story. **October 13, 2017**

“This picture shows Konstantin Alexander Rohde with his parents Natasha and Joern after the final check-up of a fully equipped nitriding chamber furnace for the treatment of automotive parts. After a successfull preliminary “hot” acceptance under real working conditions the

furnace is now ready to be shipped to Mexico. Konstantin is the second son of Natasha and Joern and was born on October 2nd 2017.”



SECO/WARWICK & The Aluminum Industry

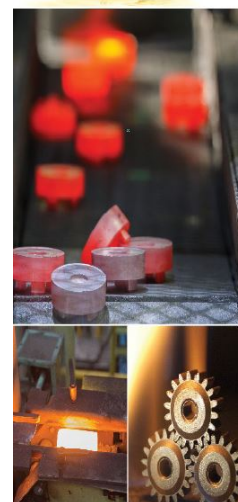
“With the increase in aluminum consumption in the transportation industry, US aluminum mills are rapidly expanding capacity to meet this demand. According to the Aluminum Association, “Since 2013, the aluminum industry announced U.S. plant expansions and planned investments totaling more than \$2.2 billion to meet increasing automotive customer needs.” Frequently, the most expeditious means of meeting this increased demand is accomplished through plant modernizations. Preventative maintenance keeps them operating at top efficiency. As a major supplier of original equipment to the aluminum industry for over 35 years, the SECO/WARWICK service team is active in major facilities throughout the world, specializing in the modernization and maintenance of aluminum equipment manufactured by SECO/WARWICK, as well as that from other furnace vendors. Since 2016, SECO/WARWICK has executed 11 modernization projects for the three major manufacturers in the continental United States.

“We have enjoyed a longterm partnership with the aluminum industry that has afforded us the opportunity to continue to grow and advance our technologies to enable our customers to remain competitive in the global aluminum market,” stated Jonathan Markley, Managing Director, SECO/WARWICK USA. “We have designed our professional service portfolio to ensure that our customers realize the



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*maximum service life of their equipment and get total value from their capital purchase.” Learn more about SECO/WARWICK heat treatment solutions. Visit us at ALUMINUM USA, a trade show and B2B-platform for the aluminum industry.” **October 13, 2017***



Fluidized Bed Line Sold

In our opinion any time a fluidized bed line is sold it is news! Perhaps we should back up a bit though. Young people in the industry might not be familiar with fluidized bed style heat treating, a technology which enjoyed some popularity 30 years ago. The technology actually produced good parts but it was messy (sand everywhere) and it has gradually follow out of favor to the point that virtually no new systems are ever built and used ones are worth what you can get. We actually had a very nice system on our site for a while, a system located at ACE Metal Treatment in Australia where the technology has lived longer than in most countries. While we had nothing to do with the sale we understand that it was just sold to a company in China proving that for every piece of equipment out there, there is a buyer somewhere in the world. **October 12, 2017**



Diablo Furnaces, Illinois, USD

There is a relatively new furnace builder in Illinois by the name of Diablo Furnaces which we have run across a couple of times over the past year. The design of furnace they are marketing is very similar to the old Beavermatic design (Of course Premier Furnace Specialists Inc. of Farmington Hills, Mich., acquired the intellectual property assets of BeaverMatic Inc. of Rockford, Ill., back in early 2015). Well we certainly know why the design is similar, at least three of the employees at Diablo used to work at Beavermatic; Burk Glogowski, Richard Claeysen and Sue Harrod are all ex employees of Beavermatic proving once again that for good or for bad people entering the heat treating industry rarely leave the industry or wander far from home which in retrospect is probably a good thing. **October 12, 2017**

Helium Shortage? What Shortage?

Typically gas quenching in vacuum furnaces uses nitrogen, argon or helium. There are advantages to each but certainly helium has really excited a number of heat treaters over the years, the main disadvantage being that it is very expensive (which means that all heat treaters try to reclaim as much as they can). The reason helium is so expensive is that it is

in very short supply, as a matter of fact this is pointed out in the short case study further down which was done by **Air Products** for commercial heat treater **Solar Atmospheres** based in Pennsylvania, USA. However this might be changing according to this news report about a mammoth find in Africa. Yes we well understand that there is a big gap between discovery and coming to market but this certainly offers hope that down the line helium becomes more cost effective. **October 11, 2017**



"New analysis of a gargantuan helium deposit discovered in Tanzania last year has revealed that there may be much more of the gas than initial surveys revealed. At the time, the find, called "life-saving," was estimated to contain at least 54 billion cubic feet (1.5 billion cubic metres). To put that in perspective, domestic helium consumption in the US for 2016 was 1.7 billion cubic feet, and the US has total known helium reserves of 153 billion cubic feet. Now, according to new measurements taken of the helium, there could be a lot more than that – around 98.6 billion cubic feet, according to Thomas Abraham-James, CEO of helium company Helium One. "It's pretty much doubled in size," he told Live Science. The global helium shortage affects a lot more than blimps and party balloons. Helium is used to cool the magnetic resonance magnets in MRI machines, and it's also used as a coolant for nuclear magnetic resonance and at the Large Hadron Collider. NASA uses it in rocket fuel, and it's also used as a carrier gas in gas chromatography and mass spectroscopy.

"Air Products, located in Allentown, PA has been Solar Atmospheres, Eastern PA sole supplier of liquid nitrogen, argon and helium since its start in 1983. This relationship and Solar's new application for the use of helium for vacuum furnace quenching has lead Air Products to do a case study on Solar. Air Products did the study to explain the engineering and processing advantages of Solar's helium usage for a considerable percentage of its quenching needs. The study was on the use of helium cuts against conventional gas quenching practices that use the much less expensive nitrogen or argon. The case study features Solar's new 24 foot furnace (50,000 lb. capacity) and new 10 bar, high gas velocity vacuum furnaces in its Hermitage, PA facility. These furnaces illustrate the challenge and advantages of improved

quench cycles by using helium. Through furnace engineering modifications and the use of helium, quenching times are better than anticipated. The results for vacuum heat treated material have been spectacular. Air Products challenge is to supply helium gas while there is a world-wide production shortage. Solar Atmospheres is confident of Air Products ability, the world's largest producer and supplier of helium, to meet the expanded application of this gas for its customers in the heat treating industry. Air Products long range planning has given Solar Atmospheres the assurance it needs to implement its growth strategy.” (the photo below shows one of the furnaces at Solar).”



Daewon Corp. Installs Nitrex Metal System

“Nitrex Metal successfully installed and commissioned an NX-1230 potential-controlled nitriding system for processing automotive springs. The customer, Daewon Corp., based in Korea, is a high volume automotive parts manufacturer supplying global automakers such as Hyundai, Kia Motors, GM, Chrysler, Volkswagen, and many others. Daewon previously used an outside supplier to nitride springs, but the company recognized that its interests would be better served by implementing this capability in-house. This new project is the result of Daewon’s past experience with a Nitrex-approved heat treater and their satisfaction with the reliability of the Nitreg® nitriding process that was key to the application’s

success. Nitreg® nitriding of springs allows fatigue resistance to be improved for longer service life in automotive use. The technology also maintains tight dimensional tolerances (no distortion), excellent uniformity from part to part, and excellent repeatability between production runs. The system is capable of processing a load capacity up to 11,570-pound (5250-kg) and complies with the nitriding requirements laid out by AMS2759/10A.

ABOUT NITREX METAL: Nitrex Metal, www.nitrex.com, is a worldwide partner offering modern nitriding / nitrocarburizing technologies, solutions, equipment and services. Our Nitreg® potential-controlled gas nitriding and Nitreg®-C potential-controlled gas nitrocarburizing (ferritic nitrocarburizing-FNC) technologies are applied in the precision parts, automotive, aluminium extrusion, defense, gears, tool & die, plastics, machinery, and many other industries." **October 11, 2017**



Dual Spindle Induction Scanner Available

An advertiser of ours has just listed a used Induction Heating Scanner and indicated how this was a unique opportunity. This scanner is current technology and has been operating when it was replaced a couple of weeks ago. Most used induction equipment is older technology and many have been sold to dealers that may upgrade it or let it sit in inventory for months or years. Many come from high production environments that operate

constantly for multiple shifts per day. This scanner was used moderately in a machine shop, only for some of the parts they produced. If this used equipment is repaired and upgraded with new controls the price will be more than twice as much as this one. Most of these used scanners are offered without any tooling, coils, spare parts or documentation. The unique opportunity offered is a current design scanner with an (current technology) IGBT Power Supply and Dual Output Bus, Nine Coils (ID from 5/8" to 2 1/2" Dia.), a spare control module and drawings and documentation. The Bus, Coils, spares and documentation have a replacement value of \$20,000 or more. It is a dual spindle model and has a 24" scanning capability. It has a 200kW, 30 kHz power supply. The control system on this scanner is an older type that is simpler than some of the newer PLC or PC types. See the details in our "Induction Equipment For Sale" section. <https://www.themonty.com/induction/#I172> **October 11, 2017**

ALD Thermal Treatment/ Ramos Arizpe, Mexico

For the third year running commercial heat treater ALD Thermal Treatment in Ramos Arizpe, Mexico has been awarded received a "GM supplier Quality Excellence" Award by General Motors. ALD Thermal Treatment is part of the AMG Group out of Germany and their sister company ALD is one of the larger furnace builders in the world. The commercial heat treating division of which ALD in Mexico is part of consists of 3 locations, Mexico, Port Huron, Michigan, USA and Limbach-Oberfrohna, Germany and we at "The Monty" have had the privilege of seeing all three locations, all of which are very well organized with brand new equipment. It is certainly no secret that the US and Mexico operations primarily service General Motors while the German locations largely concentrates on automotive work from German auto parts manufacturers. **October 10, 2017**



SSI Seminars

*"Last week SSI was busy putting on technical seminars in Queretaro, Mexico and Shanghai, China. Working with their local offices in those regions, Damian Bratcher and Jim Oakes provided technical content to quite large groups and it was well received. This year they provided technical seminars in a number of locations including here in Toronto, Canada. Look for SSI to announce dates and cities for 2018 in the coming months. SSI will of course be exhibiting in a couple weeks at the Heat Treat Show in Columbus. You can find them at booth 2407 and they will be presenting a technical paper on FNC and Post Oxidation during the Technical Session on Tuesday as well as Process Automation at the Solution Center on Wednesday." Jim Oakes, VP Business Development, SSI, Super Systems **October 10, 2017** .*



Thanksgiving Holiday

Due to the Thanksgiving Holiday we will be closed with no news updates for October 9th. Regular updates will begin on October 10th. Enjoy your holiday! **October 9, 2017**

Jamie Jones Presented With MTI Distinguished Service Award

"Solar Atmospheres president, Jamie Jones, was recently presented with the Metal Treating Institute (MTI) Distinguished Service Award for 2017, and nominated as Vice President / President Elect of MTI for 2017-2018. Jamie has served on the Institute's Board of Governors since 2013. He has served on a variety of different committees including the Education Committee and NextGen Creative Team. Jamie was honored to receive the Distinguished Service Award, an award given for outstanding, significant, and well recognized contributions of lasting importance to the MTI. Solar Atmospheres has been a member of MTI since 1983. Jamie indicated that he was "very happy to serve the MTI in this capacity. I look forward to the challenges ahead and embrace the opportunity to build MTI to be an even more all-encompassing organization for commercial and contract heat treaters around the globe." The Metal Treating Institute (MTI) is the world's largest collection of commercial heat treaters with locations in 40 states, 8 countries, and over \$1.2 billion in annual sales. More information can be obtained about MTI by going to www.heattreat.net. For additional information about Solar Atmospheres, please contact Mike Moyer, Director of Sales at 215-721-1502 x1207, or mikem@solaratm.com, or visit us at www.solaratm.com." **October 6, 2017**



Roger Jones, CEO of Solar Atmospheres; Jamie Jones, President of Solar Atmospheres, Souderton.

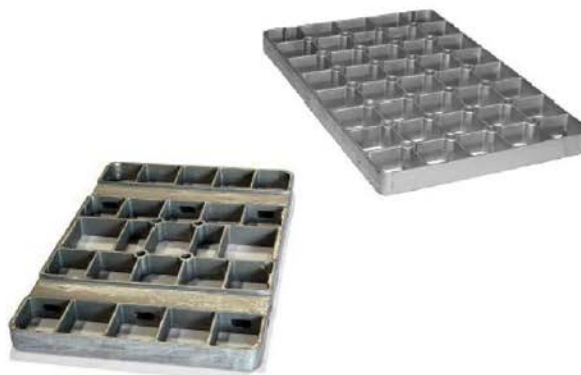
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Kanthal Press Release

The motivation from the Jury is: "Sunfire GmbH has developed a process converting regenerative power, CO₂ and water into synthetic gas or a crude oil substitute (Blue Crude) which has the potential to satisfy the key need for CO₂-neutral transportation fuels for the sustainable society of tomorrow. Sunfire is nominated for their process which utilizes waste heat with the help of efficient high temperature flow heaters to maximize the overall efficiency." "It feels great, I'm very motivated", said Sebastian Becker, Sunfire GmbH. "Sunfire has a very motivated team and we are eager to make the world more renewable. Hopefully we have the right idea at the right time with the right people, and I think this can make us successful." Dr Dilip Chandrasekaran, Head of R&D and Technology at Kanthal, and Chairman of the Jury, said: "Sunfire GmbH has with their technology fulfilled the key criteria for the Kanthal® Award, to promote innovation, sustainability and benefits on a global scale."

The Kanthal® Award recognizes innovations related to new solutions in sustainability, quality of life and the field of energy efficiency. The Kanthal® Award includes a prize sum of 5000 Euro (\$5500), a statuette and a diploma. The prize sum is, however, not for the winner to keep, but is to be donated to a charitable organization which supports the same criteria the

*Kanthal® Award is based. Sunfire GmbH will donate their award to the environmental organization Greenpeace. Kanthal is Sandvik Groups global brand in heating technology with access to Sandvik's world-class resources, including research and development and advanced processing technologies. The company has a strong tradition in innovation and makes extensive investments in R&D. For further information please visit: <http://www.kanthalaward.com/> **October 6, 2017***

SECO/WARWICK Sells Vacuum Nitriding System Into Mexico

Interesting that this is the second time in two days that we have announced furnace builder SECO/WARWICK selling a “Zero Flow” gas nitriding system, yesterday it was India today it is Mexico. **October 5, 2017**

“A global manufacturer of steel and specialty alloys has purchased a SECO/WARWICK nitriding system with vacuum purge and two tempering units to support their expansion in



Mexico. The tempering furnaces will be paired with two existing systems, while the large nitriding unit will stand alone, equipped with ZeroFlowR gas nitriding technology. ZeroFlow technology is a critical tool to enable users to be competitive with traditional systems by reducing the total cost of ownership and producing high quality product. Since 2012, SECO/WARWICK has commissioned several dozen ZeroFlow installations worldwide. Customers using the ZeroFlow technology report savings in ammonia consumption over traditional methods on average while achieving better metallurgical results The two SECO/WARWICK standard box (chamber) tempering furnaces feature a rugged, heavy duty industrial design for uniform heat treating and tempering a wide variety of parts. Also included in this package were comprehensive Professional Technical Services including pairing the new equipment with existing systems, start up, and commissioning of the completed heat treating lines. “Serving our global partners is the primary reason that SECO/WARWICK has

introduced both the ZeroFlow technology and the new Professional Technical Service program. This is a good example of our Service program in action, supporting our customers

by pairing new equipment with their existing manufacturing cell enabling them to get the most value from their capital purchase,” commented Jonathan Markley, Managing Director, SECO/WARWICK, USA.”

Kyle Moore of Paulo Promoted

By way of background we should say that Paulo is the second largest commercial heat treater in North America. **October 5, 2017**

Paulo is excited to announce that Kyle Moore has accepted the St. Louis Production Manager position effective October 2nd. Kyle joined Paulo in 2014 as a Corporate Quality



Management Associate. He was influential in improving our quality management systems and performing audits for ISO 9001, AS9100, TS16949, CQI-9, and NADCAP across multiple facilities. Kyle was then promoted to Paulo St. Louis Quality Manager. In this role he improved the customer experience, enhanced the service level of the quality system and systematically worked through well over 50 PPAP's

(Production Part Approval Process) in 2017. His commitment to the Paulo team and our customers has been instrumental in the success of the plant. His ability to lead process improvement, problem solve, and interface with customers will continue his success as Production Manager. Kyle demonstrates excellent understanding and commitment to our mission of helping our customers succeed.

Tim Mohr, St. Louis Plant Manager, added, “As Quality Manager Kyle has made tremendous improvements to our Quality Systems. I’m excited for him to move into the Production Manager role and continue to move the ball down the field.” Kyle commented, “We have all seen Paulo grow and change and I am very fortunate and proud to be a part of this. I am excited about our future and the team we have assembled to get us there. I look forward to continuing to build our relationships and make our team even stronger.” Ben Crawford, Vice President Operations, comments “Paulo’s commitment to developing talent internally remains. I’m excited to watch Kyle flourish and the plant prosper from his growth and knowledge.” Founded in 1943, Paulo is one of the largest providers of heat treating, brazing, and metal finishing solutions in North America. Headquartered in St. Louis, Paulo operates six

divisions servicing the Midwest and Southeast regions of the United States and northern Mexico.”

Kalyani Thermal Processing

We go to India for this brief news item about a company by the name of Kalyani who is involved in a number of different facets of the heat treating industry including heat treating in house and commercial and building furnaces. **October 4, 2017**

“Kalyani Thermal Processing has been merged with parent company ‘Kalyani Technoforge Ltd’, however it will continue its commercial thermal processing business as a separate profit center division. Our sister company Kalyani Technoforge has recently added a brand new gas nitriding vacuum furnace with zero flow technology purchased from Secowarwick. This furnace is of 1500 kg gross capacity with capabilities of ferritic nitrocarburising, nitriding. Regards, Mandar Bidawe, Business Development Head, Thermal Processing Business, Kalyani Technoforge Ltd, Pune, India”



Super Systems Inc. – Mexico

“SSI Mexico held the 2nd technical seminar in Queretaro, Mexico on 28 Sept 2017. The sixty plus attendees were provided a technical overview of CQI-9, pyrometry services including TUS and SATs, atmosphere generation, oxygen sensor operation and troubleshooting, generator diagnostics, furnace maintenance and aluminum heat treating and microstructures. SSI Mexico provided a product show room to demonstrate real solutions for the technical issues presented. And, as a token of appreciation, the event ended with tapas, cervezas and tequila.

Super Systems agradece a todos los que vinieron al evento. The 3rd seminar has been tentative scheduled for 1Q2018.” **October 4, 2017**



product showroom



“after party” and the 30 people that closed the bar!

Joe Saliba Hired by Onex Inc.

“Onex Inc., Erie, PA is very pleased to announce that Joe Saliba has joined our team and will be responsible for further development of the Blue Diamond Furnace Division. Onex, Inc. is an industrial furnace and service company that serves the heat intensive manufacturers in the surrounding region.

Joe is a graduate of Niagara College’s Mechanical Engineering Technology Program and has been involved in the industrial furnace business for many years. He started his career off with an internship at H&S Heat Treating, Port Robinson, Ontario, Canada and then working at Can-Eng Furnaces, Niagara Falls, Ontario, Canada for 15 years. In his most recent role Joe was Sales Manager and utilized many innovative ideas developing unconventional customized solutions for customers.

"I am really excited to be part of the team here at Onex. Our company is founded in service and our reputation for responding quickly to our customers' needs and staying connected with them has led to very loyal business relationships. I'm very proud to be part of an organization that can provide full thermal processing service work. We are all really looking forward to further developing the Blue Diamond Furnace Division and showing new customers the quality furnace systems that Onex designs and builds." **October 3, 2017**



William Oliver Wright June 26, 1930 – September 26, 2017

While we never knew William Wright he gave some friends of ours a start in the heat treating industry. William Wright and his cousin had a manufacturers rep firm in the Chicago area specializing in the heat treat industry. Going back a number of years he hired a young fellow by the name of Jim Wilbur to assist him in the business which ended up with Jim buying the business. William Wright & Associates is now one of the top rep firms in the Midwest and along with Jim there is also KC Wright and Willy Wright. **October 3, 2017**

"William Oliver Wright, 87, passed away peacefully surrounded by his loving family on September 26, 2017. William is survived by his loving children Kathryn (Andy) Roscher, Clifford (Celeste) Wright, David (Diane) Wright, his brother Clifford (Suzanne) Wright, numerous nieces and nephews, 9 grandchildren and 3 great grandchildren. He was preceded in death by his wife Sheila. Interment will be private at Lake Forest Cemetery. A Celebration of Life gathering will be held at the Deerpath Inn, 255 E Illinois Ave, Lake Forest, IL on Tuesday, October 3rd from 4:00 to 8:00 pm. In lieu of flowers, gifts in memory of William may be made to Friends of Lake Bluff Parks, 355 West Washington Ave, Lake Bluff, IL 60044 www.friendsoflbtparks.org 847-234-4150. Please ensure that your gift is in memory of

William Wright. Information at Wenban Funeral Home 847-234-0022 or www.wenbanfh.com."

Fluke Instruments & IDEMITSU

So what do Fluke (a supplier of Temperature measurement solutions for heat treatment processes) and IDEMITSU (a global supplier of lubricants and petrochemical products) have in common? If you said absolutely nothing we would certainly understand however in this case they do have something in common. Both are our most recent advertisers (their banner ads can be found on the top of the page and on either side of each page) and both will have very large exhibits at the upcoming ASM show in Columbus, Ohio later this month. Please take the time to have a quick look at what each company has to offer. **October 3, 2017**

Monday Morning Briefing

October 6th/2017 there will be an auction of the remaining equipment belonging to **RF Machining LLC.**, in Statesville, NC. Amongst a large collection of gear hobbers, shapers and associated equipment are a couple of Induction systems including a **50KW Pillar Induction Hardening System** which in the pictures looks to be in pretty good shape. Speaking of auctions remember **Donovan Heat Treating** in Philadelphia? Very unfortunately this family owned commercial heat treater closed down and all of the equipment went to auction May of this year. We never did hear how successful the auction was but just this week a reader asked if we knew where the large 41' car bottom furnace had gone to. His understanding was that "some guy in Ohio" bought it but as to the company he wasn't sure. Anybody out there know who bought this furnace? **Ken Lester** who was in charge of the heat treating department at **R. H. Sheppard Co., Inc. in Hanover PA** retired this past week. R.H. Sheppard Company is a manufacturer of gears for power steering systems and has a large in house heat treating department consisting of a number of batch IQ furnaces.

In Australia **Heat Treatment Australia** is certainly doing well these days and is the result of a great deal of work, investment and foresight. "Australia's defence industry employs

around 26,000 people. Most of them are employed by small and medium enterprises (SMEs). Some of those companies have found a niche doing something that is too specialized for a prime contractor, or which a prime cannot do in-house economically. And that includes some very specialized, high value manufacturing and process operations, which makes them vital



parts of collaborative teams and the supply chains of the major prime contractors. For Dr Karen Stanton, Strategy Director at Heat Treatment Australia (HTA) in Brisbane, collaboration is essential. “As they say, necessity breeds invention, and the nature of our economy and markets (limited scale, niche markets, difficulties achieving critical mass) means that Australian companies must innovate and create in order to be successful.” The company specializes in heat treatment of aerospace components that is an essential step in the manufacturing process. Some of these processes could not be done in Australia before HTA developed the capability, and the knock-on effect for Australian industry has been significant, she believes. One example is a vacuum hardening process pioneered by HTA. This is the only process of its kind that is approved for certain F-35 undercarriage components; indeed, HTA is the only company in the 10-nation F-35 partnership approved to carry it out. “The F-35

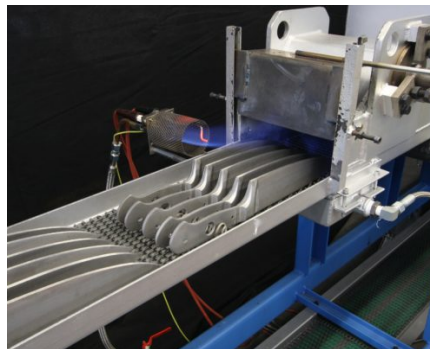
program was the driver behind this innovation and it would not have eventuated if HTA was not involved in the program,” Stanton says. HTA is the only heat treatment business in Australia approved by Lockheed Martin and aerospace accreditation agency Nadcap, she says. Without HTA, components built by at least six other Australian F-35 suppliers would have to be treated overseas, putting their entire body of work at risk due to additional costs and risks such as hedging exchange rate fluctuations, transportation, time delays and travel.” French vacuum furnace builder **BMI** September 14th celebrated their 70th anniversary in business. To highlight the occasion the company hosted 64 people from 12 countries for an open house, a picture of the event can be seen below.



H.C Starck Press Release; *"H.C. Starck's furnace group has delivered a uniquely engineered, high temperature refractory metal hot zone to one of its furnace customers. Collaborating with the customer on this project, H.C. Starck demonstrated its focused engineering resources and dedicated manufacturing team which has been used to design and engineer fabricated products for the furnace industry. With H.C. Starck's portfolio of refractory metals, the team fabricated a 1600°C hot zone designed to operate in a vacuum, with certain inert gases or in a reducing atmosphere. By simulating the temperature of each layer, H.C. Starck's engineering team ensured the proper materials were applied throughout the hot zone."H.C. Starck is excited to deliver the first of its kind refractory metal hot zone with our team of dedicated furnace and metallurgical professionals utilizing the latest technology to simulate and design superior products. We are committed to providing the best in excellence to our customers," said Andreas Mader, President and CEO of the Fabricated Products Division."*

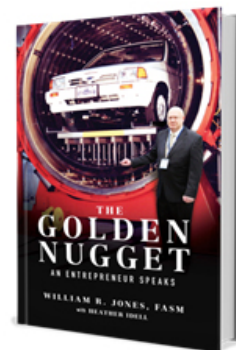
Safed Press Release; *"SAFED Laboratory convinces Industry Leaders; The SAFED laboratory that opened last year in Mödling, Austria has spurred the interest of numerous businesses within the European heat treatment industry. The test plant is already contributing to the continued advancement of thermal processes, says Dr Herwig Altena, head of development and applications engineering at AICHELIN Holding in Mödling. AICHELIN, a subsidiary of the Berndorf Group ranges among the worldwide leaders for the production of industrial furnace plants. <http://aichelin.com> "We are very happy about the numerous inquiries and the exciting and informative experiments that we are now conducting together with our customers. This way, we can test processes individually under real-life conditions and work on solutions tailored to our customers' needs," Dr Altena says, satisfied. Visitors to the laboratory are mostly European companies and leaders of the screw, fastenings, and coin industry. In most cases, they come with very clear ideas but want to gain valuable knowledge before making a definitive decision to buy, or they want to test critical precision adjustments and*

clarify detailed issues in practice. AICHELIN also benefits from these manifold tests. The company can enhance their profound know-how and will thus be able to use the added value gained in product development and process optimization to the advantage of their customers. The test plant is a cast link belt furnace, which is ideally suited for bright annealing, hardening under protective gas atmosphere, carburization or case-hardening, artificial aging as well as tempering. At temperatures of up to 1,100 degrees Celcius, steel components can be treated under any desired composition of protective gas atmosphere. The gas supply panels of the SAFED plant enable the supply of nitrogen, endogas, hydrogen, propane, natural gas, and air. At a maximum loading of 30 kilograms per running meter, the cycle time is between 7.5 and 60 minutes. The plant also has a rapid cooling device, enabling cooling down to under 100 degrees within 2 minutes. When working with thin-walled components such as razor blades, customers are also able to use gas cooling in order to reach their desired results.” **October 2, 2017**



The Golden Nugget: Bill Jones Speaks

“The Solar Atmospheres group of companies announces the October 2017 publication of the unique memoirs of its founder and owner, Bill Jones, an icon in his field. Part memoir, part technical guide, *The Golden Nugget: An Entrepreneur Speaks*, by William R. Jones and co-author Heather Idell, takes the reader on a journey through Mr. Jones’ life and career – from a curious, technically adept young man to becoming one of the most lauded and respected leaders in the vacuum furnace and heat treating industries. Providing insight into the mind of an entrepreneur, the book also chronicles the technical innovations that propelled



Mr. Jones to the forefront of these industries. A must-read for metallurgists, heat treating professionals, and entrepreneurs, as well as students of business and manufacturing. For information on how to obtain a copy of the book, visit solaratm.com/nugget.” **October 2, 2017**

USED EQUIPMENT

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

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

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

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

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

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

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

BATCH FOR SALE

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

[Contact Us](#)

Quick Jump To Items:

- Item # B437** Closure Of A Heat Treat Plant
- Item # B436** 36" x 60" Pit Gas Nitrider
- Item # B435** CODERE Switzerland System 250 42/60
- Item # B434** Holcroft Batch IQ
- Item # B433** Car Bottom 74" x 84" x 84"
- Item # B432** Atmosphere Box Furnace 36" X 48" X 24"
- Item # B431** Air Atmosphere Box Furnace 2,000 F
- Item # B430** Ipsen Recirculating Box Furnace
- Item # B428** Carbottom Furnace 1800 F
- Item # B427** SOLO Swiss Line 202-30/30/60
- Item # B426** Plasma Nitriding Unit 1000 kg Capacity
- Item # B425** Box Furnace 2000 F
- Item # B424** Atmosphere Box Furnace 80" x 96" x 60"
- Item # B421** Surface Combustion "Super 36" Allcase
- Item # B418** Lindberg High Temperature Oven 36" Cubed
- Item # B415** J.L. Becker Car Bottom 1800 F
- Item # B414** Ipsen Batch IQ Installation Immaculate
- Item # B400** Surface Combustion Super 30 Allcase
- Item # B399** Car Bottom Furnace 10' x 12' x 8'
- Item # B398** Sauder Batch IQ Line 24" x 24" x 36"
- Item # B397** "Lift-Off" Atmosphere Box Furnaces (2)
- Item # B391** Ipsen T-11 Batch IQ Furnace
- Item # B388** Hydrogen Atmosphere Furnace 8" x 8" x 8"
- Item # B386** High Temperature Tube Atmosphere Furnace
- Item # B374** Atmosphere Box Furnace 2100 F

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

Item # B352 Pacific Scientific Box Furnace

ITEM # B437

CLOSURE OF A HEAT TREAT PLANT

Closure of a Heat Treat Plant. All of this equipment plus some miscellaneous items are available. 1 Lindberg Homo Carb pit furnace 35" x 60" deep (clear working load area.) Electric. 1 Lindberg Homo Carb pit furnace 35" x 48" deep. Electrically heated. Waukeetronic flow meters, nitrogen, air and NG flowmeters on gas panel. Transformers, SCRs, carbon probes and control panels. Furnaces approximately 20 years old. Both completely rebuilt 2 1/2 years ago. All new alloy. Some spare parts and fixtures.

1 C10 Thermal tempering furnace 40" dia x 60" Deep 1450F. Complete with retort and flowmeter for low O2 work. 92 Kw., Scr and control panel 3 years old. Asking \$ 130K for all furnaces. Canadian funds. Purchaser to remove and load equipment. All equipment was used for aerospace heat treating. All in excellent, nearly new condition. Some additional items available ie; oil quench tank with pump and cooler, quench oil, 3 Despatch ovens 30x30x60" high electric. 650F



ITEM # B436

36" X 60" PIT GAS NITRIDER

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

Asking Price \$75,000 USD.



ITEM # B435

CODERE SWITZERLAND SYSTEM 250 42/60

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

Asking Price: 595,000 CHF



ITEM # B434

HOLCROFT BATCH IQ FURNACE

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

Asking \$55,000 USD.



ITEM # B433

CAR BOTTOM 74" X 84" X 84"

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

Asking Price: 8,250 USD



ITEM # B432

ATMOSPHERE BOX FURNACE 36" X 48" X 24"

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

Asking \$49,500 USD.



ITEM # B431

AIR ATMOSPHERE BOX FURNACE 2,000 F

Lindberg/MPH air atmosphere box. Model Number: 11-ROMT-243624-20, Job Number: 224745. Chamber Dimensions: 24" W x 36" D x 24" H. Electrically heated 40KW. Max Temp: 2,000°F. Capacity: 1,200 lbs. @ 2,000°F. Elect. Input: 480/3/60. SCCR Rating: 65 KW. F.L.A.: 5 AMPs. Elect. Drawing: 7315-1134-00A. 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 \$65,000 USD.



ITEM # B430

IPSEN RECIRCULATING BOX FURNACE

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

Asking Price: \$39,500.00



ITEM # B428

CARBOTTOM FURNACE

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

Asking \$150,000 USD or best offer.



ITEM # B427

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

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

Price on request .



ITEM # B426

PLASMA NITRIDING UNIT 1000 KG CAPACITY

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

Asking 98.000 Euro. Located in Turkey.



ITEM # B425

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

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

Asking \$85,000 USD.



ITEM # B424

ATMOSPHERE BOX FURNACE

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

Asking \$125,000 USD.



ITEM # B422

IPSEN SEALED QUENCH LINE

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

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

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

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

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

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

Asking Price £95,000.00



ITEM # B421

SURFACE COMBUSTION "SUPER 36" ALLCASE

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

Asking Price: \$353,825 USD.

ITEM # B418

LINDBERG HIGH TEMPERATURE OVEN

Lindberg High Temperature Oven. Model 41-MT-363636-2. Serial number 949223. Working dimensions of 36Wx36Lx36H. Manufactured in 1994. Maximum operating temp of 2050F. 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 # B414

IPSEN BATCH IQ INSTALLATION

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

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



ITEM # B400

SURFACE COMBUSTION SUPER 30 ALLCASE

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

Asking \$60,000 USD.



ITEM # B399

CAR BOTTOM FURNACE

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

Asking \$85,000 USD.



ITEM # B398

SAUDER BATCH IQ LINE

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

Dimensions:

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

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

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

Quench: 106" x 10'H x 72"

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

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

Misc. skids, flow panel, SBS, spare parts

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



ITEM # B397

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

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

Asking \$325,000 USD each.



ITEM # B391

IPSEN T-11 BATCH IQ FURNACE

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

package. This furnace includes a stationary loader, gas fired Dunk & Spray washer, manuals & drawings. Good condition, just moved to indoor heated storage.

Asking \$75,000 USD.



ITEM # B388

HYDROGEN ATMOSPHERE FURNACE

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

Price: \$5,000 USD



ITEM # B386

HIGH TEMPERATURE TUBE ATMOSPHERE FURNACE

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

Price: \$2,500 USD.



ITEM # B374

ATMOSPHERE BOX FURNACE

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

Asking Price: \$18,000.00 USD.



ITEM # B371

SAUDER "AUTO-TILT" CAR BOTTOM FURNACE

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

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



ITEM # B352

PACIFIC SCIENTIFIC BOX FURNACE

Pacific Scientific Box Furnace. Working dimensions of 72" wide X 120" long X 48" high, Gas fired radiant tube, maximum operating temperature of 2050F. Air operated vertical lift door, fiber lines, new refractory piers (12), hi-temp horizontal radiant tubes (6 above, 6 below), full safeties, side exhaust guard. Free standing control panel-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 # 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 # C312** Surface Combustion Roller Hearth Line
- Item # C311** Ipsen Pusher Line P-12
- 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 # C219** Abbott Furnace

ITEM # C330

MESH BELT FURNACE LINE

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

Best offer.



ITEM # C329

CI HAYES ATMOSPHERE BELT FURNACE

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

Asking Price \$15,000 USD



ITEM # C328

CI HAYES ATMOSPHERE BELT FURNACE

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

Asking Price \$15,000 USD



ITEM # C327

ROGERS ENGINEERING CONTINUOUS BRAZING FURNACE

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

Asking \$250,000 USD.



ITEM # C325

SINTERITE MESH BELT CONVEYOR FURNACE

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

Asking \$70,000.00 USD or best offer.



ITEM # C324

C.I. HAYES MESH BELT FURNACE

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



ITEM # C323

AICHELIN CAST LINK FURNACE LINE

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

Best offer.



ITEM # C322

SURFACE COMBUSTION ROTARY HEARTH FURNACE LINE

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

Asking \$50,000 USD.



ITEM # C321

AUSTEMPERING SYSTEM

Austempering System. Ipsen Model SG500, S/N52822. Shaker hearth style hardening furnace is capable of 500 pounds/hour, 1850F operating temperature, gas fired 800,000 BTU's/hour with an 18" wide tray. Temper has an operating temperature of 800F and a heat input of 300,000 BTU's. Controls on both are Honeywell UDC units. Entire system consists of a magnetic conveyor loading system, Ipsen shaker-feeder-hopper. 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 # C312

SURFACE COMBUSTION (PIFCO) ROLLER HEARTH LINE

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

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



ITEM # C311

IPSEN PUSHER LINE P-12

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

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



ITEM # C308

AFC MESH BELT HARDENING FURNACE

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

Asking \$75,000 USD.



ITEM # 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.



ITEM # C219

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

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

Asking price: \$77,000 USD / OBO.



DRAW/TEMPER FOR SALE

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Quick Jump To Items:

- Item # T346** Despatch Oven 72" X 48" X 48"
- Item # T345** Surface Combustion Temper Furnaces (4 Available)
- 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 # T333** Composite Curing Oven / Heat Treat Oven
- Item # T329** Guspro Heat Cleaning Oven
- Item # T325** 3-Station Despatch Temper Furnace
- Item # T321** Grieve Conveyor Oven
- Item # T320** Pifco Conveyor Oven
- Item # T318** Temper 48" W X 48" D X 36" H
- Item # T303** Pifco Temper Furnace
- Item # T301** Lucifer Furnace
- Item # T290** Tempering Ovens 36" X 48" X 36" (2 available)
- Item # T286** Tempering Ovens 36" X 48" X 36" (2 available)

ITEM # T346

DESPATCH OVEN 72" X 48" X 48"

Despatch Oven 72" X 48" X 48". Manufactured by Despatch this is an electrically heated oven with working dimensions of 72" high X 48" wide X 48" deep. 230/3/60 40 KW. Operating temperature of 850F. Serial Number: 76414. Temperature Controls: New solid state digital readout indicating controller and overtemp. Side mounted control cabinet. Description & Features: Double swing open doors, Vertical air flow. Provisions for shelves, one shelf included. Top mounted circulating fan forces air over heating elements, located in the rear wall, and up through the work load resulting in good uniformity. Oven has been checked out and test fired and is ready for immediate shipment. Condition: Very Good.

Asking \$14,900.00 USD.



ITEM # T345

SURFACE COMBUSTION TEMPER FURNACES (2 AVAILABLE)

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

Asking \$29,500 USD Each.

ITEM # T343

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

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

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

Asking \$49,900.00 USD.



ITEM # T342

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

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

Asking \$16,500 USD.



ITEM # T341

TEMPER FURNACE

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

Asking \$91,000 USD.



ITEM # T340

SAFED/BOREL ANNEALING FURNACE

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

Price on request.



ITEM # T339

BOX TEMPERING OVEN

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

Asking price is \$55,000 USD.



ITEM # T336

MESH BELT TEMPER FURNACE 48" WIDE

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

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

Asking \$29,500 USD.



ITEM # T335

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

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

Asking \$8,000.00 USD.



ITEM # T333

COMPOSITE CURING OVEN / HEAT TREAT OVEN

Composite Curing Oven / Heat Treat Oven. Manufactured by Epcon this unit has working dimensions of 30'L x 12'W x 12'H and overall dimensions of 31'3"L x 17'4.5"W x 22'4.5"H. Electrically heated with an Inconel 900 KW heater and an operating temperature of 800F. Two recirculating fans type; Two N.Y.B. Size 40 Plug Fans, capacity: 33,000 CFM Each. Motor HP: 30 HP-Each (480V/60HZ/3PH). Exhaust fan; type N.Y.B. Series 20 GI, Size

224DH, capacity 4,000 CFM, 5 HP motor. Interior is 18 Ga. Aluminized Steel and exterior is 18 Ga. Carbon Steel. Insulation: 8# Density Mineral Wool, 7" thickness. Control Panel: NEMA-12. Power Supply: 480V/60HZ/3PH. Double swing doors. Excellent condition, virtually unused. New this was \$811,000 USD.

Asking \$130,000 USD.



ITEM # T329

GUSPRO HEAT CLEANING OVEN

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

\$2,000 or best offer.



ITEM # T325

STATION DESPATCH TEMPER FURNACE

3-Station Despatch Temper Furnace. Manufactured in 1980 by Despatch Industries, Inc. 3 Independently loaded and operated furnace stations with shared panel. Tops elevate off

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

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

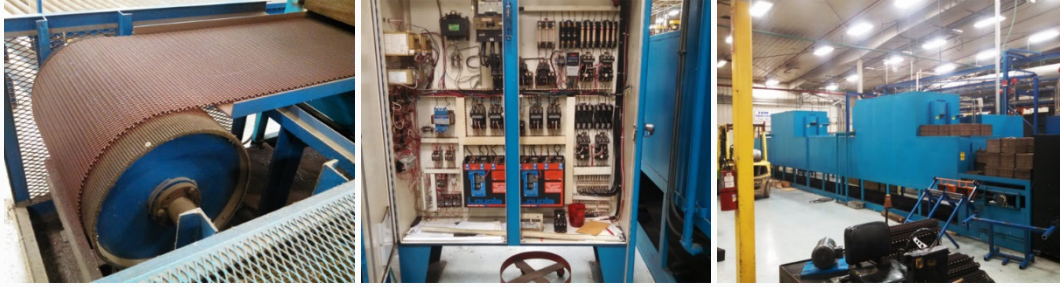


ITEM # T321

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.



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 # T301

LUCIFER FURNACE

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

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



ITEM # T290

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

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

Please call for pricing.



ITEM # T286

LINDBERG BOX TEMPER

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

Asking Price: \$65,000 USD



GENERATORS FOR SALE

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

[Contact Us](#)

Quick Jump To Items:

Item # G201 Ammonia Dissociator 250 SCFH

Item # G200 Endothermic Generators 1500 CFH (2 available)

Item # G198 Endothermic Generator 3000 CFH

Item # G197 Ammonia Dissociator 1000 CFH

Item # G196 Surface Combustion 5000 CFH Endo Generator

Item # G193 Pacific Scientific Endothermic Gas Generator 3000 CFH

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.

Please Call For Pricing



ITEM # G200

ENDOTHERMIC GENERATORS 1500 CFH (2 AVAILABLE)

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

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



ITEM # G198

3,000 CFH ENDOTHERMIC GENERATOR

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

Asking \$22,500.00 USD.



ITEM # G197

AMMONIA DISSOCIATOR

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

Asking Price \$11,500.00 USD.

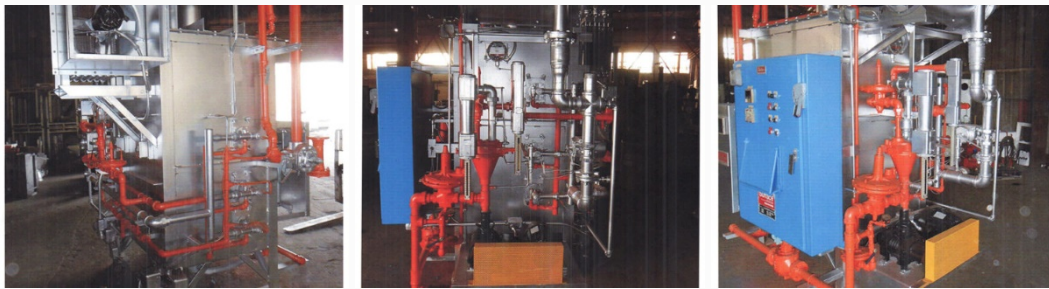


ITEM # G196

SURFACE COMBUSTION 5000 CFH ENDO GENERATOR

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

Asking \$31,500.00 USD.



ITEM # G193

PACIFIC SCIENTIFIC ENDOTHERMIC GAS GENERATOR

Pacific Scientific Endothermic Gas Generator. Natural gas, Model # PGF 3000-EN, Serial #416417, Max Temp 1950°F, Voltage 460/3/60, Work Area 3000 CFH, Dimensions: 42"W x 86"H x 106"L – Approx. Standard "Pacific Scientific" design Endothermic Gas Generator with water cooled shell & tube heat exchanger, Waukee vane pump, Waukee flow meters, atmospheric type ring burner. Generator just removed from service on 4/2015.

Controls: Mounted and wired in an enclosure attached to the generator includes a Honeywell programmable logic controller (PLC) which controls all functions of the generator. The PLC also monitors/controls temperature, dewpoint and flow. There is a Honeywell digital high limit mounted in the same enclosure. This generator has a "Waukee" rotary vane pump and "Waukee" ratio tronic digital flow controls. This generator is also

equipped with a “Nova” dewpoint system. Available immediately and in very good condition FOB East Chicago, IN.

Please call for pricing.



ITEM # G189

SURFACE COMBUSTION 2400 CFH ENDO GENERATOR

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

Asking \$59,000 USD.



ITEM # G178

AMMONIA DISSOCIATORS (4 AVAILABLE)

Ammonia Dissociators (4 available). Built by Sargeant & Wilbur, 4 electrically heated Ammonia Dissociators. Model GAD3000E. 3,000 CFH capacity. Maximum temperature 1759F. Voltage 480/3/60/60 kW. External dimensions of 5’W x 6’H x 8’L.

Controls: Mounted and wired in a free standing panel includes the following:

- Yokogawa UT 350 digital control for dissociator undertemp.
- Yokogawa UT 350 digital control for dissociator overtemp.

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

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

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

Asking \$29,500.00 USD each.



ITEM # G176

SURFACE "MULTI-BOTTLE" ENDO GENERATORS

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

Asking \$75,000 USD.



ITEM # G173

LINDBERG ENDO GENERATOR

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

Asking \$17,500.00 USD.



ITEM # G169

GASBARRE/SINTERITE FURNACE DIVISION ENDO GENERATOR

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

through the chamber for good uniform heating of the alloy retorts. The natural gas and air pass through a Waukee "mixor" valve then into the Waukee gas pump. Mixed gas enters the 3 "mixed gas" flow meters, through the Selas fire checks and enters the top of the retorts. The gas travels through the catalyst filled heated retorts and exits at the bottom. The exiting Endothermic gas passes through water cooled chambers then finned cooled air heat exchangers then through the Endothermic flow meter. A pressure regulator is supplied on the exiting gas piping. Good condition.

Asking \$29,500.00 USD.



INDUCTION 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 # I173 125 Kw Ajax Induction Generator

Item # I172 Vertical Induction Scanner

Item # I171 50 Kw Lepel Generator

Item # I164 Ajax Tocco Induction Power Supply Unused

Item # I160 Ajax Tocco Power Supply Unused

Item # I158 Induction Power Supply 335 kW

Item # I153 Raydyne Induction Heating System 40 kW

ITEM # I173

125 KW AJAX INDUCTION GENERATOR

125 Kw Ajax Induction Generator. Output is 125 Kw, Frequency 300KHZ, 460 Volt, Line Current 352 Amps. Foot Print 48" x 80" x 78". PLC operated, Optical Infrared Pyrometer Temperature Control. Approximately 100 Induction Coils. Spare Load Coil Transformer. Lepel Heat Exchanger Lift and Rotate Fixture. Good Operating Condition.

Asking Price: \$15,250.00 USD



ITEM # I172

DUAL SPINDLE INDUCTION SCANNER

Dual Spindle Induction Scanner. Manufactured by Inductoheat this is an Inductoheat Statiscan II 200 Kw, 30khz vertical Induction scanner. This is a moderately used piece of equipment. It was used in a machine shop operation for a variety of parts. It appears to be in very good condition with some minor maint. required. Power Supply is IGBT type. This was in operation until a couple of weeks ago when it was replaced with a newer scanner. It has a 24" scanning capacity. (Replacement value est. \$200,000)

It is available with;

- Dual Output Bus with shorting bar for single coil operation. (replacement value est. \$4,000 +/-)
- Nine (9) MIQ (machined integral quench) Coils, 1 - 5/8" bore, 1- 7/8" bore, 1 - 1 1/4" bore, 2 - 1 1/2" bore (need repair), 2 - 2" bore, 2- 2 - 2 1/2" bore. All are in good or like new condition except the 1 1/2". (Replacement value est. \$15,000 +/-)
- Spare Durant Counter (Replacement value est. \$2,000). This model is a little simpler and less complex than more recent PLC or PC controls. I believe it would lend itself to a shop with less experienced operators or with frequently changing operators.
- Some (if not all) Documentation.

Asking Price: \$75,000.00 USD



ITEM # I171

50 KW LEPEL GENERATOR

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

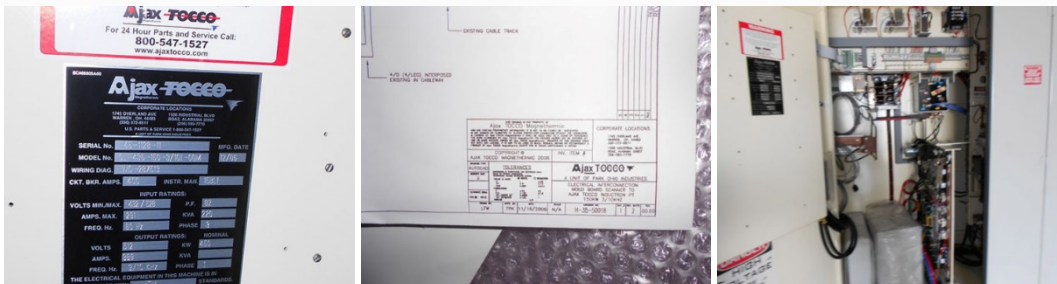


ITEM # I164

AJAX TOCCO INDUCTION POWER SUPPLY

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

Asking \$33,000 USD.

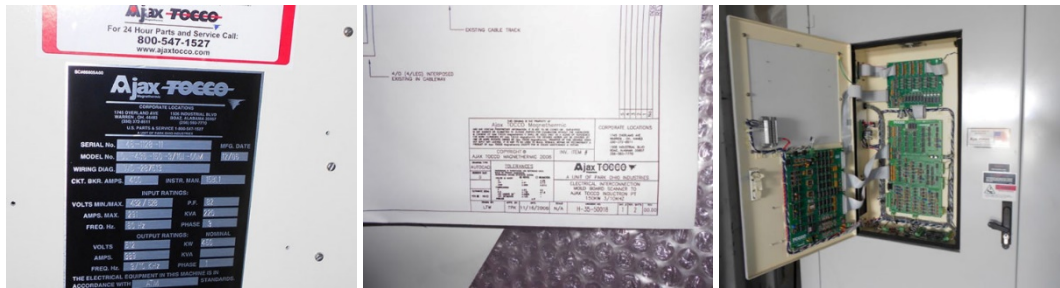


ITEM # I160

AJAX TOCCO POWER SUPPLY (UN-USED)

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

Asking \$39,000.00 USD.



ITEM # I158

INDUCTION POWER SUPPLY

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

Asking \$39,500.00 USD.



ITEM # I153

RAYDYNE INDUCTION HEATING SYSTEM

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

Asking \$7,500.00 USD.



LAB EQUIPMENT FOR SALE

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Quick Jump To Items:

Item # L8 Clark Micro Hardness Tester

Item # L7 Leco Micro Hardness Tester

Item # L3 Laser Diffraction Particle Size Analyzer

Item # L1 Detroit Testing Brinell Hardness Tester

ITEM #L8

CLARK MICRO HARDNESS TESTER

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

Asking \$6,500.00 USD.



ITEM #L7

LECO MICRO HARDNESS TESTER

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

Asking \$7,000.00 USD.



ITEM #L3

LASER DIFFRACTION PARTICLE SIZE ANALYZER

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

Asking \$20,000 for complete system.

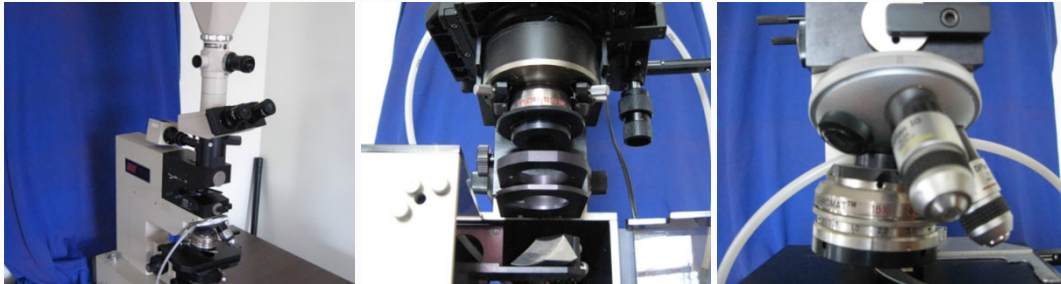


ITEM # L1

SPECTRA-TECH 0044-003 INFRARED MICROSCOPE

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

\$6,500.00 USD.



MISCELLANEOUS FOR SALE

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Quick Jump To Items:

- Item #M410** Magnaflux MPI Inspection
 - Item #M409** Graymill Aqueous/Solvent Parts Washer
 - Item #M408** Surface Combustion Power Loading Table 30" Wide
 - Item #M406** Surface Combustion Parts Washer
 - Item #M402** Closed Loop Water Cooling System 15 GPM
 - Item #M400** Nitrogen Generating System 99.999 Purity
 - Item #M399** Eclipse Burners, Recuperators, Spark Igniters
 - Item #M396** Surplus Cast Link Belt HT Material
 - Item #M394** Hi Tech Weighing System
 - Item #M385** Giant Finishing Machine
 - Item #M381** Water Cooling System
 - Item #M380** Bronco Wheelabrator 36" Meshbelt
 - Item #M378** 1 Surface Combustion Radiant Tube
 - Item #M370** SBS Quench Airs 3 Fan Units
 - Item #M366** Wheelabrator Rubber Belt Tumblast
 - Item #M365** Dual Lane Conveyor Washer
 - 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 #M410

MAGNAFLUX MPI INSPECTION

Magnaflux MPI Inspection, with Magnaglo hood. Type H720 Special, Serial Number 70465. 120" Base, 600 Amps DC continuous, 6000 Amps intermittent, 24" Ring. Maximum part length is 92". Instruction Manual included. Unit is designed for semi-automatic inspection of various parts using Magnaglo continuous or residual wet method of fluorescent magnetic particle inspection. Unit features both circular and longitudinal magnetization over a wide range of parts.

Asking Price: \$11,750.00



ITEM #M409

GRAYMILL AQUEOUS/SOLVENT PARTS WASHER

Graymill Aqueous/Solvent Parts Washer. TR-Series 795-92561 12-11. Tank Size 47" x 26 3/4" x 24" D, Heater to 180 F. No Platform in this equipment. Oil Separator OSEP-5. Rinse tank, RP tank, Containment. Good Operating Condition

Asking Price: \$1250.00 USD



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 #M402

CLOSED LOOP WATER COOLING SYSTEM

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

Asking \$7,950.00 USD.



ITEM #M400

NITROGEN GENERATING SYSTEM

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

Asking \$82,500.00 USD.



ITEM #M399

ECLIPSE BURNERS, RECUPERATORS AND SPARK IGNITERS

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

Asking \$1840 USD each.

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

\$695 USD each.

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

\$100 USD each.



ITEM #M396

SURPLUS CAST LINK BELT

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

Please call for pricing – Gord: 905.271.0033



ITEM #M394

HI TECH WEIGHING SYSTEM

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

Asking \$6,000 USD.



ITEM #M385

GIANT FINISHING MACHINE

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

Asking \$30,000 USD.



ITEM #M381

WATER COOLING SYSTEM

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

Asking \$7,500.00 USD.



ITEM #M380

WHEELABRATOR – BRONCO

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

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

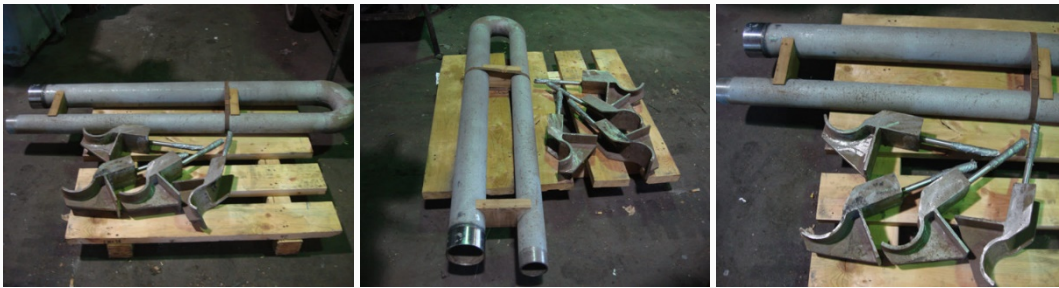


ITEM #M378

1 SURFACE COMBUSTION RADIANT TUBE AND 4 SUPPORTS

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

Asking \$3,000 USD.



ITEM #M370

SBS QUENCH AIRS (2 AVAILABLE)

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

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



ITEM #M366

WHEELABRATOR RUBBER BELT TUMBLAST

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

Asking: \$55, 000.00 USD.



ITEM #M365

DUAL LANE CONVEYOR WASHER

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

Asking: \$39,500.00 USD.



ITEM #M363

SBS UNIT

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

Price: \$15,500.00.



ITEM #M348

IPSEN AUTOMATIC DUNK/SPRAY WASHER

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

Excellent condition asking \$35,000 USD.



ITEM #M346

SBS "QUENCHAIR"

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

Asking \$5,500.00 USD.



ITEM #M341

AFC CHARGE CAR

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

Asking \$28,500.00 USD.



ITEM #M334

BERG WATER CHILLER

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

Asking \$5,500.00.



ITEM #M314

HOLCROFT DUNK/SPRAY WASHER

Holcroft Dunk/Spray Washer. Model GPWS 24-36-24. Electrically heated, 480/3/60/50 amps. Working dimensions of 24" wide X 24" high X 36" deep. External dimensions of 96"W X 143" high X 124" long (91" without skimmer attached). This is a standard dunk/spray washer with 4 Warren Electric immersion heaters. Spray nozzles are arranged over and all sides of the wash area. Load height is 51" from floor to top of rollers. Wheel centres are 14-1/2". Controls are mounted and wired on the right hand side of the washer and includes all necessary pushbuttons and signal lights. There is a dunk cycle timer and spray cycle timer. A Honeywell UDC 2000 digital temperature controller controls wash temperature. Good condition. **Asking \$18,500.00 USD.**



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 # VF330** Surface 2-Bar Quench Vacuum Furnace
- Item # VF329** Abar Ipsen HR46 X 72
- Item # VF328** Abar Ipsen Model HS-26 Vacuum Furnace
- Item # VF327** Surface Combustion Vacuum Temper Furnace
- Item # VF326** Ipsen 924 Vacuum Furnace
- Item # VF323** 150 Ton Vacuum Hot Press (2 Available)
- Item # VF322** Vacuum Sintering Furnace, 2,000 C
- Item # VF321** Ipsen Vacuum Furnace
- Item # VF320** High Temperature Vacuum Furnace
- Item # VF319** Vacuum Induction Melting System
- Item # VF317** Twin High Temperature Vacuum HT Sintering Furnaces
- Item # VF316** AVS Vacuum Furnace 24" x 24" x 48"
- Item # VF315** AVS Vacuum Furnace (Rebuilt)
- Item # VF314** Ipsen Bottom Load Furnace 60" x 96"
- Item # VF313** Top Loading Vacuum Furnaces 2100 C
- Item # VF312** Vacuum Furnace 2400 C
- Item # VF311** Vacuum Furnace 6 Bar Quenching
- Item # VF307** Bottom Loading Vacuum Furnace 48" x 60"
- Item # VF303** Surface Combustion Vacuum Temper Shell
- Item # VF301** Vac Aero 2 Bar Vacuum Furnace
- Item # VF300** Stokes Microvac Pump
- Item # VF299** Sunbeam Vacuum Furnace 36" x 120"
- Item # VF294** Vacuum Annealing Furnace 8" x 90"
- Item # VF289** Ipsen Vacuum Temper 12" x 16" x 24"
- Item # VF285** 20" Right Angle Poppet Valves (4 available)
- Item # VF282** AVS Vacuum Debinding/Sintering Furnace

Item # VF281 Surface Combustion Vacuum Furnace

Item # VF271 Sintering/De-Wax Furnace 1400 C

Item # VF267 Semi-Continuous Titanium Diffusion Bonding Hot Press

Item # VF266 Kinney 75 CFM Vacuum Pump

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

Item # VF255 Roots Gas Blower

Item # VF254 MD Blower, 350 CFM

Item # VF243 35" Diffusion Pump

Item # VF242 35" Diffusion Pump

ITEM # VF330

SURFACE 2-BAR QUENCH VACUUM FURNACE

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

Asking Price: \$119,000



ITEM # VF329

ABAR IPSEN HR46 X 72

Abar Ipsen HR46 X 72. Manufacturer: Abar Ipsen. Model: HR 46×72. Condition: Rebuilt in 2015. Very good condition. Hot Zone: 36"W x 24"H x 72" deep, Moly, New in June 2015. Elements: Moly. Controls: New Ipsen control panel, new in 2015. Temperature: 2400F. Diffusion Pump: 32" Varian Diffusion Pump (new in 2015). Current configuration has a 4-5' deep pit for the diffusion pump. Pumps: Stokes 212 mechanical pump was rebuilt in early 2016. Welch 1398 holding pump was rebuilt in 2015. Stokes 615 blower recently rebuilt. Spare Rebuilt Stokes 212 mechanical pump and Welch 1398 holding pump available. Current footprint: 21' Wide (+ water surge tank which could be relocated 4'x10'x6'H). 24' Deep (+10' deep loader). 12' High. 5'x9'x5' deep pit for diffusion pump. Power: 480 Volts, 3 Phase, 60 Hz. Loader Included, 10' Long x approx. 3.5' Wide. 2-Tier TZM Moly Grid Fixture, 36" Wide x 72" Long x 18.5" Tall. Cold Trap: Liquid N2 fed Cold Trap. Status: Furnace was in production until January 1st, 2017.

Asking Price: \$350,000



ITEM # VF328

ABAR IPSEN MODEL HS-26 VACUUM FURNACE

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



ITEM # VF327

SURFACE COMBUSTION VACUUM TEMPER FURNACE

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

Asking Price: \$85,000 USD



ITEM # VF326

IPSEN 924 VACUUM FURNACE

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

More details and asking price available upon request.



ITEM # VF323

150 TON VACUUM HOT PRESS (2 AVAILABLE)

(2) 150-Ton Vacuum Hot Presses

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

Asking \$450,000 USD Each



ITEM # VF322

VACUUM SINTERING FURNACE, 2,000 C

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

Temperature: 2000 °C maximum operating temperature. Temperatures above 1700 °C require partial pressure or positive pressure. Maximum heat rate is 10 °C/min ramp rate for room temperature to 1600 °C, ± 10 °C uniformity @ up to 1600 °C in vacuum. Rotary piston roughing pump. Evacuates chamber to 20 micron in 10-15 minutes, empty (5×10^{-3} Torr Ultimate vacuum) 5 μ /hr. leak rate. Process Gasses – Argon, Nitrogen, 1% Methane in Nitrogen. Controls Fully automatic operation with ACE™ control/ Data Acquisition System.

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

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

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

Asking \$180,000 USD.



ITEM # VF321

IPSEN VACUUM FURNACE

Ipsen Vacuum Furnace:

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

Price: \$58,000 USD.



ITEM # VF320

HIGH TEMPERATURE VACUUM FURNACE

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

Asking \$100,000 USD for everything.



ITEM # VF319

VACUUM INDUCTION MELTING SYSTEM

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

Asking \$285,000 USD.

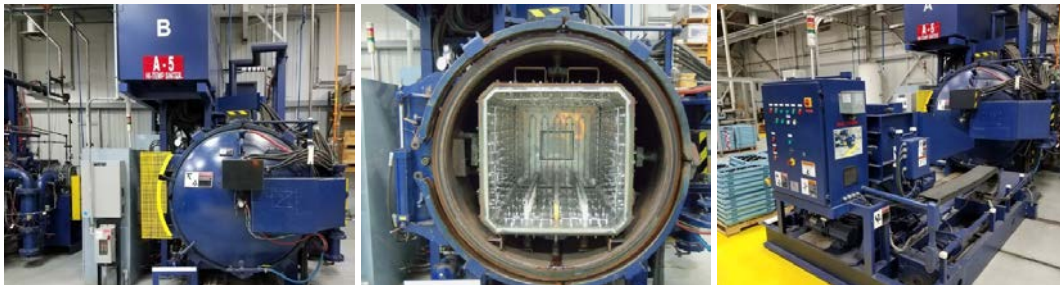


ITEM # VF317

TWIN HIGH TEMPERATURE VACUUM HT & SINTERING FURNACES

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

Asking \$275,000 USD for Both.



ITEM # VF316

AVS VACUUM FURNACE

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

Moly Fixture. VFD on blower. Rear Access Door. Needs new hot zone. May need turbopump and turbopump controller.

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



ITEM # VF315

AVS VACUUM FURNACE (REBUILT)

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

Asking \$195,000 USD.



ITEM # VF314

IPSEN BOTTOM LOAD VACUUM FURNACE

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

Asking Price: \$325,000 USD.



ITEM # VF313

TOP LOADING VACUUM FURNACES (6 AVAILABLE)

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

Asking \$175,000 USD each.



ITEM # VF312

2400C VACUUM FURNACE

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

Asking \$149,000 USD.



ITEM # VF311

VACUUM FURNACE 6 BAR QUENCHING

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

Asking 155.000 Euro.



ITEM # VF307

BOTTOM LOADING VACUUM FURNACE

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

Please call for pricing.



ITEM # VF303

SURFACE COMBUSTION VACUUM TEMPER

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

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



ITEM # VF301

VAC AERO 2 BAR VACUUM FURNACE

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

Asking Price: \$150,000 USD.



ITEM # VF300

STOKES MICROVAC PUMP

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

Asking Price: \$6600 USD or best reasonable offer.



ITEM # VF299

SUNBEAM VACUUM FURNACE

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

Asking Price: \$95,000 USD.



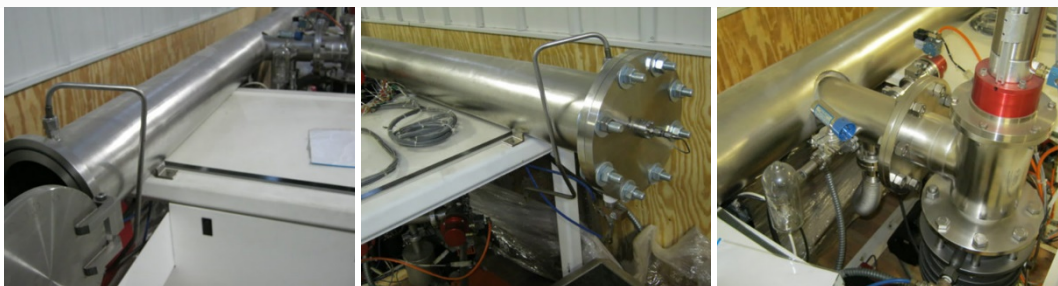
ITEM # VF294

VACUUM ANNEALING FURNACE

Vacuum Annealing Furnace. Manufactured by Thermionics this is a custom designed vacuum annealing furnace designed to heat treat wire up to 210 cm long. The vacuum chamber has an 8" Dia. X 90" effective working length. The operating temperature was

developed for a maximum operating temp of 1200° F, The vacuum nominal level (continuous) duty was developed as 1×10^{-6} Torr. Maximum vacuum level to operate in continuous duty is 5×10^{-8} Torr. The unit was designed to use N₂ gas. The unit was an R & D unit that was built in 1998, but has had little to no use. Excellent condition. New this was \$90,000 USD.

Asking Price: \$29,000.00 USD.



ITEM # VF291

SMALL TOP LOAD VACUUM FURNACE

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

Asking Price: \$10,000 USD



ITEM # VF289

IPSEN VACUUM TEMPER FURNACE

Ipsen Vacuum Temper Furnace. Built in 1981. Working dimensions of 280 mm high X 420 mm wide X 590 mm deep (11" X 16.5" X 23.2"). Maximum load 100kg (220 pounds). Minimum operating temperature 150C, maximum operating temperature 700C. Input

power 94 KVA, heating 71Kw, 575 volts, 60Hz. Type K T/C's, Honeywell controls. Vacuum contact point 1.0×10^{-1} mbar, operating pressure 1000 mbar. Maximum vacuum level 5.0×10^{-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 $\pm 8^\circ\text{C}$. 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.



ITEM # VF285

20" RIGHT ANGLE POPPET VALVES (4 AVAILABLE)

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

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

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



ITEM # VF282

AVS VACUUM DEBINDING/SINTERING FURNACE

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

Asking Price: \$169,000 USD.



ITEM # VF281

SURFACE COMBUSTION VACUUM FURNACE

Surface Combustion Vacuum Furnace. Model: IHVP-364830-2, S/N: VC-42202-1. Work Zone Size: 42”W x 60”L x 30”H. Hot Zone: All graphite, including hearth and elements. Vacuum System: Requires Stokes 1722 Skid (412H mechanical pump and Stokes 615-1 vacuum blower. Both are missing), 16” Port for diffusion pump, but no pump. Power

Supply: 250 kW 460V/3Ph/60Hz. Max. Temp.: 2400F. Max. Load: 3000 lb at 1900F. Cooling Gases: Nitrogen, Argon, Helium. Gas Quench Capability: +12 PSI positive pressure. Cooling Fan: Top mounted. Controls: Honeywell DCP-7700 Temp. Controller. Eclipse EMC-560 Hi-Limit. Honeywell Strip Chart Recorder. Philips Model 316 Vacuum Controller. Control Thermocouple: Ni/Ni-Mo. Fair condition. Location: Southern California.

Asking Price: \$29,000 USD.



ITEM # VF271

SINTERING / DE-WAXING FURNACE

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

Asking Price: \$299,000 USD.

ITEM # VF267

SEMI-CONTINUOUS TITANIUM DIFFUSION BONDING HOT PRESS

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

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

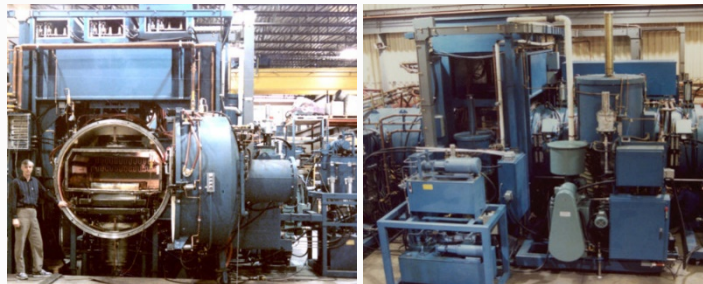
Bonding Chamber. 20" diffusion pump / 100 CFM holding pump Moly Pin walking system rated for 2720 kg load 44" w x 54" d x 20" high product size in batch mode 44" w x 54" d x 6.5" high product size in semi continuous mode Constant 1100°C Heated Platens, Moly pressing surface 1000 tons of force, up pressing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

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

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

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

As is \$890,000.00 USD

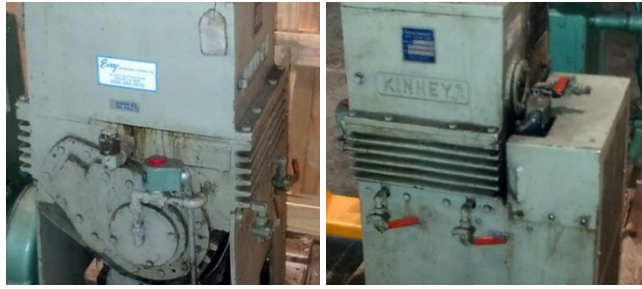


ITEM # VF266

KINNEY 75 CFM VACUUM PUMP

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

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

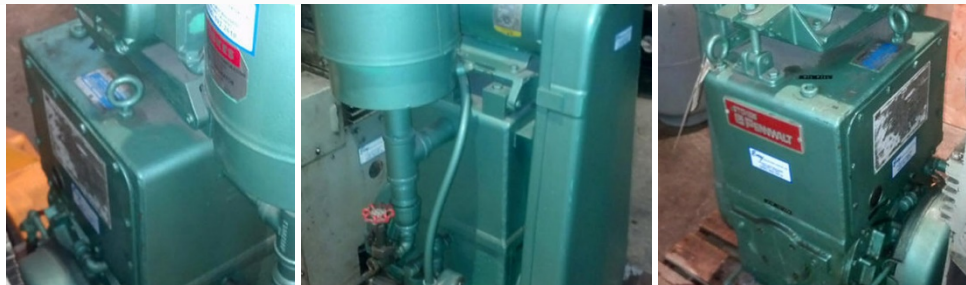


ITEM # VF265

STOKES 149H-11 80 CFM VACUUM PUMP

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

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



ITEM # VF255

ROOTS GAS BLOWER

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

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



ITEM # VF254

MD BLOWER, 350 CFM

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

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



ITEM # VF243

35" DIFFUSION PUMP

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

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



ITEM # VF242

35" DIFFUSION PUMP

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

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

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



HEAT TREAT CENTRAL

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

Please send your enquiries to:

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

¹While supplies last

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

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Moly

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

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



NEW EQUIPMENT

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



AFC-Holcroft of Wixom,

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



ALD Vacuum Systems of Wixom,

Michigan provides 'The Solution' to your high volume, vacuum based heat-treating equipment requirements.

We provide process capabilities such as Low Pressure Carburizing (LPC) and high pressure gas quenching (HPGQ) as well as vacuum oil quenching, neutral hardening and on and on. Automated processing of heat treat is the most economical means to gaining the most from your capital investment.



Custom Electric Manufacturing

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



Dry Coolers Inc. of Oxford,

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



Super Systems Inc.

Develops and manufactures products for the thermal processing industry. Our products include probes, analyzers, controllers, software solutions, flow control and

engineered systems. We have extensive experience in addressing industry demands with technology to help our customers be more efficient and produce better quality products. Our state-of-the-art manufacturing facility in Cincinnati, Ohio, and offices around the globe give us the resources to address the instrumentation, software and technical needs of the industry.



South-Tek.

Manufactures a variety of Nitrogen Generators, from those designed to output a few liters per minute of Nitrogen flow rate for table top laboratory applications, to designs capable

of producing 75,000 cubic feet per hour to meet the demands of some of the largest industrial plants. Our systems are capable of producing Nitrogen purities of up to 99.9995% (5 PPM and lower). Whether you are using nitrogen for vacuum quenching, inerting atmosphere furnaces or for required safety purge South-Tek Systems has your solution.

EMPLOYMENT OPPORTUNITIES ADVERTISING

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

Employment Opportunities

Quick Jump To Items:

- Item # 0338** Service Technician
- Item # 0337** Product Manager
- Item # 0336** Account Manager
- Item # 0335** Inside Sales DTR
- Item # 0334** Planning Technician
- Item # 0333** Process Engineer
- Item # 0332** Sales Representative
- Item # 0331** Process Metallurgist
- Item # 0323** Heat Treating Plant Manager

ITEM # 0338

SERVICE TECHNICIAN

Service Technician. Position Title: Combustion and Controls Technician. Position Status: Hourly. Report To: Service Manager. Revision Date: October 2017.

Company Information. Armil CFS, Inc. is a progressive manufacturing and service company specializing in high temperature process equipment, including furnaces, kilns, incinerators and related products; located southeast of the Chicago metropolitan area in South Holland, IL. Industries served include, Investment Casting, Heat Treating, Forging, Incineration, Human and Animal Cremation.

General Position Summary. This position is responsible for the timely assessment and repair of existing thermal process equipment and/or the startup of new systems built by Armil CFS. The Combustion/Controls Technician utilizes verbal and written communication skills to maintain a close relationship with the client from the installation to the completion phase, confirm that the client receives the products described in the contract. When in the shop, this position will receive direction from Shop/Production Manager to work on other project related tasks

JOB RESPONSIBILITIES

1. Work in industrial plant environment
2. Read blueprints, wiring diagrams, schematic drawings
3. Startup, commissioning and troubleshooting of combustion and control systems
4. Perform preventative maintenance and calibration of equipment and system
5. Familiar with PLC and HMI basic functions
6. Testing, adjustment and replacement of defective or improper functioning circuitry and electronic components
7. Assembly and installation of control panel systems
8. Fabrication of electrical, pneumatic, gas and hydraulic pipe/conduit assemblies
9. Maintain service reporting and documentation as required

PREREQUISITES FOR POSITION

- High school diploma and 5+ years of relevant experience
- Understanding of industrial combustion and thermal control systems
- Excellent interpersonal and communication skills
- Knowledge of NFPA 86 (Standard for Ovens and Furnaces)
- Knowledge of NFPA 70E (Electrical Safety in the Work Place)
- Knowledge of basic computer functions
- Out of town travel (as required)
- Valid driver's license

COMPENSATION. Competitive Compensation based upon skill sets and experience. This is a full-time position with a competitive wage and benefit package that includes medical, disability, and life insurances, employer funding to H.S.A., employer matched 401(k) plan,

paid holidays and vacation.
Armil CFS is an Equal Opportunity Employer.

Please send resumes to jeffp@armilcfs.com

ITEM # 0337 ACCOUNT MANAGER

Job Title: **Product Manager** – Metalworking Lubricants

Exempt-Nonexempt: X Exempt Non-Exempt

Location: Detroit Office (Southfield, MI)

Reports to: Senior Regional Chief Engineer

Position Summary: Charged with a product line contribution as a business unit. This extends from increasing the profitability of existing products to developing new products for the company. Markets and develops products based on industry experience and contact with customers and prospects. Possesses a unique blend of business and technical savvy; a big-picture vision, and the drive to make that vision a reality. Spends time in the market to understand their problems, and find innovative solutions for the broader market.

Essential Functions/Examples of Duties:

- 1) Identify and develop new sales opportunities and/or products based on market needs.
- 2) Manage the product line from strategic planning to tactical activities. Working closely with all divisions, supports the development of marketing strategy including; finding new markets for current products, developing new products to meet market needs and setting strategies to improve profit margins.
- 3) Specify market requirements for current and future products by conducting market research supported by on-going visits to customers and non-customers
- 4) Drive a solution set across development teams (primarily Development/Engineering, and Marketing Communications) through market requirements, product contract, and positioning.
- 5) Analyzing potential partner relationships for products
- 6) Cross Sell. Gain approvals and sell current products to additional ILA sales markets. (IE. OEM to After Market, Passenger Car to Heavy Duty market, etc.).
- 7) Network with and grow industry contacts by consistently attending association meetings, joining technical committees, presenting papers to symposiums, industry meetings etc..
- 8) Conduct product training for Customers and ILA associates
- 9) Gain OEM written approvals for IKC / ILA products
- 10) Communicate information about new technologies, product developments and industry requirements to customers and appropriate associates within ILA / IKC and IKC Affiliates
- 11) Communicate customer information to appropriate coworkers within ILA / IKC and IKC following company policies and procedures.

- 12) Help to develop product specification sheets and marketing literature.
- 13) Maintains professional and technical knowledge by attending educational workshops; reviewing professional publications; establishing personal networks; participating in professional societies.
- 14) Maintains subordinates job results by leading, coaching and disciplining employees; planning, monitoring, and appraising job results.

The preceding functions are examples of the types of work performed by associates assigned to this job classification. Management reserves the right to add, modify, change, or rescind work assignments and to make reasonable accommodations as needed.

Minimum Requirements:

Education Preferred: BS/BA. Technical Bachelor's degree preferred (Mechanical/Chemical Engineering, Chemistry, Marketing).

Experience: Must be able to research new markets and help develop new business strategies

Product Specific: Min.4-5 years of appropriate lubricant and industry knowledge as well as proven sales experience.

Special Skills: Strong lubricant sales background

Working/Networking relationship with Equipment OEMs

Marketing Strategy Planning experience

Project Management

Metalworking Lubricant knowledge

Familiarity of competitive product lines

General knowledge of product formulation

Complete understanding of product applications

Outstanding communication skills including presentations and public speaking.

Strong computer skills including Microsoft Office and Dynamics CRM

Additional Information:

Travel required 40 to 60%

Please send resumes to :

awilkerson@ilacorp.com

ITEM # 0336 ACCOUNT MANAGER

Job Title: **Account Manager**

Exempt-Nonexempt: X Exempt Non-Exempt

Incumbent:

Location: Southeast -Reports to Detroit Office

Reports to: Division Manager/Deputy Division Manager

Position Summary: Responsible for implementing action plans to support division market strategy. Establishes, maintains and expands accounts in assigned territory, providing a

high level of customer service and building customer relations through mutually rewarding partnerships.

Essential Functions/Examples of Duties:

- 1) Accomplishes sales goals by implementing action plans to support division market strategy as directed by Division Manager/Deputy Division Manager
- 2) 1. Identifies and qualifies potential new accounts.
- 3) 2. Initiates sales process by scheduling appointments, making initial presentations and understanding account requirements.
- 4) 3. Closes sales by building rapport with potential accounts, explaining product and service capabilities, overcoming objections and preparing quotes.
- 5) Achieves a high level of customer service and support with an emphasis on partnership building. Works with customer to create partnerships that are mutually rewarding.
- 6) Works with resources to expand sales by introducing new products or supporting the development of new applications.
- 7) Works with Deputy Division Manager/Division Manager on business developments/promotions as required to meet sales goal under the direction of Division Manager
- 8) Reports activities, problems, and results to Division Manager and appropriate Technical & Marketing Chief Engineer / Product Manager. Follows company policies and procedures.
- 9) Communicates pricing and product changes to the customer as required
- 10) Supports the collection of past due customer accounts
- 11) Supports Technical & Marketing team's market research including the development of new strategies to expand the business as well as brand image/awareness
- 12) Maintains current customer/industry knowledge through educational opportunities such as; professional publications, industry events and networking.
- 13) 4. Uses resources, creativity and knowledge to find new ways to increase volume sales, support customer needs and elevate ILA recognition in the market.

The preceding functions are examples of the types of work performed by associates assigned to this job classification. Management reserves the right to add, modify, change, or rescind work assignments and to make reasonable accommodations as needed.

Minimum Requirements:

Education: BA/BS (technical degree preferred) or equivalent experience
Experience: 4 to 8 years sales direct, industrial sales experience preferred
Product Specific: Automotive and/or Industrial Fluids/Metalworking background preferred. Knowledge of and experience with OEMs, Tier 1 and Tier 2 suppliers a HUGE plus

Special Skills:

Strong sales drive
Prospecting
Outstanding communication skills including presentations and public speaking.
Closing

Goal setting
Disciplined
Sales training helpful
Strong computer skills including Microsoft Office and Dynamics CRM

Additional Information:

Travel required: 50 to 70%,

Please send resumes to :
awilkerson@ilacorp.com

ITEM # 0335

INTERNAL SALES CONSULTANT

Job Title: **Internal Sales Consultant**

Exempt-Nonexempt: Exempt X Non-Exempt

Location: Detroit Sales Office

Reports to: Area Accounts Manager Division: B2B sales

Position Summary: Responsible for executing internal sales activities for designated B2B customers. The position will establish, maintain, and expand ILA customer services and is responsible for servicing our geographically diverse customers, virtually from the Detroit office. Services will include follow-up with customer inquiries, price quotations and follow up as well as technical product support. This person will be expected to continually build strong communications with both external and internal customers.

Territory: Open

Essential Responsibilities/Examples of Duties:

1. Manage and maintain active communication with designated customers.
2. Utilize ILA resources to fulfill customer requirements.
3. Utilize ILA tools (such as CRM) to keep sales force aware of the activities.
4. Prepare daily, weekly, and monthly planning / sales reports as assigned.
5. Capture relevant information and report to management.
6. Provide recommendations to ILA management to increase effectiveness, and streamline processes.
7. Support I-LAS customers as needed. (I-LAS stands for Lubricants Analysis Services).
8. Provide the highest level of customer support and assist with resolving customer issues.
9. Meet with customers when deemed appropriate by management. Occasional travel required.

The preceding functions are examples of the types of work performed by associates assigned to this job classification. Management reserves the right to add, modify, change, or rescind work assignments and to make reasonable accommodations as needed.

Minimum Requirements:

Education: College degree or equivalent experience is preferred.

Experience: Two years or more of customer relations and/or sales experience

A working familiarity of social media tools.

Previous experience of customer relation management system (CRM) is a huge plus.

Special Skills:

- Strong organizational traits and the ability to work independently.
- Desire to learn and grow
- Ability to provide highly detailed, accurate reports.
- Working knowledge of Microsoft Office including Excel, Word, and Outlook.
- Excellent command of the English language both verbal and written.
- Able to work effectively with ILA managers/leadership.
- Outstanding customer service attitude (service DNA)
- Professional business demeanor.
- Ability to develop and maintain excellent customer relationships.

Additional Information:

Travel: Up to 10% travel is required for this position.

Please send resumes to :

awilkerson@ilacorp.com

ITEM # 0334 PLANNING TECHNICIAN

Planning Technician. Summary: This position works under the direction of the Engineering Manager and Planning Engineer to perform contract review, write planning and disposition of orders received for processing.

Essential Functions:

1. Review incoming documents for contract review.
2. Document and request information from customers to enable process orders to be released.
3. Write instructions and revise process masters for processing without direct supervision.
4. Create sketches and visual instructions to supplement and attach to process masters.
5. Take pictures of hardware as needed.
6. Provide daily updates of requested information regarding customer orders.
7. Perform engineering dispositions when the Engineering Manager, Planning Engineer and/or Process Engineer are not available.

Knowledge, Skills and Abilities:

1. Exceptional computer skills in a variety of programs including, but not limited to Outlook, Excel, Word, PowerPoint and proprietary company software programs
2. Ability to adapt to a changing technology environment.
3. Be able to review a specification or blueprint to determine process and inspection requirements.
4. Be able to manufacture a mount for micro-hardness testing, perform testing & evaluate results.
5. Ability to effectively communicate in English.
6. Ability to work under time constraints to meet internal and external customer demands.
7. Basic math skills.
8. Excellent written communication skills in English.

Supervisory Responsibilities: None at this time.

Working Conditions: Normal office environment.

Minimum Qualifications:

1. High school diploma or GED.
2. ITAR (US Citizen)

Success Factors:

1. Experience in the aerospace/ defence industry.
2. Education or experience in engineering/quality.
3. Have the ability to work well with others in a team environment.
4. High attention to detail.
5. Self-starter.
6. Be able to use hand inspection tools.

Please send resumes to: heather@thermalvac.com

ITEM # 0333 PROCESS ENGINEER

Process Engineer. Summary: This position works under the direct supervision of the Engineering Manager, performing contract review, process planning, evaluation and disposition of orders. In addition the Process Engineer aids the Engineering Manager by assisting and leading in the development and implementation of new jobs and oversees special process development.

Essential Functions:

1. Review incoming documents for contract review.
2. Write instructions for a process master without direct supervision.
3. Develop and train team members in novel processes.
4. Responsible for disposition of Non-Conforming product (NCR's) and investigation of root cause. (Based on experience and/or qualifications described herein.)
5. Responsible for administering the document change request system (DCR).

6. Provide daily updates of requested information regarding customer orders.
7. Maintain Engineering electronic operating system.
8. Work within the team environment to meet internal and external demands for continuous improvement.
9. Request additional information to enable non-conforming orders to be released.

Knowledge, Skills and Abilities:

1. Ability to troubleshoot in a variety of situations.
2. Meticulous attention to detail in repeated tasks.
3. Exceptional computer skills in a variety of programs including, but not limited to Outlook, Excel, Word, PowerPoint and proprietary company software programs.
4. Ability to adapt to a changing technology environment.
5. Excellent communication skills.
6. Be able to review a specification or blueprint to determine process and inspection requirements.
7. Ability to manage time, resources and projects and prioritize effectively.
8. Ability to assemble customer parts based on written instructions.
9. Ability to work under time constraints to meet internal and external customer demands.
10. Be able to use hand inspection tools.
11. Read, write and speak the English language.

Supervisory Responsibilities: None at this time.

Working Conditions: Normal office environment, limited (less than 50%) exposure to shop environment.

Minimum Qualifications:

1. Bachelors Degree in STEM field: (Mechanical Engineering, Materials Science, Chemical Engineering, Physics, Chemistry or a related field).

Success Factors:

1. Experience in the aerospace/defense industry.
2. Ability to work well with others within a team environment committed to continuous improvement by paying high attention to detail.
3. Driven by fast paced environment and able to self-manage multiple tasks.

Please send resumes to: heather@thermalvac.com

ITEM # 0332

SALE REPRESENTATIVE

North American Cronite is seeking a **Sales Representative** in Texas and Oklahoma. Direct employment would also be an option if preferred to a representative agreement. North American Cronite is a world leader in the manufacture of fixtures and furnace parts in refractory alloys for heat treatment, steel, incineration, power generation, automotive, and aerospace industries. SAFE Cronite, our parent company, is present throughout the world, with 700 employees based at 9 production, design and R&D facilities in the United States,

Mexico, France, Great Britain, Germany, Czech Republic, China and India. Please address your inquiries to jim.demarest@safe-cronite.com

ITEM # 0331

PROCESS METALLURGIST WANTED

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

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

Position responsibilities include:

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

Qualifications include:

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

If interested, please submit resume to:

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



ITEM # 0323

HEAT TREATING PLANT MANAGER

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

1. Manages, supervises and coordinates activities of workers engaged in hardening, tempering, annealing, and other Vacuum heat-treating processes to condition metal work pieces and products, applying knowledge of heat-treating processes and properties and structure of materials.

2. Maintain and expand outside customer base for Heat Treating and Brazing services.

Build and maintain rapport with key customers.

3. Schedule Furnace cycles according to customer demand.

4. Communicate with Customers regarding contract, technical and delivery requirements.

5. Perform contract review and enter new orders into database to generate shop travelers used in production.

6. Encourage and promote operating in a continuous improvement environment. Remove waste and constraints from the production processes to improve efficiencies, enhance productivity and to attain established goals.

7. Ensure all members of the manufacturing team are aware of safety policies to provide a safe workplace for our employees.

8. Work closely with shop foremen and maintenance personnel.

9. Work closely with quality personnel to review product consistency, customer requirements and determine areas of improvement.

Knowledge, Skills and Abilities Required:

1. Bachelor of Science in Metallurgy, Metallurgy Engineering or Material Science and Engineering discipline or Equivalent Manufacturing experience required. A minimum of 5 plus years of experience in heat treating.

2. Previous experience/best practices implementing and using continuous improvement tools such as; Six Sigma, 5-S, Lean Manufacturing, etc. to drive improvement.

3. Experience with Aerospace and Nadcap requirements a plus.

4. Previous experience/broad understanding of safety systems and enforcement of safety rules and policies.

5. Excellent planning and organizational skills, with the ability to balance production and maintenance needs.

6. Demonstrated ability to motivate people, assess and develop employee skills.

7. Motivated self starter and proactive problem solver a must

Equal Opportunity Employer, including disabled and veterans.

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

SEEKING EMPLOYMENT ADVERTISING

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

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

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.

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W.G. Montgomery Limited

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Email: gord@themonty.com
