February Issue 2020

HEAT TREAT NEWSLETTER

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INTRODUCTION

This issue of ***"The Monty"*** includes heat treat news from around the world which includes new furnace installations, the latest trends in the industry, lots and lots of *"people"* news and page after page of new furnace listings. As always we hope you enjoy and we look forward to your thoughts and comments.

Sincerely, Gord, Jordan and Dale Montgomery

HEAT TREAT NEWS

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

Bottom Loading Vacuum Furnaces

Jan 31, 2020

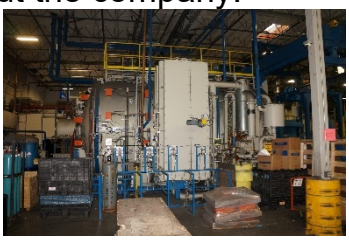
January 29/2020 we had the news item below about bottom loading vacuum furnaces and at the time we promised more details to come. We can now share with you that these furnaces are located at Stack Metallurgical in Portland, Oregon, USA and they were provided by furnace manufacturer Ipsen. The first was installed in 2016 and it's twin in 2018-needless to say what you are looking at is a multi million dollar installation. In this photo we see from the left Gord Montgomery, Nels Plough, President, Craig Beaumier, VP, Sales & Marketing and Mike Deaner, Maintenance Manager (more about Mike and Stack later).

"Bottom Loading (Vertical) Vacuum Furnaces; It would be interesting to know what % of new vacuum furnaces built each year are bottom loading (vertical) as opposed to horizontal loading. It is certainly very much in the minority as they are largely relegated to the aerospace industry and seldom seen in other vacuum hardening applications such as hardening of dies or tool steels. Our guess would be 5% possibly as high as 10% of the total worldwide market but we emphasize that is just a guess on our part. Having said that we have this photo of a really impressive bottom loading vacuum furnace installation we just saw in person. What you are looking at are two bottom loading vacuum furnaces with working dimensions of 60" X 60", 6 bar quenching, each with a capacity of 8,000 pounds and both installed within the past 3 years. More to come."

Largest Vacuum Carburizing Furnace in North America

Jan 31, 2020

Here is a trivia question for you-what is the largest vacuum carburizing furnace in North America? We believe it to be this SECO/WARWICK unit located at Stack Metallurgical in Portland, Oregon, USA. With working dimensions of 72″ X 72″ X 72″, oil quenching and a weight capacity of approximately 10,000 pounds we have yet to see a larger unit in North America. Designed for large gears these photos do not do justice to this monster. By the way next week we will have a profile of Stack telling you all about the company.



Heat Treatment 2000 Ltd./UK Expansion

Jan 30, 2020

Lets go to the UK for an announcement about a major investment in an aluminum processing facility. We actually visited this company back in 2013 shortly after they had installed a new 6,000 pound an hour mesh belt furnace line (you can find the 2013 announcement further down). The company provided this short U Tube video for us.

"We are about to announce the opening of a new £3 million heat treatment facility for aluminium processing. It is sited adjacent to our existing facility and complements our current aluminium capability and the 300 tons per week of fasteners and presswork we currently heat treat. The investment consists of a suite of automatic computer controlled rapid quench furnaces capable of taking up to a 3 ton charge which can be quenched in temperature controlled cold water, hot water or polymer. The latter is followed by and agitated rinse and hot power wash to ensure product cleanliness. This is supported by new precipitation ovens with automatic door opening. Furnaces are a combination of gas and electrically heated opening up new opportunities as well as meeting increased demand for our services. Our investment doubles capacity giving us one of the largest processing capabilities in the UK. Bar code tracking and scanning have also been introduced providing live data which can be accessed remotely."

MARCH 2013 PRESS RELEASE Heat Treatment 2000 Ltd./UK. *We're learning a thing or two about heat treating in the UK, namely that generally the volumes aren't as large as in areas such as the US, Germany, China or Taiwan. Large volume cast or mesh belt continuous furnace lines for heat treating fasteners in all of the areas just mentioned are not uncommon but in the UK they are relatively uncommon and to date the only commercial heat treater we have seen or heard of that specializes in big volume fastener heat treating is a company by the name of Heat Treatment 2000 located West Midlands, England. In 1998 the company invested in a 6,000 pound/hour mesh belt line bought from Can Eng in Niagara Falls, Ontario, Canada for an investment of roughly $2 million USD and just last year purchased another very large mesh belt line from a supplier in Taiwan. While it would appear that continuous heat treating of fasteners is a very strong area for the company not to be missed is the fact that the company also has a very large aluminum processing department. We would describe this as a medium to large size commercial heat treater that looks to have captured an area of heat treating not generally covered by other heat treaters in the UK and consequently the company looks to be doing very well.*



Nitrex Installs System at Gas Springs Manufacturer

Jan 30, 2020

According to this press release Nitrex sold and installed a gas nitriding system to a gas spring manufacturer in Poland, a system which entered production just over a month ago. The system would have been built at the Nitrex location in Poland, a facility which we visited a little while back. The first photo below shows the new installation at ***FA Krosno***, the second picture shows ***Gord Montgomery*** with the founder of Nitrex, ***Mr. Michel Korwin*** at the Nitrex manufacturing facility in Poland.

"FA Krosno completed the installation of a Nitrex nitriding system at the manufacturing facility in its namesake city in southeastern Poland. The company is one of the largest players in the European gas springs market supplying manufacturers of commercial vehicles and agricultural equipment such as Fiat SpA, Scania AB, MAN SE, and AGCO. Over the last several years, FA Krosno and Nitrex have entered into a research and development initiative to improve the durability of piston rods in gas spring assemblies of passenger vehicles. The piston rod is the highest stressed part of the assembly and is subject to buckling, which adversely impacts the service life of the gas spring. The challenge was to design a nitriding cycle that would achieve a high surface hardness for improved wear resistance and minimized friction, and which would ultimately extend the service life of the gas spring."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Trelleborg Sealing Solutions Installs Sintering Ovens

Jan 30, 2020

Trelleborg Sealing Solutions Installs Sintering Ovens

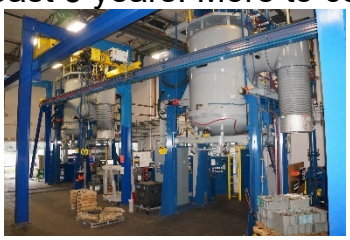
"Wisconsin Oven is pleased to announce the shipment of four (4) Natural Gas Fired Walk-In Series Batch Ovens to Trelleborg Sealing Solutions. These batch ovens will be used for a sintering process on PTFE parts. The maximum operating temperature of the sintering batch ovens is 800° F and the work chamber dimensions are 5'2" wide x 10'0" long x 6'0" high. Each of the ovens utilizes a special rotating mechanism that provides up to 100 rotations per minute and is mounted to the side of the oven per the customer's specifications."

Bottom Loading (Vertical) Vacuum Furnaces

Jan 29, 2020

It would be interesting to know what % of new vacuum furnaces built each year are bottom loading (vertical) as opposed to horizontal loading. It is certainly very much in the minority as they are largely relegated to the aerospace industry and seldom seen in other vacuum hardening applications such as hardening of dies or tool steels. Our guess would be 5% possibly as high as 10% of the total worldwide market but we emphasize that is just a guess on our part. Having said that we have

this photo of a really impressive bottom loading vacuum furnace installation we just saw in person. What you are looking at are two bottom loading vacuum furnaces with working dimensions of 60″ X 60″, 6 bar quenching, each with a capacity of 8,000 pounds and both installed within the past 3 years. More to come.



Kleenair Products Co., Clackamas, Oregon, USA

Jan 29, 2020

Yesterday we had a “teaser” photo of an electrically heated aluminum drop bottom oven with the promise that we would give more details about the manufacturer. The builder is a company by the name of Kleenair Products Co., located near Portland, Oregon, USA and in spite of the fact that it has been in business since 1926 it is a name which doesn’t readily come to mind when it comes to drop bottom ovens. The name “Kleenair” comes from the fact the company originally made ventilation systems for ships before entering the industrial furnace business in the late 1950’s. While every furnace the company builds is custom their most common examples are “tip up” furnaces, car bottom style, box furnaces, sintering furnaces, some MIM vacuum furnaces and yes quite a number of drop bottom ovens over the years. This employee owned company does everything in house from start to finish and is currently run by the majority shareholder Mr. Steve Gee who can be seen in a couple of these pictures. While the company covers many industries their main focus is on the aerospace industry and with over 30 employees and roughly 30,000 square feet under roof they are probably the largest furnace builder in the US Northwest. Nice operation and obviously a company which quietly goes about turning out real solid equipment.

Steve Gee, President, Kleenair, Ben Grammer, Grammer Vacuum Technologies

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Dr. Steffen Wolf Joins UPC Germany

Jan 29, 2020

"Dr Steffen Wolf joined UPC Germany as the Head of Sales Europe in December 2019. Dr Wolf got his doctorate in fuel cell technology in 2013 in the University of Stuttgart. After some learning roles at Planzee AG and DLR (German Aerospace Center), he joined the H+K Hardness and Surface Technology in June 2013 as Technical Sales Manager. H+K is a service company in the field of heat treatment. Dr Wolf has accumulated a deep technical knowledge in many heat treatment processes and technologies. He also developed a very good market understanding in Germany and Europe. He is based in Heiningen where UPC Germany has it's main office. His dynamism and structured approach will streng then UPC Europe and steer the development of competitive solutions for the UPC growing customer base. Please welcome Steffen."

Stack HIP-Grand Opening Celebration, Albany, Oregon, USA

Jan 28, 2020

January 27th, 2020 saw the Grand Opening of the Stack HIP *(Hot Isostatic Press)* facility in Albany, Oregon, USA *(all the details about Stack's investment in this technology can be found in the press releases below)*. It truly is an impressive operation as can be see in the pictures below and we can say that they don't really give you an idea about how large the system is. How about we phrase this another one which really should get your attention, the HIP unit cost approximately $18 million USD and total investment in this plant will be about $25 million USD-now those are really impressive numbers! To refresh your memory these are the details about the unit; *"The Hot Isostatic Press, model QIH286 M URC®, is equipped with Quintus' proprietary uniform rapid cooling and features a large-capacity work zone of 63 inches (1,600 mm) in diameter and 102 inches (2,591 mm) in height, allowing densification of large batches at 29,000 psi (2,000 bar) and a maximum operating temperature of 2280°F (1,250°C). The QIH286 Mega-HIP satisfies Stack's demanding criteria for output quality, operational performance, and cost-effectiveness."*

Portland, Oregon, December 3, 2019 — "Stack Metallurgical Group Augments Hot Isostatic Pressing Capacity with Second System from Quintus Technologies Spurred by a successful entry into Hot Isostatic Pressing at the beginning of this year, Stack Metallurgical Group is redoubling its commitment to the technology with the addition of a second Hot Isostatic Press (HIP) from Quintus Technologies. A trusted provider of heat treating and metal processing services to quality-critical industries, Stack is now investing in a model QIH 122 M URC®, which features a work zone of 26.0 inches (660 mm) in diameter and 68.9 inches (1,750 mm) in height. The new system follows the installation of a high-capacity Mega-HIP, the QIH286 M URC®, with a work zone of 63 inches (1,600 mm) in diameter and 102 inches (2,591 mm) in height. "We've been extremely happy with the market response as we have expanded our service offerings to include HIP," states Doug Puerta, CEO, Stack Metallurgical Group. "The massive size of our first unit enables us to process larger castings and/or powder metal components. The new unit now allows us to efficiently process a wider range of materials and lot

sizes and is ideal for moderately sized components. The capabilities and capacity offered by these two units further strengthens the value proposition that Stack facilities provide their clients."

Like the Mega-HIP, the QIH 122 M URC is equipped with the Quintus proprietary uniform rapid cooling (URC) feature, which combines HIP and heat treatment in a single process. Known as high pressure heat treatment (HPHT), this innovative approach streamlines the steps involved in material densification and heat treatment. It enables all processed components to cool uniformly, resulting in minimal thermal distortion and non-uniform grain growth. The improved material properties are essential for parts designed for demanding applications–in aerospace, medical implants, and power generation, for example. The burgeoning additive manufacturing (AM) environment played a large role in Stack's decision to expand its HIP portfolio. "We see opportunities not only in traditional markets such as castings, but also in emerging markets, with additive manufacturing being the most notable," Mr. Puerta says. The new press, which operates at a maximum temperature of 2,552°F (1,400°C) and a maximum pressure of 30,000 psi (2,070 bar), will be installed in Stack's recently completed facility in Albany, Oregon.

"HIP is an important contributor toward our objective to be a one-stop shop for our clients, as we can now service a broad range of manufacturing milestones," Dan Ederer, Stack Corporate President added, "Quintus has been a great partner since we first began exploring an entrance into HIP. Quintus has provided unique solutions including size, pressure, and cooling rate capability, which has in turn enabled us to partner with our clients in a more comprehensive manner."

"Stack's decision to invest in a second Quintus HIP is a tribute to our leadership position in the industry," says Jan Söderström, CEO of Quintus Technologies. "As the need for Hot Isostatic Pressing steadily increases, we are very pleased with this next step in our relationship."

About Quintus Technologies; *Quintus Technologies is the global leader in high pressure technology. The company designs, manufactures, installs, and supports high pressure systems for sheet metal forming and densification of advanced materials. Quintus has delivered over 1,900 systems to customers within industries such as aerospace, automotive, energy, and medical implants. The company is*

headquartered in Västerås, Sweden, with a presence in 45 countries worldwide. For more information, go to www.quintustechnologies.com

About Stack Metallurgical Services, Inc.;*With a history dating back to 1946, the Stack Metallurgical Group has grown to become the most versatile provider of heat treating and metal processing services in the Pacific Northwest. With its new HIP facility coming on-line in 2019, Stack will offer four Nadcap-accredited locations with a focus on the aerospace, power generation, medical implant, and high-end knife and cutlery markets. The company's modern and extensive equipment line-up offers a comprehensive portfolio of services for demanding clients throughout North America. With a range of aerospace OEM approvals for heat treatment, Stack has built trusted relationships with aerospace titans like Boeing, General Electric, Consolidated Precision Products, and Precision Castparts. Read more about Stack: www.stackmet.com"*



Johan Hjaerne, BU Director Americas, Dave Ederer, Chairman Stack Metallurgical Group, John Erley, BD Manager Americas west

Doug Puerta, Bob Hill, President, Solar Atmospheres

Nels Plough, President, Stack Metallurgical, Kim Chaussee, Production Control Supervisor, Doug Puerta, CEO Stack Metallurgical, Gord Montgomery

Aluminum Drop Bottom Oven

Jan 28, 2020

What you see in this photo is a largely completed, electrically heated aluminum drop bottom oven. It is being built by a US company which we weren't aware made drop bottoms, but as it turns out they have produced quite a few over the years and the company has a very impressive track record-any guesses? More details and photos of this company later this week.

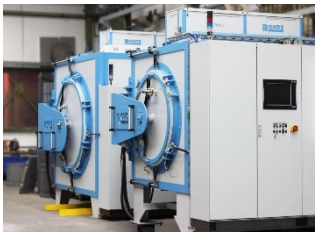
Monday Morning Briefing

Jan 27, 2020

In Quakertown, PA, USA ***Vacu Braze*** recently received their GE Aviation Supplier Approval; *"Vacu Braze continues to expand its capabilities for the Aerospace Industry by receiving the GE Aviation Supplier Approval for Vacuum Heat Treating. The GT193 verifies that a review has been completed of Vacu Braze's technical resources and quality system controls used in heat treating and has found our process to be capable of satisfying certain GE Aviation requirements and specifications. Vacu Braze offers a variety of services catering to the aerospace industry. These include precision vacuum heat treatment for parts such as fasteners, bearings and bushings, weldments, and many other aircraft components. As Vacu Braze continues to expand capabilities and technical*

certifications, we look forward to the opportunity to provide more high-quality services to customers in all the industries we serve." Vacu Braze is owned and run by ***Mr. Ralph Puerta*** which leads us into our next news item. Ralph's son ***Doug Puerta*** is CEO of ***Stack Metallurgical Services Inc.***, in Portland, Oregon which is the largest commercial heat treater in the US Northwest. Monday January 27th we at ***"The Monty"*** will be attending the grand opening of the company's brand new HIP operation in Albany, Oregon and in the process taking a number of photos of this facility and also of the main Stack plant in Oregon. This photo shows the HIP unit being installed.

Going back to October of 2018 we had this news item about a planned new vacuum nitrider installation at ***Siegen Tool and Hardening*** in Germany (our press release is below). The company now has two of these systems installed as you can see in the picture*; "OCTOBER 2018;* ***Siegen Tool and Hardening*** *to Add Rohde Vacuum Nitrider. In Siegen, Germany we see that tooling supplier and commercial heat treater Siegen tool and hardening technology GmbH is adding capacity. In the fall of 2018 this will include a ROHDE Schutzgasöfen GmbH vacuum nitriding system similar to this system which is located at commercial heat treat HTU in Mühlhofen, Germany. Siegen Tool & Hardening currently has a number of furnaces which includes vacuum hardening up to 15 bar and the ability to offer Plasma nitriding and nitrocarburizing."*



Recently it was announced that ***Nitrex*** had acquired vacuum furnace manufacturer ***GM Enterprises*** in California, USA is an acquisition which surprised and impressed many in the industry. We have a small footnote to that story. ***Nitrex*** and sister company ***United Process Controls (UPC)*** are well known around the world as one of the largest suppliers of furnace control systems. In North America UPC sells their products primarily thought independent manufacturers reps, a system which has worked very well for many years. However a number of these same reps also sell for vacuum furnace builder Ipsen

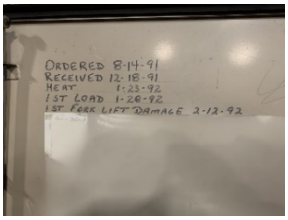
which is of course a competitor to GM Enterprises. We're not sure what the solution to this will be. From our friends at ***Paulo*** comes this press release; *"Paulo is excited to announce the addition of* **Steve Lias** *to the team as Key Account Manager for the Cleveland Division. Steve has completed a month of training on*

the shop floor and at Corporate Headquarters in St. Louis. Steve is not new to the manufacturing world, with close to 30 years of experience selling industrial and electrical supplies nationwide. Steve commented, "I am ecstatic to start working as a Key Account Manager in 2020. Paulo Cleveland has a fantastic team with regards to their knowledge of both customer products and processing requirements. I look forward to growing the sales here, building solid relationships, and providing value to all our customers. Our new HIP unit will open up a new market this year to continue the growth trend we've enjoyed over several years. "William Rassieur, VP Sales, added, "I'm excited to have Steve on the team. His experience, willingness to learn, and customer focus make him a great compliment to the strong group in Cleveland. That facility has grown tremendously to support our customers which can only come from strong relationships. I know Steve will reinforce those existing relationships and forge new ones to take us to our strategic goals. "Founded in 1943, Paulo is one of the largest providers of thermal processing and metal finishing solutions in North America. Headquartered in St. Louis, Paulo operates six divisions servicing the Midwest, Great Lakes, and Southeast regions of the United States and northern Mexico."

Furnace and oven builder ***DELTA H*** started up a Dual Chamber Aerospace Heat Treat (DCAHTTM) at ***AAR Corp.***, at Indianapolis International Airport. AAR is a leading provider of aviation services to commercial airlines and governments worldwide. At its Indianapolis MRO facility it performs heavy maintenance with a focus on the Boeing 737.

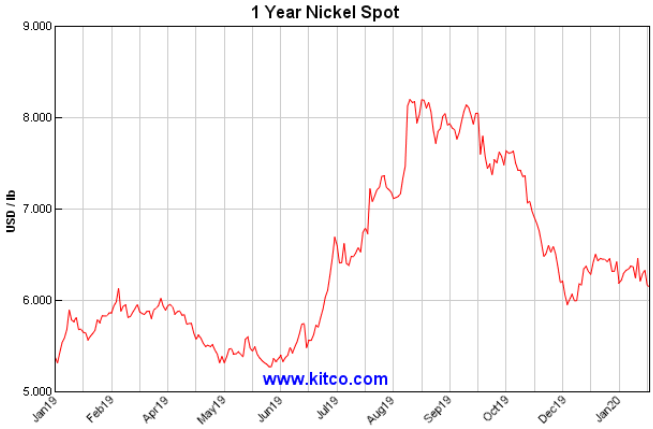
We were recently asked to add a used vacuum furnace to our list of available ***Used Vacuum Furnaces For Sale*** https://themonty.com/vacuum-furnaces/ As part of

the listing we received the photo below. We will apologize right up front for our



rather warped sense of humor but it did strike us as rather humorous. The furnace was ordered new in August of 1991, received December of the same year, installed January of 1992 with the first load processed January 28th of 1992. Exactly 12 days later a furnace loader managed to run a fork lift through the hot zone.

Nickel Pricing remains fairy constant which should bring joy to many heat treaters hearts-the graph below shows pricing for the past year. Nickel as most people know is the largest factor in price fluctuations for all fabricated and cast alloy furnace components and fixturing.



Retech Systems LLC. Last year the ***Retech Division*** of Furnace Builder ***SECO/WARWICK*** went through a number of changes which we mentioned on this site. We came across this report from last week (it has been abbreviated) which explains the changes and where the company stands now-the title was ***"A Sound Turnaround"***. *"Since 1963, Retech Systems LLC has been a global leader in the supply of metallurgical processing equipment and, today, is the world's leading supplier of Electron Beam (EB) and Plasma (PAM) Cold Hearth furnaces for melting and refining titanium and titanium alloys. In 2011, Retech became a part of the SECO/ WARWICK group of companies. Its expertise includes end-to-end solutions in several categories: vacuum heat treatment; atmosphere and aluminum thermal processing; controlled atmosphere brazing of aluminum heat exchangers; and vacuum metallurgy. The SECO/WARWICK Group has 10*

companies located on three continents with customers in nearly 70 countries, and production facilities in Poland, the United States, India, and China. Last year, Retech Systems announced that much of the manufacturing and assembly work previously done in the company's home office in Ukiah, California will be transferred to SECO/WARWICK's facilities in Świebodzin, Poland, thus allowing it to be better-positioned to support both large capital projects, while also satisfying the regular, daily customer service needs that its clients demand and deserve. Currently, Managing Director Earl Good reports that Retech is also working on a long-term lease for a new office space and R&D facilities in the Buffalo, New York area.

"We've decreased the size of our manufacturing facility in Ukiah," Good continues. "But we'll continue to maintain the office out in Ukiah; there are a lot of good people there with technical knowhow and it's important that we maintain that. We have increased the cooperation with the SECO Group, our owners, over in Poland; they have very good facilities, as far as manufacturing and assembly. We have a very skilled workforce over in Poland that we can utilize, but we also have options to go to other locations, and the Buffalo facility will provide options to do some manufacturing and assembly here in the U.S., as well. Going forward, Good maintains that Retech Systems has a "very promising proposal backlog that will help us through the next couple of years. There's a lot to be optimistic about," he adds. "We continue to look for opportunities to create new technologies that the market wants and needs. Business has gone pretty well and we will have over $60 million in new capital equipment and combined after-market orders, this year."

And to round things out we reached back into our archives and came up with this picture taken back in 2007. In it we see Lone Star Heat Treat in Houston, Texas, USA one of the largest commercial heat treaters in Texas. As you can see in this picture heat treating in Texas is not your typical heat treating.

Abbott Furnaces Receives New Furnace Orders

Jan 24, 2020

Furnace manufacturer Abbott Furnace in St. Mary's, PA, USA sent us these two press releases about new furnace orders.

Abbott Furnace Receives Order For Sintering Furnace Scheduled For Delivery Q2 2020

"St. Mary's, PA: *Abbott Furnace Company is proud to announce that a company that specializes in manufacturing high volume, ferrous-based powdered metal components in the automotive, lawn and garden, agricultural, and industrial markets has placed an order with Abbott Furnace Company for an electrically heated continuous belt sintering furnace to be delivered in the 2nd quarter of 2020. Abbott Furnace will design, manufacture and install the sintering furnace that is rated at 2,150° F and also includes the unique Abbott Varicool Cooling System. This will be the 36th furnace we have supplied to this customer. We have been able to help them meet their customers' requirements by suppling equipment that allows them to sinter harden cost effectively and in spec day in and day out."*

Abbott Furnace Receives Order For Soft Magnetic Alloy Processing Furnace Scheduled For Delivery Q2 2020

"St. Mary's, PA: *Abbott Furnace Company is proud to announce that a manufacturer in the powder metal industry providing components to the metals and mining market has given Abbott Furnace in St. Marys, PA an order for an electrically heated continuous belt soft magnetic alloy processing furnace shipping*

in the 2nd quarter of 2020. The furnace has a maximum temperature of 1850° F in an air, nitrogen or steam atmosphere and includes a Delube chamber, oxidation chamber, water-jacketed cooling chamber and a Thermostack thermal oxidizer. The furnace will be controlled through an Allen Bradley Micrologix PLC. Abbott Furnace co. continues to support the Powdered Metal business by developing equipment to meet their needs. This furnace design will help the P/M industry to grow in the electrification segment of the market.

About Abbott Furnace; Abbott Furnace is an industrial furnace manufacturer with 35 years of experience designing and producing some of the industry's most reliable and high performing industrial continuous process furnaces. Abbott is a leading producer of industrial sintering furnaces, annealing furnaces, tempering furnaces, brazing furnaces, heat treat furnaces, steam treat furnaces, industrial ovens, CAB furnaces, High-Temperature Furnaces and other specialty furnace products. Abbott Furnace is a privately owned company located in St. Marys, Pennsylvania. Abbott furnaces are proudly manufactured in the USA."

Rightway Fasteners to Add More Heat Treating Capacity

Jan 24, 2020

In Columbus, Indiana, USA fastener manufacture and captive heat treater Rightway has plans on expanding. During a meeting with Columbus City Council earlier this week the company was granted a tax abatement which will help the company expand, add 9 new jobs in 2020 and add three new coating lines and another furnace. Currently the company operates 5 mesh belt lines. This is a brief history of the company; *"Rightway Fasteners, Inc began as Indiana Metal Coatings in 1991, then changed its name the Rightway Fasteners, Inc (RFI) in 1995, and has continued to grow year after year since that time. RFI was established as a joint venture in the US from four well established Japanese owned companies; Meidoh Co. Ltd, Nagoya Dacro, Toyota Tsusho America, and Sannohashi. In 2003, RFI expanded its product line by establishing another joint venture. Owari Seiki (OSR) which manufactures screws and nuts. RFI now specializes in manufacturing specialty bolts and supplying a large variety of nuts and screws to some of the largest and most reputable automobile companies in the world. RFI also specializes in applying surface treatment such as zinc plating and Geomet coatings."*

Bodycote, South Windsor, CT, USA Installs Vacuum Furnace

Jan 23, 2020

The Bodycote location in South Windsor, CT just commissioned this brand new bottom load vacuum furnace (which looks like an Ipsen to us). The furnace is rated for +/- 10F. The South Windsor plant carries Nadcap, AS9100 and ITAR to support a diverse group of Aerospace and Defense manufacturers and specializes in vacuum brazing & vacuum heat treating. This is quite typical of all captive and commercial heat treaters in the US Northeast, heavily dependant upon the aerospace, defense and to a lesser degree medical industries.

Lindberg/MPH Sells Homocarb Pit Furnace

Jan 23, 2020

If you scan through this press release you will see that a very well known individual in the North American furnace manufacturing industry, Mr. Bill St. Thomas is quoted. This gives us the opportunity to include this photo of Bill which was taken at the ASM Heat Treat Show in Columbus, Ohio, USA back in 2017.

“Lindberg/MPH announced the shipment of an Electrically Heated Homocarb Pit Furnace to a manufacturer in the power industry. This pit furnace is designed with a maximum operating temperature of 1750°F and gross workload of 1600 lbs. Temperature uniformity of +/- 25°F at 1650°F was documented with a 9-point profile test.

The furnace can accommodate a work basket with a 25" diameter that is 48" deep providing a clear work volume of 13.64 ft3. A retort minimizes atmosphere consumption and furnace conditioning time between loads. The cover lid utilizes an electrically operated boom lift which provides ease of loading and unloading. An upper furnace fence guard was also installed on the furnace to provide added safety. This pit furnace is designed with the capability to use Homocarb fluid for the furnace atmosphere. It is also designed with a forced cooling system which accelerates cooling of the load while still under a protective atmosphere. “The Homocarb Fluid Atmosphere system pumps the Homocarb Fluid through a furnace inlet tube to a heated target suspended from the cover inside the furnace chamber.

This ensures that the fluid is dissociated to create the furnace atmosphere before it comes into contact with the customer workload." Bill St. Thomas, Business Development Manager"

Mr. Michael Frison, Nitrex Turnkey Systems

Jan 22, 2020

From our friends at Nitrex we have this press release; *"The new year brings a new face to the Nitrex sales team. We are please to announce the appointment of Mr. Michel Frison as Vice-President Global Sales of the Nitrex Turnkey Systems (NTS) division. He joins Nitrex with extensive experience in managing procurement and sales teams, mainly in the aerospace and industrial machinery sectors. "Mr. Frison will be responsible for all NTS sales around the world, overseeing the internal and the external sales network. Michel, welcome to the Nitrex team."*

Used Furnace Appraisals

Jan 22, 2020

One of the services we offer at “The Monty” is used equipment appraisals. Send us a brief description of what you have available along with a few photos and we will happily provide you with an idea about what your equipment is worth on the used market and roughly how long it will take to sell. Why just yesterday we had a company in North Carolina, USA ask us what this continuous furnace was worth-needless to say we had to say scrap value and that is it.

Hot Isostatic Pressing (HIPPING), Spain

Jan 22, 2020

We’re not going to repeat yet again how the HIP process seems to be gathering momentum but it does seem like every time we turn around we have another press release about a new HIP installation. In this case this press release is from Spain and we know absolutely nothing about the company beyond the fact that their target market is similar to everybody else’s-the aerospace and medical industries. Interesting that the company already has 3 locations in the US-Oregon, Ohio and Mississippi to be exact;

“We are pleased to submit a brief description of Isostatic Toll Services Bilbao SL, whose new plant in Abanto-Zierbena (Biscay, Basque Country) will be officially opened on 29th January. ITS Bilbao (“Isostatic Toll Services Bilbao SL”) was founded in Autumn 2018 and the first operational production cycle was performed in October 2019. It is the most modern and capable HIP factory in Southern Europe. ITS Bilbao will support and help boost high-tech Aviation and Medical implant manufacturing Industry in the region.

Isostatic Toll Services Bilbao SL (ITS Bilbao) is an entrepreneurial initiative of 5 individuals of 4 different nationalities = USA, Italy, Belgium and Australia, each with a strong current operational activity in related businesses: forging, toll HIP facility, HIP unit design and assembly, advanced materials production. The European Holding, ITS Europe SA, is located in Luxembourg and will solely control the Bilbao operations. ITS Bilbao is the sister company of 3 similar HIP Toll Center i

n USA, already approved by NADCAP and from relevant jet engines manufactur es. The operation competence is a direct fertilization from the American Toll Ser vices Centers, while the technology is provided by AIP Inc, supplier of the HIP u nits, also shareholder in ITS Bilbao. As such, AIP is currently the only player in the Western World with relevant direct operation activities both in Fabrication an d Operations of HIP units. "



Environmental Issues in the Heat Treating Industry

Jan 21, 2020

It is really not that many years ago that potentially dangerous chemicals in the heat treating and surface treating industries were treated in a very cavalier manner. In years gone by it was not uncommon that used quench oils, vapor degreaser chemicals and cleaning agents were routinely dumped "out back". It is an issue which has come back to haunt many a company and indeed has made some companies virtually unsaleable due to potential liabilities. The infamous "green ooze" story out of Michigan has to be the most egregious case we have ever come across and it is a story which as it turns out has a heat treating element to it. The story started at Electro-Plating Services in Michigan after green ooze was spotted leaking onto a major highway in the state. The latest twist to the story has officials investigating the closed down Commonwealth Heat Treat building which is owned by the same individual who owns Electro-Plating. Commonwealth was a large commercial heat treater in the Detroit area which closed down a number of years ago.

"A Detroit-based property that shares the same owner as the shuttered Electro-Plating Services in Madison Heights is now being investigated for potential hazardous materials, the state said. The Michigan Department of Environment, Great Lakes and Energy on Friday launched an investigation into the property at 5900 Commonwealth St., the agency said in a statement. It is owned by Gary

Sayers, who was recently imprisoned for violations of environmental laws at his Madison Heights company, according to the release.

Detroit Fire Department inspectors identified potentially hazardous liquids at the site, according to the state. These substances were not found on the site when it was inspected in December as part of the probe into contamination that seeped a green ooze onto Interstate 696. EGLE personnel were en route to the site Friday to assess the situation, determine the next steps and ensure the site is properly secured, the agency said. As of 7 p.m., no personnel were on site. Signs on the door from the city fire department and the Department of Building Safety Engineering and Environment warned people to "stay out" and that the building was "condemned and dangerous."

On Dec. 20, motorists spotted the ooze seeping from a wall on eastbound I-696; Electro-Plating Services, shuttered by the state in December 2016, is right above the site where the yellow-green liquid appeared. Nearly 11,000 gallons of contaminated water have been collected from the former Electro-Plating Services building at 945 E. 10 Mile, EGLE said Friday. "The owner of the building has dug a pit that was 10-by-10-feet and 5 feet deep in the basement and he was just pouring his contaminants into this earthen hole," said Jill Greenberg, a spokeswoman for EGLE. "While it was flushed out over time, the contaminants still leached into the soil. There's holes in the roof where water and snow got in, mixing in with the chemicals and found its way out."

Kittyhawk Inc Receives Nadcap® Accreditation for Heat Treating/Hot Isostatic Pressing (HIP) at their New Oregon Facility

Jan 21, 2020

"Nadcap® recognizes Kittyhawk Products OR LLC for its commitment to continual improvement in aerospace quality. Kittyhawk Products OR LLC announces that it has been awarded Nadcap® accreditation for Heat Treating/Hot Isostatic Pressing (HIP). "We at Kittyhawk are proud to share this achievement. Our commitment to better serve our customers with a new facility in the Pacific Northwest is a huge leap for our company. Kittyhawk is a small family run business that has served the

HIP needs of it's customers since 1981. We are confident in our foundation and excited about the growth." Kittyhawk Inc has held Nadcap® accreditation since 2014. The Oregon facility opened its doors in November 2019. Kittyhawk Products OR LLC received Nadcap accreditation for demonstrating their ongoing commitment to quality by satisfying customer requirements and industry specifications. "Nadcap® accreditation is universally acknowledged as a significant undertaking. Validating compliance to industry standards, best practices and customer requirements, Nadcap® has long been incorporated by the aerospace industry into their risk mitigation activity. Congratulations are therefore due to Kittyhawk Products OR LLC as their hard work has resulted in achieving Nadcap accreditation for Heat Treating/Hot Isostatic Pressing (HIP)," commented Michael J. Hayward, Executive Vice President and Chief Operating Officer at the Performance Review Institute."

Monday Morning Briefing

Jan 20, 2020

Cloyes Gear and Products recently announced that it achieved ISO 9001:2015 certification for its manufacturing plant in Paris, Arkansas. We mention the company because they have a reasonably large captive heat treating department; *"Based in Fort Smith, Arkansas, Cloyes is a leader and a global designer, developer, manufacturer and distributor of timing drive systems and components for original equipment manufacturers and the automotive aftermarket. ISO 9001 is the international standard that specifies requirements for a quality management system (QMS). Organizations use the standard to demonstrate the ability to consistently provide products and services that meet customer and regulatory requirements. It is the most popular standard in the ISO 9000 series and the only standard in the series to which organizations can certify."* Last year furnace builder ***SECO/WARWICK*** closed their manufacturing operation in Meadville, PA. We see that the remaining equipment will be auctioned off this week. Rather sad to see the end of the road for this facility which we visited a number of times over the years. We mentioned a little while back how powdered

metal parts supplier ***Chicago Powdered Metal*** in Schiller Park, IL, USA had closed their doors. The equipment, including a number of rather tired mesh belt sintering furnaces will be on the auction block January 23/2020. We can't imagine their will be much demand for the furnaces.

We have rated commercial heat treater ***Hauck Heat Treatment*** #2 in Europe in terms of annual sales https://themonty.com/largest-european-commercial-heat-treaters-february-2019 Well the company continues to grow especially in the growing eastern European heat treat market. The company is in the process of installing a new ***SECO/WARWICK*** vacuum carburizing furnace in their Kaliz, Poland facility which can be seen below.

Since we are talking about Poland and SECO/WARWICK we might as well mention another installation the company is working on. Commercial heat treater ***HART-TECH*** in Poland is in the process as we speak of installing a new system. What you see in this photo is a brand new SECO vacuum furnace capable of vacuum hardening and vacuum carburizing. As you can see installation is almost complete and the furnace should be in production in the near future.

People News. We start off in Enfield, CT, USA where we hear that ***Bob Lyman*** recently became CEO of commercial heat treater ***Eastern Metal Treating, Inc.*** Eastern is a family owned business specializing in austempering and Bob up until the end of 2019 was General Manager. ***Anne Miner*** has been involved with marketing in the heat treat industry for many years and most recently was working with ***Diablo Furnaces*** in Rockford, IL until it closed down at the end of 2019. It would appear that Anne is now Client Services Manager Rebuild & Retrofits for Ingersoll Machine Tools again in Rockford. ***Ben Jones*** recently became Quality Operations Manager at ***Hauck Heat Treatment Ltd.***, in Luton, UK. As we mentioned further up Hauck is one of the largest commercials in Europe.

There is a news report which can be easily found saying that there was an issue at ***RTI Surgical*** in Marquette, Michigan over the weekend which resulted in the plant closing. The stories we have seen have been brief but all basically say that Saturday morning Nitric acid was spilled and that it came from a Heat Treat furnace. No idea what type of furnace it was but needless to say if we hear anything more we will let you know. We will wrap up this Monday Morning Briefing with a photo which dates back a number of years, 12 we believe. In this picture we see ***Terry Profugi*** of ***Hi TecMetal Group*** Inc., in Cleveland along with ***John Hubbard*** of ***Bodycote*** fame.

Stack Metallurgical Group Expands Capabilities with Ipsen Furnace

Jan 17, 2020

Ipsen USA installs a TITAN® vacuum furnace at Stack Metallurgical Group's location in Spokane Valley, Washington. Stack Metallurgical Group is Nadcap accredited and the Northwestern United States' largest commercial heat treater.

Formerly known as Inland NW Metallurgical Services, Stack Spokane is one of the company's four locations offering a range of metal processing services. Installation of the TITAN® H6 2-bar vacuum furnace was completed in late 2019 and will be used to process critical aerospace components.

Stack operates four Ipsen furnaces in Spokane and a dozen more in Portland. From stress relieving, normalizing, annealing and hardening, Ipsen has supplied Stack with numerous furnaces to meet just about any heat-treating need.

"It was an easy choice adding another Ipsen furnace to our offering," said General Manager Ron Decker. "We count on Ipsen for a versatile product that delivers great results."

TITAN® furnaces achieve powerful performance using innovative technology and predictive maintenance capabilities all while maintaining a global platform, small footprint and short delivery times. This TITAN® H6 has a graphite hot zone, load size of 36" wide x 36" high x 48" deep and can process up to 3,000 lbs.

About Ipsen

Ipsen USA designs and manufactures industrial vacuum and atmosphere heat-treating systems, supervisory controls systems and predictive maintenance

software platforms for many industries, including Aerospace, Automotive, Commercial Heat Treating, Energy and Medical. With production locations in America, Europe and Asia, and representation in 34 countries, Ipsen is committed to providing 360° support for customers worldwide. Read more about Ipsen: ipsenusa.com

About Stack Metallurgical Services, Inc.

Stack Metallurgical Group has a history dating to 1946 and has grown to become the most versatile provider of heat treating and metal processing services in the Pacific Northwest. Through its new HIP facility, Stack offers four Nadcap-accredited locations with a focus on the aerospace, power generation, medical implants, and high-end knife and cutlery markets. The company's modern, extensive equipment line-up offers a comprehensive portfolio of services for clients throughout North America. With a range of aerospace OEM approvals for heat treatment, Stack has built trusted relationships with aerospace titans like Boeing, General Electric, Consolidated Precision Products and Precision Castparts. Read more about Stack: stackmet.com.

HT-MX Chihuahua, Mexico Operating HIP System

Jan 17, 2020

We had a news item yesterday about how commercial heat treater HT-MX in Chihuahua, Mexico had ordered a new HIP unit-as it turns out that information is rather out of date. The reality is that HT-MX did order a HIP system however it is now installed, in operation and awaiting NADCAP approval which should happen in the next few weeks. The company plans on having an Open House in February to show off the unit and also to showcase a number of other investments the company had made over the past little while. These photos show part of the HT-MX facility.


Surface Combustion Batch IQ Furnaces 36″ X 48″ X 36″ (2 available)

Jan 17, 2020

We have available two gas fired Surface Combustion “Super 36” Allcase furnaces. These were built in 2001, have updated SSi, “state of the art” controls, one has top cool and both are in excellent condition. Asking price is $115,000 USD each which is a tremendous price. jordan@themonty.com

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First HIP Unit to be Installed in Mexico

Jan 16, 2020

Commercial heat treater HT-MX in Chihuahua, Mexico has just placed an order

with Quintus Technologies for a hot isostatic press (HIP) system. It will include Quintus’ proprietary uniform rapid cooling (URC) feature, which combines HIP and heat treatment in a single process. The HIP has a hot zone measuring 14.8 inches (375 mm) in diameter and 47.2 inches (1,200 mm) in height. It operates at a temperature of 2550°F

(1400°C) and a pressure of up to 2,070 bar (30,000 psi). As far as we know this will be the first HIP unit to be installed in Mexico. We're still surprised at the rapid growth in hot isostatic pressing in North America, this represents roughly the 5th order Quintus has received in the past year. In related news "The Monty" will be attending the grand opening of the brand new HIP installation at Stack Metallurgical in Albany, Oregon at the end of this month. This photo shows the first system being installed-we will be showing you the finished installation in just two weeks.

HALEX Holding GmbH Acquires Härterei Aribert Conrad GmbH

Jan 16, 2020

Yesterday we had a news item about German commercial heat treater HALEX Holding GmbH acquiring another facility, "Härterei Aribert Conrad GmbH" headquartered in Iserlohn-Sümmern, Germany. To go with that news item we have these photos of Härterei Aribert Conrad.

HALEX acquires Härterei Aribert Conrad

Jan 15, 2020

In Germany we see that commercial heat treater Halex with 15 plants around Europe has acquired yet another, in this case a facility by the name of ***"Härterei Aribert Conrad"***. Over the past couple of years we at "The Monty" have had the chance to visit a number of their plants and can truthfully say that they are all pretty nice operations. These pictures tell the story.

"Aldenhoven, 10th January 2020 *– HALEX Holding GmbH acquires all shares of the hardening shop "Härterei Aribert Conrad GmbH" headquartered in Iserlohn-Sümmern. The hardening shop "Härterei Aribert Conrad GmbH" specializes in the heat and surface treatment of metallic material and operates SPS-controlled hardening lines with highly motivated and skilled staff on over 1500 square meters production space. The machines' various application possibilities allow to work an advanced variety of different materials providing excellent, certified quality. Even large quantities will be delivered to the customers' facilities with minimal lead times and optimal quality. This is guaranteed through continuous modernization of the machinery and reliable, future-oriented processes as innovation and progress have a long tradition at Conrad. "Conrad is an excellent addition for our corporate group as technology, geographic location, corporate culture and customer basis fit very well to our group." as described by Sven Killmer, CEO HALEX Holding GmbH. "We are particularly happy that Mr. Kampen will continue to manage the hardening shop Conrad as an experienced and well-connected managing director. Embedded in our supporting HALEX-Holding-structure Conrad is able to continue its success story of the previous years and in join cooperation and our support, invest into its employees, production capacity and new technology. We welcome the hardening shop "Härterei Aribert Conrad GmbH" and all its employees within the HALEX family!"*

Martin Kampen, CEO Härterei Aribert Conrad GmbH adds: „We are happy that through the acquisition we have been able to solve the company's open successor question and were able to ensure the long-term persistence of the company while strongly equipping it for the future, as there are attractive possibilities for knowledge transfers within a group. The HALEX Holding offers a significant added

value to us in many areas. Next to the advantages of a large corporate group, HALEX convinced us especially through its mid-tier corporate culture and decentralized governance strategy. Concrete, this means for us demand-based support in the future, while still being able to make our own decisions for our own local market."

The HALEX GROUP was founded in 1990 and operates as a successful corporate group with two business segments. The company with headquarters in Aldenhoven, Germany belongs to the leading manufacturers of aluminum extrusion dies and service providers for metal finishing through heat and surface treatment in Europe. HALEX operates 15 subsidiaries with around 550 employees in Germany, Italy, The Netherlands and Romania. For the transaction ARQUIS Rechtsanwälte supported the HALEX Holding on the legal side, PwC acted as financial and tax advisor. Additionally, the ERM Group advised on the fields environment, health and safety. The contact to the "Härterei Aribert Conrad GmbH" was made by the M&A consultancy Livingstone Partners."

Härtha Hardening Industries, Weissenburg, Germany

Sabo Boxtel Division, Boxtel, The Netherlands

Handle Härterei GmbH Division, Tübingen, Germany

Haertha Hardening Industries, Aldenhoven, Germany

Beechcraft Explosion, Wichita, Kansas, USA

Jan 15, 2020

Last week we had a news item about an explosion at a Beechcraft facility in Wichita, Kansas. It made our news section because of the possibility that it was related to heat treating the company does. As it turns out it was an autoclave furnace with nitrogen addition and this photo shows what a tremendous explosion it was.

"New pictures released by the Sedgwick County Fire Department show the devastation left after a massive explosion at Textron's Beechcraft plant number three in December. "Once again, it not only does it show the force of this blast but it also shows how fortunate we were that they were on a shutdown," says Chief Doug Williams. Chief Williams told Sedgwick County commissioners the cause of the blast that left 15 workers injured is still a mystery, but he says this massive piece of equipment called an autoclave blew up, sending a fan 450 feet in the air. It landed in a nearby field. "The autoclave exploded out at Textron. This is a very, very large piece of equipment. It was pressurized with nitrogen which is an inert gas. It's not something that's harmful, you're breathing it right now, so, as a result of that explosion, we don't why it exploded," says Commissioner David Dennis.

The autoclave is a large oven, 25 by 65 feet…used to mold airplane equipment. It's so big, it was used to cure a space shuttle wing several years ago. The blast blew the autoclave off its concrete base. At the time of the blast, Textron thought it was a small pipe that exploded. The blast was so big it damaged at least a dozen cars in the parking lot and left mangled metal strewn everywhere. A 20-foot-long piece of iron was launched through the roof of a completely separate building.

"One piece traveled across to another building and just missed a major gas line, which if it would've hit that gas line it would've caused a huge explosion," said Dennis."

Uni-Cast New Hampshire, USA Adds Drop Bottom Ovens

Jan 14, 2020

Back in April of 2019 we had this news item about investment casting company Uni-Cast in Londonderry, NH, USA adding two drop bottom ovens. Well one of them is now installed as you can see in this photo. *"April 11 2019 Uni-Cast is expanding their factory located in Londonderry, NH and they chose Pyradia for the purchase of 2 electric drop bottom ovens with a temperature uniformity of +/- 10 °F for their T4 applications. Uni-Cast is a major manufacturer of sophisticated aluminum investment castings which has built an enviable reputation in the industry for strict quality control and the capability to produce some of the industry's most challenging designs."*

Onejoon Thermal Solutions Buys Eisenmann Thermal Solutions

Jan 14, 2020

We received a press release this morning about how a Korean manufacturer of furnaces, Onejoon Thermal Solutions was buying a German furnace builder by the name of Eisenmann Thermal Solutions. The press release went on to say that the dal would be concluded January 15th and that Eisenmann Thermal Solutions has 200 employees in two locations in Germany. The press release caught our attention as we flatter ourselves that we know the Germany market fairly well but we have never heard of Eisenmann Thermal Solutions before-some investigating was in order. Turns out that yes this all true and it sounds like Eisenmann builds some pretty high end furnaces but few of their products are destined for the "real heat treatment industry". Our very basic research tells us the

company is more involved with kilns and furnaces for producing carbon fibres as opposed to vacuum furnaces, sealed quench furnaces or mesh belt lines.

Solar Atmospheres, Western PA Awarded Gulfstream Approval

Jan 14, 2020

Solar Atmospheres of Western Pennsylvania is proud to announce their recent Gulfstream approval for material process specifications GAMPS 5101 and 5102. Specification GAMPS 5101 relates to the heat treatment of low alloy steels, and GAMPS 5102 is associated with the annealing and precipitation hardening of PH stainless steel. Compliance to these two specifications are fundamental to ensure that flight-critical raw materials and parts are heat treated and tested properly.

"This prime approval not only gives our current customer base permission to use our location for thermal processing of Gulfstream components, it also gives them the ability to run larger loads of 40,000 – 60,000 lbs. at a time, due to our large furnace sizes," stated Michael Johnson, Sales Manager. "The larger loads reduce the number of certifications, furnace charts, and mechanical testing documentation that is typically required post heat treating."

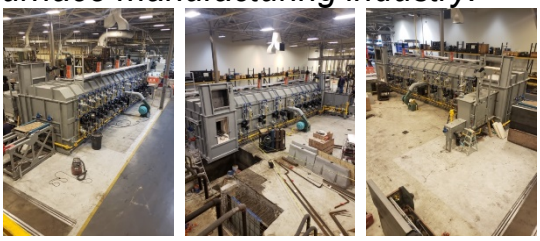
For additional information about Solar Atmospheres, contact Mike Johnson at 1-855-934-3284 or mikej@solaratm.com*, and visit us at* www.solaratm.com*.*

Monday Morning Briefing

Jan 13, 2020

We are going to start off in Europe for our Monday Morning Briefing-Eindhoven, Netherlands to be exact. The photo you see below was taken at commercial heat treater ***Hauck*** in Eindhoven and entered production just a couple of months ago. It has an all metal hot zone and working dimensions of 1.2 X 1.2 X 2 meters (roughly 4′ X 4′ X 6″). According to Hauck it is the largest all metal vacuum furnace is any of their plants and is the largest in the Benelux countries. Hauck is the second largest commercial heat treater in Europe with 27 locations https://themonty.com/largest-european-commercial-heat-treaters-february-2019/

Volvo Drivetrain, Hagerstown, Maryland, USA installs pusher furnace. Back in 2019 we had this press release about McLaughlin Furnace Group receiving an order from a truck component manufacturer. We can now say that the end customer is Volvo Drivetrain in Maryland; *"McLaughlin Furnace Group based in Fort Wayne, Indiana is pleased to announce that they have received an order from a major truck component manufacturer for a two row, gas fired pusher furnace. The president and owner of the company Mr. Jeff McLaughlin had this to say about the order "We are very pleased that such a substantial manufacturer should have so much confidence in our ability to provide a state of the art system on time and on budget. This is a real milestone for our company and reinforces the fact that McLaughlin Furnace Group has grown to be one of the largest and most diversified in the North American furnace manufacturing industry."*



ECM Technologies Promotes Vincent Esteve to ECM USA Business Development Manager; *"Vincent Esteve's primary functions will include overseeing business sales and marketing development in North, Central and South America with a focus on further expanding the ECM brand into innovative markets, such as: 3D additive manufacturing, vacuum induction melting, vapor phase aluminizing, brazing and other vacuum furnace applications now offered from ECM Technologies. This also includes rapid thermal process and annealing furnaces and R&D laboratory equipment. He will develop and execute comprehensive strategic sales and marketing plans for established business*

markets, including but not limited to: automotive, aerospace, nuclear, and energy. The new ECM Technologies' Robotics division will also be a key product offering introduced to all territories. Mr. Esteve joined ECM Technologies in January 2013 as an Area Sales Manager in charge of India, Southern Europe and Latin America. In April 2016, he transferred to ECM USA, Inc. in Kenosha, Wisconsin with a focus to expand ECM into the North and Latin America heat treat markets. ECM Technologies is an innovative low pressure vacuum furnace manufacturer with headquarters in Grenoble, France. With subsidiaries and ventures around the world, ECM's global presence is well known in the automotive, aerospace, nuclear, energy, electronic, induction and 3D additive industries. With such a versatile product line, ECM's products are ideal for heat treatment processes ranging from rapid thermal processing (RTP) with the JIPELEC™ JetFirst furnace to low pressure vacuum carburizing (LPC) with the ICBP® 1299 DUO (dual chamber vacuum furnace). For more information, visit us online at www.ecm-usa.com or www.ecm-furnaces.com."

Last week it was announced that ***"Nitrex"*** had acquired vacuum furnace manufacturer ***G-M Enterprises*** in a very interesting and bold move (this was a January 10th news item for us). What was not included in that press release were any details about the parent company of Nitrex, "***Novacap"*** which makes for interesting reading. Here is a condensed version about Novacap; *"Montreal Jan. 9, 2020. Nitrex, which is backed by Novacap has acquired Corona, California*

based G-M Enterprises, a provider of vacuum furnaces. No financial terms were disclosed. Nitrex is a provider of fully integrated heat treating solutions and technologies. ***ABOUT NOVACAP;*** *Founded in 1981, Novacap is a leading Canadian private equity firm with $3.6 Billion of assets under management. Its distinct investment approach, based on deep operational expertise and an active partnership with entrepreneurs, has helped accelerate growth and create long term value for its numerous portfolio companies. Over the last 38 years, Novacap has invested in more than 90 companies and completed more than 130 add on acquisitions."*

We mentioned ***John Carroll*** a few months back after he left commercial heat treater ***Metals Technology*** in Carol Stream, IL, USA. John just resurfaced at ***Arnold Magnetic Technologies*** in Illinois where he has the title of General Manager. In his new position John will continue to be involved in heat treatment. Where are they now-***Dave Stanton***. Dave started his heat treating career as a metallurgist at ***Iwis Drive Systems***, followed by a stint at ***Rexnord***, some time as heat treat rep and most recently he was with ***IBC Coatings*** in Lebanon, Indiana. It would appear that he just let the industry to take a position as Production Manager at Silicis Technologies also in Indiana.

Mike Kasprzyk of ***Inex*** is retiring. Mike worked for General Motors in the US for many years before starting a company in Upstate New York by the name of Inex who manufacturer radiant tubes of composite of silicon & silicon carbide material for the heat treatment industry. Mike has had an incredible 59 year working career but is now leaving the company in the competent hands of long time employee ***Mike Rumfola***. Silicon carbide radiant tubes have been around for quite some time and suppliers claim they have some real benefits over typical alloy tubes-which we would agree with. However having said that they have never taken over the market and continue to own quite a small portion of the radiant tube market.

In the “interesting rumor” department we have one from the Canadian heat treat market. If you recall commercial heat treater ***Bluewater Thermal*** closed down their location in Kitchener, Ontario just a few months ago and all of the equipment was auctioned off (all the details are in our archives). Rumor has it that the two mesh belt lines and two of the batch IQ furnaces were bought by an individual who is planning on keeping them in place and continuing to operate this facility as a commercial heat treat operation. We are inclined to think this rumor is probably true and we will keep you posted. Since we are talking about the Canadian heat treat market we should mention ***Rajiv Mehta*** who has spent many years in the industry. Rajiv worked at captive heat treater ***Standard Aero*** in Saskatoon, Canada (Standard is now part of Timken Bearings) before moving to ***Bodycote*** in Newmarket, Ontario which was followed by a move to ***Bodycote*** in Burlington, Ontario. Rajiv just parted ways with the company and we have been lead to believe that he is back at Standard Machine which perhaps completes the circle.

To round things out for today we are reaching into our archives to show you this interesting photo. What you see is the pit carburizing heat treat department of one of the largest commercial heat treaters in Germany, ***Hanomag*** in ***Hannover, Germany***. This department represents only a tiny portion of the location as a whole. This photo was taken back in 2013.

Nitrex Acquires G-M Enterprises to Strengthen Products Portfolio

Jan 10, 2020

Now this is quite the news! It has been well known for some time that vacuum furnace manufacturer "G-M Enterprises" in California, USA has been on the market but we at "The Monty" never would have guessed that the buyer would be our good friends at Nitrex. We are surprised and impressed that Nitrex would take this large step. More later.

Montreal, Canada – On January 8, 2020, Nitrex, a lead provider of fully integrated heat-treating solutions and technologies globally, acquired G-M Enterprises, a strong player in the vacuum furnaces market, headquartered in Corona, California. The acquisition is in line with Nitrex' strategy to further expand its integrated heat treatment solutions offer to customers while strengthening its products portfolio. For the past 30 years, G-M Enterprises has earned the reputation as a leading technological supplier of vacuum furnaces solving challenges for customers in the aerospace, power generation, energy, MIM sintering, and commercial heat-treating industries. The acquisition represents a great fit with Nitrex, as both share the same goal of providing technologies that improve customer workflow and efficiency while maximizing the life span and quality of engineered parts and components.

"This acquisition will allow Nitrex to bolster its turnkey solutions business by bringing a new, innovative and broader mix of heat treatment systems to our customers," said Jean-Francois Cloutier, Nitrex CEO.

"G-M Enterprises is a strong performer in the vacuum furnaces market. The company has an outstanding growth opportunity and under Nitrex, we will build on that potential even further, using our global customer base and service footprint. We also look forward to welcoming the entire G-M Enterprises' team into the Nitrex family," continued Jean-Francois Cloutier.

"At G-M Enterprises, we are always looking for new ways to provide customers with the best services and product offerings. Joining forces with Nitrex and becoming part of its family of companies will ensure we keep pace with our customers' evolving needs and expectations," says Suresh Jhawar, G-M Enterprises President. "What this means for the future of G-M Enterprises is an

opportunity to enhance our products and services, expand our international presence further by leveraging the resources, expertise, and capital of Nitrex. These advancements will deliver more value to our customers for years to come," added Suresh Jhawar.

ABOUT NITREX:

Nitrex (www.nitrex.com; www.group-upc.com) is the lead provider of fully integrated heat-treating solutions and technologies globally. The company was founded in 1984 in Montreal, Canada and operates three business units – Nitrex Turnkey System (NTS) a leader of turnkey nitriding and nitrocarburizing systems; Heat Treating Services (HTS) a worldwide network of commercial heat-treating service centers; and UPC, a leading provider of controls upgrade and automation solutions for heat treating and combustion. Nitrex serves its customers globally from 14 locations across the United States, Canada, Mexico, Brazil, Germany, Poland, Italy, France, China, Japan and through a global network of representatives and licensees.

Pictured in the photo from left to right are: Mrs. Veena Jhawar, G-M Enterprises COO; Mr. Jean-François Cloutier, Nitrex CEO; Mr. Suresh Jhawar, G-M Enterprises President

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REMIX Poland to Supply Sealed Quench Furnace Line

Jan 9, 2020

Furnace builder REMIX in Swiebidzin, Poland has started the final phase of production of a UBQ Sealed Quench furnace line licensed by AFC-Holcroft. Remix is one of the larger furnace builders in Poland and for many years has been an AFC-Holcroft (Wixom, Michigan, USA) licensee building furnaces for the European market. The first two photos below show the Sealed Quench (batch IQ for our North American readers) line under construction. When completed the line is going to a major commercial heat treater in Europe. In related news we see that ***Marek Kedzierzynski*** who for a number of years was associated with REMIX is now working with AFC-Holcroft promoting their products in Europe. Marek can be seen in one of the photos below along with Gord Montgomery during a visit a couple of years ago.



Ipsen Stacks the Field with More Trained Technicians

Jan 9, 2020

Ipsen announces the completion of its 2019 Corporate Academy class. Seven graduates will step into their full-time roles as Field Service Engineers (FSEs) after several months of training and a comprehensive exam. The program is part of a strategic initiative to continue growing service capacity across the globe. Ipsen employs the largest and most skilled aftermarket team in the business. With local FSEs, customers have better access to on-site inspections, evaluations, repairs, installation and support for their heat-treating and auxiliary equipment.

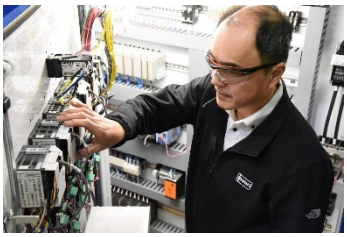
"Since the launch of the Corporate Academy, we have differentiated ourselves from the competition to establish Ipsen as the clear market leader in service," said Ipsen Service Manager John Worley. The next class begins in January 2020 with another starting in April 2020. Ipsen plans to add ten more trained technicians to the field this year. During this five-month training, participants are taught core

values, culture and fundamental job skills through classroom presentations, hands-on troubleshooting experience, and on-the-job field training. Graduates of the 2019 class were grateful for the unique learning opportunity.

"The Ipsen Corporate Academy was a very engaging experience," said one graduate. "Ipsen has given us a great platform to head out into the field."

"The level of training is well above and beyond any company I have worked for," said another graduate. Ipsen is recruiting candidates with mechanical and electrical experience or education who want to improve their skills in vacuum furnace technology, design, installation, service, and troubleshooting. These positions may require relocation, as well as domestic and occasional international travel. For more information on joining the Corporate Academy, visit www.ipsenusa.com/about-us/ipsen-careers/ipsen-corporate-academy.

About Ipsen *Ipsen USA designs and manufactures industrial vacuum and atmosphere heat-treating systems, supervisory controls systems and predictive maintenance software platforms for many industries, including Aerospace, Automotive, Commercial Heat Treating, Energy and Medical. With production locations in America, Europe and Asia, and representation in 34 countries, Ipsen is committed to providing 360° support for customers worldwide.*



Akebono Brake Corporation, Ferritic nitrocarburizing (FNC) of Brake Rotors

Jan 9, 2020

One of our news items of yesterday (January 8 which can be found further down this page) concerned a fire at Akebono Brake Corporation in Glasgow, Kentucky, USA. In the news item we mentioned how Akebono was one of the first companies to process brake rotors using a gas Ferritic nitrocarburizing process. Several readers corrected us on this and we should have known better. As far as we know the first company to mass produce brake rotors using a gas FNC process was Woodworth Heat Treating, a US commercial heat treater with several locations in the US and Mexico. http://www.woodworthheattreating.com/index.html Woodworth processes the parts in mammoth "Tip Up" style furnaces as can be seen in these photos. By the way we have always ranked Woodworth as one of the largest commercial heat treaters in North America https://themonty.com/largest-commercial-heat-treats/

HI TecMetal Group (HTG) Expands

Jan 9, 2020

In the northern USA commercial heat treater HI TecMetal Group (HTG) with 6 locations has been making some major investments as we can see in this press release; *"HI TecMetal Group (HTG), a leading heat treating and brazing service company, has made a $4 million expansion of its Eastlake, OH plant which is expected to create a dozen additional jobs. This expansion includes the installation of a large 60" x 72" vacuum brazing and heat treating furnace, the addition of three smaller vacuum furnaces, three Camco hydrogen brazing furnaces as well as the consolidation of HTG's Induction Brazing business. Since 1943, HTG has provided sophisticated heat treating and brazing services to support diverse markets. The company is adept at brazing and heat treating materials that include steel alloys, stainless steel, super alloys, copper and refractory metals. Later in 2020, HTG will upgrade approximately 20,000 square feet of our Thermal Treatment Center, located in Wickliffe, OH by installing the latest technology Ion and Gas Nitriding equipment."*

Akebono Brake Corporation, Glasgow, Kentucky, USA, Fire

Jan 8, 2020

Akebono Brake Corporation, North American subsidiary of Akebono Brake Industry Co., Ltd., of Japan suffered a fire in their heat treatment department at their Glasgow, Kentucky, USA facility yesterday, January 7th at 8:30 AM. The fire started in a furnace and spread up through the ducting to the roof with the end result that two people were taken to the hospital with some injuries. Both individuals should be fine and it appears the fire started in a heat treat furnace and spread to the furnace ducting (I believe we have heard this story before). Akebono claims to have been the first brake manufacturer in the world to adopt the FNC (Ferritic Nitro Carburizing) process back in 2012, a process which has now become the norm in brake components. The FNC treatment is applied to resolve roughness (judder) concerns caused by corrosion build-up on rotor braking surface. The

company has been in the news recently for the fact that they are closing several plants around the world-details below.

"Hundreds of employees of Elizabethtown's Akebono plant are breathing a sigh of relief after it was announced the brake company's Ring Road operation was spared. Akebono is closing two other U.S. plants as part of its business turnaround plan. Elizabethtown employees were told the plant would remain open at two Wednesday meetings, The News-Enterprise has learned. The U.S. plants closing by March 2021 because of "the reduction of sales" are in Clarksville, Tennessee, and Columbia, South Carolina, according to a 12-page company document. The company announced in July it would close or sell six factories worldwide, eliminating about 3,000 jobs. One report estimates the closures amount to 30 percent of Akebono's workforce. The restructuring is part of a plan to rid the company of much of its debt. In the announcement Wednesday, Akebono officials said they reached a deal with 37 creditors to eliminate $518 million in debt. Other locations to shut down, according to the document, are in Japan, France, Slovakia and Germany. "It's good news for us," said Rick Games, president and chief operating officer of the Elizabethtown-Hardin County Industrial Foundation. "From my standpoint, the city's standpoint and the industrial foundation, we're pleased." All international closings are expected to be completed by March 2022. According to the documents, Akebono will "conduct exhaustive measures to improve productivity, rationalize operation of plants, and reduce selling, general and administrative expense" in its remaining U.S. plants in Elizabethtown and Glasgow. A portion of Akebono's corporate headquarters is on Ring Road by the plant."

Kalyani Technoforge Ltd., Installs Furnaces

Jan 8, 2020

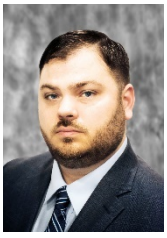
From India we have this photo of a new furnace installation at captive heat treater at Kalyani Technoforge Ltd., in Pune. What you are looking at are two double chamber sealed quench furnaces (batch IQ furnaces for our North American readers) recently installed. They were built by Aichelin

Unitherm in India (a division of Aichelin in Austria) and each has a capacity of 1500 Kgs. They will be used for gas carburizing of gears.

Solar Atmospheres Southeast Hires Tom Gundic as Plant Manager

Jan 7, 2020

Solar Atmospheres proudly announces the addition of Tom Gundic to our Greenville, South Carolina facility. Gundic has accepted the position of Plant Manager, bringing with him over 14 years of vacuum heat treating and brazing



experience, with significant time spent leading teams in the highly demanding environment of Nadcap and AS9100 quality systems.

Solar Atmospheres Southeast President, Steve Prout says, "We are excited to have such a uniquely qualified manager leading our Greenville operations team. Tom will be a tremendous resource in ensuring Solar remains a provider of exceptional vacuum thermal processing with unparalleled customer service to the US Southeast."

For more information about the Solar Atmospheres Greenville facility, visit www.solaratm.com*, or contact Mike Paponetti at 864–970–0111 ext. 1406, or* mikep@solaratm.com*.*

Sandvik Acquires Thermaltek

Jan 7, 2020

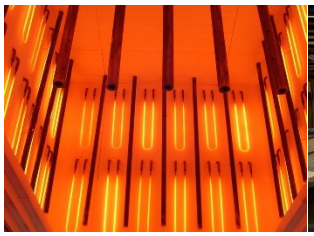
In the world of metallic heating elements the name Kanthal is one which everybody recognizes and this press release emphasizes that. This acquisition shows that the company is very serious about growing their presence in North America and adds on to a previous acquisition, that of Custom Electric in Wixom, Michigan back in 2018. We understand that the Thermaltek name will continue as it is so well recognized. We at "The Monty" had the privilege of visiting Kanthal in Sweden a couple of years ago and we have a photo to prove it (below).

"Sandvik acquires privately owned Thermaltek Inc., a manufacturer of high temperature furnace systems and metallic heating elements headquartered in North Carolina, USA. "Through this acquisition we add further strength to our leading position in industrial heating, a strategically important growth area for our Kanthal division within Sandvik Materials Technology., says Göran Björkman, President, Sandvik Materials Technology. "This acquisition is yet another important step for Kanthal to expand its global offering of sustainable industrial

heating. I am pleased to welcome all employees at Thermaltek into the Kanthal family", says Nicklas Nilsson, Vice President, Kanthal. In the 12-month period ending in September 2019, Thermaltek generated revenues of 13 million USD with its 30 employees and strong sales network in North America. Thermaltek will continue to go to market under its own brand. The transaction is closed and Thermaltek will be reported as part of the division Kanthal within business area Sandvik Materials Technology. The parties have agreed not to disclose the purchase price. The deal is neutral to earnings per share from the start.

***Sandvik** is a high-tech and global engineering group offering products and services that enhance customer productivity, profitability and safety. We hold world-leading positions in selected areas – tools and tooling systems for metal cutting; equipment and tools, service and technical solutions for the mining industry and rock excavation within the construction industry; products in advanced stainless steels and special alloys as well as products for industrial heating. In 2018, the Group had approximately 42,000 employees and revenues of about 100 billion SEK in more than 160 countries within continuing operations.*

***Kanthal**® is a world-leading brand for products and services in the fields of sustainable industrial heating technology and resistance materials. The company is part of the Sandvik Group and has a strong tradition in innovation and extensive investments in R&D."*




Monday Morning Briefing

Jan 5, 2020

To start off our Monday Morning Briefing for January 6 we have these really interesting photos from ***Geoff Mowry*** of ***Graphite Furnace Systems*** of Gardner, Massachusetts, USA. Shortly before Christmas, Geoff finished one of four 2350C high temperature vacuum sintering furnaces with working dimensions of 50" X 36" X 96" for a European customer. The customer was in such a hurry that he

chartered an Antonov 124 transport plane out of the Ukraine to fly to Pease Air Force Base in New Hampshire to pick this up so it arrived before Christmas. The results you can see below.



Just before Christmas we had a press release from the world's largest commercial heat treater, ***Bodycote*** entering into an agreement to acquire ***Ellison Surface Technologies*** (the abbreviated press release is below). How did the financial markets react? Positively which caps off a good year for the company. *"Bodycote, the world's leading provider of heat treatment and specialist thermal processing services, has entered into an agreement to acquire Ellison Surface Technologies ('Ellison'), creating one of the world's largest providers of thermal spray and engineered coating surface technology services to the aerospace industry. Ellison's business, based in North America, is highly complementary to Bodycote's existing Surface Technology business. It is primarily focused on the aerospace market. It will be integrated into Bodycote's surface technology and aerospace business, which itself has seen strong structural growth in recent years. Gross consideration for the acquisition will be $200 million (£154 million). When adjusted for tax benefits worth at least £30m, net consideration for the transaction is approximately £170 million. The consideration will be settled using Bodycote's existing committed credit facilities."*

Lets go to people news now***.*** ***Mary Springer*** of commercial heat treater ***Thermtech*** in Waukesha, Wisconsin, USA has been named to the inaugural list of Notable Women in Manufacturing, spotlighting accomplished

professionals throughout the region by *"BizTimes"*, Milwaukee. In France ***Jean-Christophe Guerin*** recently became Sales Manager at commercial heat treater ***THERMI LYON*** after working at Bodycote for many years. THERMI LYON is a family owned company and is the second largest heat treater in the country after Bodycote. ***Norm Bennett*** was recently promoted to Brazing and Thermal Process Engineer/Operations Manager at ***Braddock Metallurgical*** in Boynton Beach, FL. Braddock is the largest commercial heat treater in the US Southeast.

Continuing on with people news we see that ***IFHTSE*** (International Federation of Heat Treating & Surface Engineering) has a new President in 2020. ***Dr. Eva Troell*** takes over from ***Scott Mackenzie***. At furnace builder ***ECM*** in Kenosha, Wisconsin, USA, ***Mr. Vincent Esteve*** was recently promoted to Business Development Manager, previously he was an application engineer with the company. ***Mitch Fahrney*** has returned to captive heat treater ***Seacast*** in Marysville, Washington after a few years at ***Heat Treatment Australia***, in California. This photo shows part of the HTA facility in Santa Fe Springs, CA.

We mentioned last year how ***American Axle & Manufacturing*** closed down their facility in Charleston, SC, a facility which included a reasonably large heat treat department. The facility is now empty with most of the heat treat equipment going to a captive heat treat in the US. Late last year we mentioned how there was a very large and rather unusual Abar Ipsen vacuum furnace for sale at an ***Aerojet Rocketdyne*** location in California. It was included in an auction which was held there recently but in spite of that it remains on the used equipment market. And on a final note we have this photo of Jordan Montgomery of ***"The Monty"*** attending the recent open house at ***Paulo*** in Cleveland, Ohio when the company showed off their brand new HIP unit.

Beechcraft Explosion, Wichita, Kansas, USA

Jan 3, 2020

Several readers asked us if the recent explosion at aircraft manufacturer Beechcraft in Wichita, Kansas was related to the heat treating department because the cause appears to have been a nitrogen line exploding (details below). We have no inside knowledge but our understanding is that the heat treat furnaces are in a separate building to the one where the explosion took place. The little we know about this indicates that the explosion was in a building dedicated to composites and which includes an autoclave.

"WICHITA, Kan.—More than a dozen people were injured Friday when a nitrogen line ruptured at the Beechcraft aircraft manufacturing facility in Wichita, Kansas, causing part of the building to collapse, authorities said. Daniel Wegner, deputy fire chief for Sedgwick County, said the explosion happened at around 8 a.m. at the facility, which is in the eastern part of the city. John Gallagher, the county's emergency medical services director, said 11 people were taken to hospitals and four were treated at the scene. No one was killed, but one person has potentially serious injuries, he said. Worker Robert Baker said he was inside the building when the explosion occurred but was on the opposite side of the facility. He told The Wichita Eagle that he saw the walls flex. "There was dust and debris, even from the other side," said Baker, 36, who has worked at the plant for about a month. "Dirt in the air permeating through the walls coming down the hallways and stuff like that." He added: "That was the most scared I've ever been in my whole life,

and I'm not easily rattled. But when the walls start flexing and it sounds like the roof is about to cave in, I get pretty panicked and scared." Joel Schepis, who lives in a neighbourhood west of the Beechcraft plant, said the explosion rattled his house and dust and debris fell through cracks in his ceiling. Stephanie Harder, a spokeswoman for Beechcraft's parent company, Textron Aviation, said that the company has accounted for all of the workers and visitors who were at the plant at the time of the explosion. Investigators are working to determine what caused the explosion. Another Textron spokeswoman, Sarah White, said the company also is investigating the effect of the explosion on the company's facilities. "Textron Aviation's first concern is tending to the safety and security of our people," White said. Wegner said the explosion happened when a 3-inch (7.6-centimetre) liquid nitrogen line ruptured. The rupture was contained, but gas continued to vent, although it posed no risk to nearby residents, officials said. "The plant closed or shut down for the holiday season so the numbers that would have been here, were not, so it was a skeleton crew," Wegner said. The cause of the blast is under investigation. Harder said the structure where the explosion happened is part of a complex of buildings and houses the business' composite manufacturing and experimental aircraft."

Bill Pociask, P&L Heat Treating, Youngstown, Ohio, USA

Jan 2, 2020

P & L made our news section approximately 1 year ago when the company was acquired by Thermal Process Holdings. As a follow up to that story we have this interview with the founder of the company Mr. William Pociask, an interview which appeared in a local newspaper ***"The Business Journal"*** of Youngstown, Ohio. You will notice in this interview that Bill mentions an addition to the facility and several new furnaces. The new furnaces he refers to include two Nitrex nitriders and a Seco vacuum temper(which are already on site) and 2 Remix vacuum furnaces which will be arriving at the end of the second quarter of 2020 to compliment the Remix units the company already has. Remix by the way is a Polish furnace builder and as far as we can tell the only vacuum furnaces Remix has installed in North America are at this facility.

"William Pociask sees his life as the actualization of the American Dream. Emigrating from Poland at 10 – ironically, he notes, he now lives in Poland, Ohio – he learned English, attended Catholic schools and later Youngstown State University, then worked for a local tool and die company, delivering materials for heat treating to another tool and die firm in the area. From that experience, he saw a need for an independent heat-treating company where people could take their work rather than take it to a competitor that might put its own work first, he says. That spurred him to found P&L Heat Treating and Grinding Inc. 41 years ago. He owned the company until last year when he sold it to Thermal Process Holdings Inc. Pociask is now its general manager. The company started with heat treating aluminum extrusion dies, then moved into grinding, forging and stamping dies, as well as parts for the railroad and mining industries. It now offers an array of heat treating, hardening, tempering and nitriding services. It provides services for products as small as styluses for record players upward to 8,000-pound pieces.

"We do quite a bit for automotive," Pociask says. Its customers include Ohio Star Forge, which produces parts for Japanese automakers, and suppliers to Ford and Dodge. The company produces dies for heavy-equipment manufacturers such as Caterpillar and International Harvester. P&L is preparing to wrap up a 10,000-square-foot expansion to its existing 25,000-square-foot space at 313 E. Wood St.

in Youngstown, which has been expanded a couple of times over the years. Already, three furnaces are on-site that will go into the new building, with four more ordered and set to arrive in summer."It's all about growth," Pociask says. "In the next two years we want to get at least 50% more work into this facility and two years later we want to double the amount of sales." Annual sales are approximately $4 million, and he hopes to increase that by $1 million by the end of 2020. Just over a year ago, Pociask completed the sale of P&L to Thermal Process Holdings, based in Elkhorn, Wis. He had received an email inquiring as to whether he would consider selling the heat-treating shop. Thermal Process Holdings looks for "well-run, privately owned organizations that are looking for the next stage of growth or to continue the name of the organization [and] expand where the owners have been taking the business," says Ken Robinette, regional vice president. "Our targets are primarily organizations that don't have a succession plan and the owners are getting to the point where they're looking to the next step of their lives, which might be a little less about career and being business owners and a little more about being retired and enjoying family," Robinette says.

Pociask has five children, all of whom "went their own ways and did their own dreams. You have to love what you do and I do love it to this day." P&L was attractive because the heat-treating market is fragmented, Robinette says. There are many heat-treating companies, but few have embraced technology and innovation to the degree as P&L. Further, the company focuses on a unique market segment – the tool and die industry – that complemented Thermal Process Holdings' other business segments. The companies concluded the deal in November 2018, after about a year of discussions. Pociask, who visited other Thermal plants before agreeing to the sale, says joining with the company gives P&L the ability to increase its expertise, and to shop at better prices for the products it uses. "A year later, I'm very proud that I did this. Their goals and their thoughts are just like mine," he says. "They treat our employees very well and they value our customers, processes and so forth." The welfare of his employees was his main concern, Pociask adds, to ensure that the people who have worked at P&L for "many, many years continue to be treated properly."

Roger Kowal is one of P&L's 20 employees. He began working there 37 years ago and runs a Blanchard grinder, used for rotary surface grinding. "It's been a good source of employment. We're taken care of – hospitalization and decent pay," Kowal says. "It's a good environment to work in." Beyond the physical expansion and additional equipment, P&L is preparing for growth by bringing in at least five – possibly 10 – production employees over the next year. Pociask says he is looking at hiring the company's first salesman. "We got our customers from word of mouth. Our customers sold us," he says. The goal is to expand P&L's customer footprint beyond its current 100-mile radius. Among the new opportunities Pociask envisions is with Lordstown Motors Corp., the startup that has plans to manufacture electric trucks at the former General Motors Lordstown Complex. Current customers include Pennex Aluminum Co., which does extrusions for automaker Tesla. P&L is in the midst of developing a new proprietary heat-treating process that should be ready by June. How long Pociask remains with P&L is up to him, although he will remain well into next year as the expansion is completed and the new equipment is brought online, Robinette says. "It's [Pociask's] desire to spend less than every waking moment working on P&L, so it'll be a partnership, and we'll develop that as we go. Certainly for the next six months it might be a little more full time than part time," he says. "We'd like to keep him around as an adviser and consultant for as long as he feels interested." The P&L team "has been very open-minded to the things that we're trying to do with the platform," Robinette adds. Pociask says he's proud that he sold P&L to Thermal, "a very good organization that will take this business to the next level."

Scott Bodemann and Paul Cairney, South-Tek Systems Interview

Jan 2, 2020

We are pleased to be able to offer you this interview with both Mr. Scott Bodemann, President and Mr. Paul Cairney, Heat Treat market manager, of Nitrogen Generation Technology company South-Tek Systems of Wilmington, NC, USA.

I always like to start off our interviews with a bit of background, for instance what is your background and how did you get involved with nitrogen generating systems?

Scott*: "Thanks Gord and great to chat with you. I have been with South Tek for over 15 years and have enjoyed being a part of the Company's expansion over the years. We were established in 1997 and our sole focus is on the design and manufacturing of nitrogen (N_2) generators. Our USA based engineering/manufacturing headquarters is located in Wilmington, NC. Our systems range in size from the dimensions of a small briefcase (1 LPM) on up to*

flow rates exceeding 30,000+ SCFH. In addition, nitrogen purities range from 95% on up to 99.999% (10 ppm) and pressures can exceed 6,000 PSI.
We supply nitrogen generators into a multitude of markets; Fire Protection Systems (FPS), Food Packaging, Food Storage, Medical, Automotive, Heat Treating, Laser, Electronics, 3D Printing, University, Military, Corrosion Control (Power Plant and FPS), Laboratory, Food Service, Pharmaceutical, Chemical, R&D, Materials. Customers include those as large as Fortune 100 Companies to small privately-run business, all of which realize significant savings over purchasing nitrogen from gas companies. Our technology allows them to control their costs long into the future."

The focus of "The Monty" is very narrow, heat treating only so we will frame all of our questions around the field of heat treatment. First off why? Why buy a nitrogen generating system when it is so simple to go out and lease a bulk nitrogen storage tank?

Paul: *"There are a multitude of compelling reasons to invest in a nitrogen generation system with STS. 2 main reasons are:*

- *COST*
- *CONTROL*

COST-The cost of buying bulk gas and the added expense of delivery, tank rental, hazmat fees etc. are essentially eliminated with your own nitrogen generation system. The average cost of buying liquid bulk is around $1.00 per CCF; and the cost of generating your own with a South Tek Systems generator is around 10 cents per CCF. And, with the gas company, you are paying for nitrogen that you do not fully get to use due to daily/weekly vent off. This vent off can be up to 2% waste daily.
CONTROL-When a company uses liquid bulk nitrogen, they are tied to a gas company and, very often, a long-term contract. With our system, we have fully automated N_2 on demand. And, no missed deliveries, escalating costs or contracts to sign. Moreover, liquid bulk costs continue to increase, and the end user has no $_{control}$ over these costs."

What do you see at South-Tek as the best heat treating applications for your systems?

Paul: "*We can apply our N_2Gen nitrogen generators to a wide variety of heat treating applications, but some are certainly more suited than others. Probably the best fit for us, and where we focus the most attention would be a continuous flow atmosphere with N_2 as an atmosphere component or N_2 itself. These would include N_2/H_2, N_2/CH_4, or just N_2 for cover gas in N_2 tempering, stress relieving, normalizing, annealing, hardening, CAAB (continuous atmosphere aluminum brazing), etc. Another continuous flow application would be N_2/methanol atmospheres for carburizing and neutral hardening. Chamber purging prior to FNC or nitriding or any other atmosphere process is another popular usage. We have also supplied systems to feed N_2 into vacuum degreasers that require a N_2 flow."*

What are the more challenging applications in heat treating?

Paul: "*Emergency purging becomes challenging in some plants because of the infrequency of outages in combination with the volume of gas required to have on hand to purge all atmosphere furnaces simultaneously (enough to flow at e-purge rates for as long as it takes to cool the load). However, we do have alternative technology that does not generate N_2 on demand but tops off HPC (High Pressure Cylinders) over a determined amount of time so our customer is ready for the next emergency purge.*

Gas quenching in vacuum furnaces is a good application for our systems (we can achieve the high purity required) so long as the quench pressure is not significantly high."

How much nitrogen does a company need to use before it makes economic sense to install a nitrogen generating system?

Paul: "*Our systems are sized and specified for a wide range of flow capacity and purity. Because of that, we can make a good economic case for about any capacity situation, especially when the users demand is steady. With nitrogen generation technology, machine capacity (i.e. flow) and purity are inversely related,*

so the payback will always be better with lower purity applications since the size of the system is reduced. Many times, we find a customer does not need the 99.998% purity that they initially believe they do. A lower, but suitable purity improves the economic payback of the N_2 generation process."

What would a typical payback period for a system be? Even better do you have any case studies you can point to with lots of figures to show investment and payback?

***Paul**: "Typically, a South-Tek N_2GEN system can reduce costs by up to 90% compared to the cost being charged by the gas company. The Return On Investment (ROI) is oftentimes very quick when the equipment is capitalized; however, should the customer finance the equipment, operational spend is reduced providing an immediate ROI.*

One great example to share is HONDA USA in Anna, OH. This particular customer reduced their spend on liquid bulk by 70%. Moreover, there was a larger reduction in manpower associated with managing the bulk supply and handling deliveries."

How many systems do you estimate are installed and in use in North America?

***Paul:** "We would estimate there are hundreds of nitrogen generators installed for Heat Treat applications in North America. This is not a new technology and as more users realize that there is an alternative to working with gas companies, the popularity of these systems continues to become more widespread."*

I have to ask this question, if this technology is so great why are there so few systems in use in the heat treat industry?

***Paul:** "This is a fallacy as many systems are currently installed in the heat treat industry and their popularity continues to increase. We are hearing more and more, "Why pay a premium for a gas that I can generate myself?" However, as with any technology, and with a different way of operating, change takes time.*

Additionally, many customers cannot make the transition as quickly as they would like due to being held captive by a 5-7-year gas contract. As customers face this,

they oftentimes make it a key strategic planning objective to time their exits accordingly and make the switch as quickly as possible.
Furthermore, early versions of nitrogen generation technology utilized membrane technology which is not nearly as robust as South-Tek's current Pressure Swing Adsorption (PSA) technology. PSA systems require less demand from the air compressors and are significantly more energy efficient. This leads to much better reliability and significantly reduced operating costs."

In reviewing these questions I see that every single one refers to nitrogen, but I have been missing an obvious question-what about other gases? Heat treaters use lots of different gases, have you ever looked at producing other gases? Could your technology be used for other types of gas generation?
***Scott**: "*Nitrogen makes up 79% of the air we breath, meaning that it is the most abundant gas in our atmosphere. Therefore, it is the most cost effective to generate on site. Other gases simply are not as cost effective to generate (or feasible to generate) on site in the volumes that are needed for Heat Treating applications."

How is business for you these days and could you share with us about future plans for South-Tek?
***Scott**: "Business is very good. South-Tek continues to grow year over year, and our company is moving onward and upward every day. We have recently transitioned operations only a few miles from our previous facility into a custom designed, newly upfitted 66,000 sq. ft building. This comes at the right time as we were close to full capacity and were outgrowing our previous production space. We have also added over 20 new employees in the last 12 months.*
This exciting move is part of a strategic investment to boost production and overall operational excellence. Furthermore, this facility will allow for easier access to major highways. South-Tek continues to be the nation's leader in nitrogen generation systems and as part of our expansion, we are committed to developing the highest quality technology for Heat-Treating applications."

I appreciate the time today Scott and Paul, thank you. Gord

Mr. Paul Cairney and Mr. Scott Bodemann

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 IQ FURNACES

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

Item#IQ471 Complete Batch IQ Installation (Europe)

We have available a very complete batch IQ installation located in Europe. Installation includes;

-3 Batch IQ furnaces with working dimensions of 750mm X 1200mm X 750mm high

and a load capacity of 1000Kg. One is electrically heated and set up for carburizing with Endothermic atmosphere. Two are gas heated with WS burners (8 burners in each furnace) and set up for carburizing with endothermic atmosphere. Manufactured by Italian company CITT in 2002.

-3 electric tempering furnaces built in 2002. Working dimensions of 750mm X 1200mm X 750mm high and a load capacity of 1000Kg. Two are rated for 350C and the third 650C.

-Burnishing tank built in 2002.

-Spray washer, electrically heated, operating temperature of 120C.

-Two endothermic generators, electrically heated, both built in 2002.

Asking Price 500.000 euro, including 1 year guarantee and installation (packing and transport not included, installation depends upon country of installation). All equipment is complete and in good condition but not in use. Baskets and base trays included. Complete details available upon request. **Available immediately.**

https://themonty.com/project/itemiq471-complete-batch-iq-installation-europe/

Item#IQ470 SOLO Swiss Batch Furnace – Located In Switzerland

Technical data: Manufactured in 2006. In good working conditions before dismounting.

Hardening furnace: Processes : Austenitization – carburizing – carbonitriding, max. temperature 1050°C, 3 heating zones, Main voltage: 3x400V – 50Hz, Max. weight of load 80Kg, Useful dimension : 300 x 300 x 600 mm, Power : 30 kW
Manual manipulator: type cf
Gas cabinet: CH3OH / N2 / C3H8 / Air / NH3
Oil tank: max. temperature 100°C, Tank volume: 1200 l, Heating power: 6KW.
PC cabinet: air conditioned with management system type Easytherm Pro
Washing machine: operating temperature 80°C, 2 washing
tanks: 2×260 liters, Heating power: 2x 6 KW
Tempering furnace: Nabertherm, independent from the line, Max. temperature 450°C, Max. loading weight: 250
Kg, Chamber dimensions: 750 x 1000 x 750 mm, 400V 3PE _ 50
Hz, without gas.
Location: Switzerland

For Pricing Please Contact Jordan@themonty.com
https://themonty.com/project/itemiq470-solo-swiss-batch-furnace-located-in-switzerland/

Item#IQ465 Surface Combustion “Super 36” Batch IQ Furnace

Manufactured by Surface Combustion in 2001 this is a gas fired batch IQ furnace with working dimensions of 36″ X 48″ X 36″ and a weight capacity of 3500 pounds. Set up for endo atmosphere. Pneumatically actuated quench elevator , top cool, furnace fan and updated SSI touch pad controls. Currently installed but not in use. Very good condition.

Asking Price $160,000 USD

https://themonty.com/project/surface-combustion-super-36-batch-iq-furnace/

Item#IQ463 Ipsen T-7 Batch IQ Furnace

Ipsen Model: T7-1000-DGM Batch IQ Furnace. Serial #52044. Type: Straight Through Atmosphere Integral Quench Furnace

Processes: Carburizing, Neutral Hardening and Carbonitriding
Heat Input: Natural Gas-Fired (12 Silicon Carbide Radiant Tubes)
Work Zone: 30”W x 48”D x 20”H
Max. Temp: 1850°F (Typically operated at 1750°F)
Max. Load Wt.: 1350 lb at 1550F
Quenchant Heating and Cooling: Yes (SBS Oil Cooler)
Loading/Unloading: Ipsen “T7 Trans. Loader” powered Front-end Loader and Roller Unload Table
Pit Required: None
Carbon Control: SSI Gold Probe
Controls: Super Systems, Inc. 9120 touch screen, with SSI Series 7 & 7SL controllers, Digital data logging (currently tied into plant-wide SSI Super Data system)
Insulation Type: Brick-lined
Condition: Refurbished by Unitherm, Converted to Eclipse Recuperative Burners (still under warranty)
Included: Any available spare parts, Ammonia Tank.
Footprint: 8’-6” Wide x 27’ Long x ~14-1/2’ High
Alloy: Grids and baskets may be available

Asking Price $59,000 USD

https://themonty.com/project/itemvf350-ipsen-t-7-batch-iq-furnace/

Item#IQB461 Surface Combustion Batch IQ

Surface Combustion Batch IQ Furnace. Standard Surface Combustion Integral Quench Furnace with single quench cylinder and rear handler. This furnace has “Trident” type radiant tubes with Eclipse burners and Eclipse recuperation. Natural gas fired 1,000,000 BTU’s. Serial Number BX-35790-1. Max operating temperature 1750°F with a voltage of 460/3/60. Working dimensions of 30″W x 20″H x 48″L. Approximate external dimensions 10’w x 10’h x 15’l. Controls: Mounted and wired in a free standing panel includes a current SSi control system with PLC and computer. Very good condition and available immediately.

Asking Price $65,000 USD

https://themonty.com/project/itemb461-surface-combustion-batch-iq/

Item#IQB445 Surface Combustion Batch IQ's (3 Available)

Surface combustion gas fired batch IQ furnaces model "Super 36". Working dimensions of 36" wide X 48" deep X 32" high. Late 1980's vintage. Casemate controls, SBS quench oil filter. Set up for endo atmosphere with ammonia addition. Furnaces were in operation until February 27th 2018, now in indoor storage in the Detroit, Michigan area. Complete and in good operating condition. Alloy and brickwork in reasonably good condition.

Asking Price $99,000 USD Each Loaded On A Truck

https://themonty.com/project/itemb445-surface-combustion-batch-iqs-3-available/

Item#IQ441 GM Batch IQ Furnace

GM Batch IQ with Top Cool.Manufacturer: GM. Type: Integral Quench Furnace with Top Cool. Heated: Natural Gas – 1.2 M BTU's/Hour. Max. Temperature: 1450-1875 deg. Voltage: 460/3/60. Work Area: 36″W x 36″H x 48″L.Controls: All mounted in two freestanding panels next to the furnace Includes motor starters relays, pushbuttons, signal lights etc. Honeywell indicating controller and overtempt. Honeywell circular chart recorder for recording temperature. Carbon control system.
Description: Furnace has (4) "U" shaped radiant tubes mounted vertically, (2) on each side wall. Heated by recuperated burners. Alloy roller rail hearth, alloy circulating fan, dual quench cylinders, top cool chamber and heated quench tank. Brick lined with fiber roof. Rear handler system, 1998 vintage. Installed, complete and operational. Condition: Very Good. Availability: Immediate.

Asking Price $150,000 USD

https://themonty.com/project/itemb441-gm-batch-iq-furnace/

Item#IQ439 Surface Combustion Batch IQ Furnace

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

Asking Price $80,000 USD

https://themonty.com/project/itemb439-surface-combustion-batch-iq-furnace/

Item#IQ438 Holcroft Batch IQ Furnace Line

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

Asking Price $60,000 USD

https://themonty.com/project/itemb438-holcroft-batch-iq-furnace-line/

Item#IQ398 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 Price $125,000 USD

https://themonty.com/project/itemb398-sauder-batch-iq-line/

BATCH FURNACES

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Item#B475 BOREL Electric Chamber Furnace – Switzerland

Technical data

- **Year of manufaturing : 2018**
- **Maximum temperature : 1100°C**
- **Multilayer insulation. Interior in ceramic fiber and refractory bricks.**
- **3 x 400 VAC, 50 Hz**
- **Axron Swiss temperature controller/programmer.**
- **Delivered with removable ceramic sole.**
- **Internal dimensions (WxHxD) : 680 x 680 x 530 mm**
- **External dimensions: (WxHxD) : 1100 x 1780 x 1090 mm**
- **Internal volume : 245 liters**
- **Power : 14 kW**
- **Net weight : 450 kg**

Excellent condition, brand new. With manufacturer's instuction manual. Currently located in Switzerland : Porrentruy (2900).

Asking Price € 10'000 Euro

https://themonty.com/project/itemb475-borel-electric-chamber-furnace-switzerland/

Item#B474 New Pyradia Inert Atmosphere Retort Furnace

Furnace Construction: Bottom Loading Retort Electric Furnace w/ Semi-Automatic Electro-Pneumatic. Loading Cart. Ceramic Fiber Insulation. RA330 Sealed Retort Contruction. Primed & Painted 3/16" Steel Shell. Working

Dimensions: ø36” x 30”H. Retort Inside Dimensions: ø44” x 36”H. Design Temp: 2000F. Working Temp: Up to 1800F. Uniformity: +/-25F @ 1800F. Heating Power: 180KW, Watlow SCR. Heat-Up Ramp: Ambient to 1800F in 120 min (loaded oven). Max Gross Load: 800lbs. Heating Element Type: Sandvik ROB Heating System w/ APM Heating elements. Furnace Atmosphere: Argon/H2 Mix (<4%). Voltage: 600/3/60. Amperage: 200 amps. Recircation Fan: Plug Type, Radial, 3 HP, Water Cooled. Cooling: External to retort, 5 HP blower with additionnal 1/2 HP forced air fan. Instrumentation: AMS2750E, Type B compatible. Gas Panel: Complete Ar/H2 gas panel with flowmeters, pressure regulators, manual & solenoid valves & flow switches, SSI O2 sensor, SSI Dew point sensor. Controls: NEMA 12 electrical enclosures, Micrologix PLC, Kep 7” Touchscreen HMI, Eurotherm Nanodac Temperature Controller, Eurotherm 3216 Limit Controller, Eurotherm 6100A, Digital Chart Recorder w/ Up to 12 Recording Inputs for Load TCs, Batching capability, Bar Code, Scanner, Uninterrupted Power Supply (UPS), 1-Ton Air cooled Temptek TCU, CSA Approved. Extras: 2x Forced Air Cooled Tables, 2X Carbon Fiber Fixture Grids. NEW!

Asking $375,000 Canadian (Approximately 295,000 USD)

https://themonty.com/project/itemb474-pyradia-inert-atmosphere-retort-furnace/

Item#B473 Pit Carburizing Furnaces (2 available)

Manufactured by Surface Combustion these are gas fired units with an operating temperature of 1750 F. SSI controls. Working dimensions of 48” X 72”. Endo atmosphere with recirculating fan in the bottom. Currently installed but not in use. Excellent condition.

Asking $150,000 USD Each Loaded On A Truck

https://themonty.com/project/itemb473-pit-carburizing-furnaces-2-available/

Item#B472 Ionitech’s Plasma Nitriding Cold-Wall furnace

Ionitech’s Plasma nitriding Cold-Wall furnace ION-75CWI, with 2 Chambers and one control. The furnace is capable of Plasma Nitriding, Plasma nitrocarburising, and Post-oxidation, processing big and small parts and tools. The furnace has

been used for 4 years at Ionitech's facility and has been taken care of perfectly – it is good as new. It still works daily. It has been retrofited to work with our absolutely user-friednly touchscreen control panel. The process is really easy to control. Ionitech gives full time support as maintenance and technology after purchase. Working dimensions of Chamber 1 are Ø 1000 mm x 1100 mm and max weight of tool for processing 1500 kg. Chamber 2 – Ø 750 mm x 2000 mm and and max weight of tool for processing 1500 kg. Purchase can be done with only one chamber. Located in Europe.

For Pricing Please Contact Jordan@themonty.com

https://themonty.com/project/itemb472-ionitechs-plasma-nitriding-cold-wall-furnace/

Item#B471 Lindberg Pit Nitrider

Lindberg Pit Nitrider. Lindberg Cyclone "Pit Nitriding" furnace with removable fan assembly & retort. There are twelve (12) bolt locks which seal the fan assembly to the gasket on the retort. Fan assembly sets on a steel stand when not in use. Alloy retort sets sets in a steel support when not in use. Electrically heated with a voltage of 230/3/60/105 kW. Model # 3896-E12 and serial # 14030. Max operating temperature is 1250°F. Working dimensions of 36″ diameter x 84″ deep with external dimensions of 5'w x 9'4″H x 7'l – Furnace Only. Controls mounted and wired in a free standing panel includes all necessary controls for proper operation.

For Pricing Please Contact Jordan@themonty.com
https://themonty.com/project/itemb471-lindberg-pit-nitrider/

Item#B452 AHT Fluidized Bed Furnace

Applied Heat Technologies (AHT) fluidized bed furnace. Treatment chamber is 300 mm diameter x 900 mm deep (roughly 12 in diameter x 36 in deep.) Maximum temperature is 1050 °C (1922°F). Maximum load is rated at 50 kg at 1000 °C (110 lb at 1832 °F) and 90 kg at 570 °C (198 lb at 1058 °F.) Mark® fluid

bed furnace controller software. Silicon carbide heating elements, 25 kW, configured in delta. Piping is set to accept nitrogen, argon, hydrogen chloride (HCl), and hydrogen gasses. Inert material is P120 grit aluminum oxide (Al2O3) powder. The fluidized bed is designed to deposit vanadium carbide (and other carbides with correct chemistry) onto steel. The fluidized bed system comes with a propane burner, HCl detection system, and scrubber system. The system also has a hood and quench bed that came with it but these have not been used and it cannot be verified that they work. The fluidized bed system with scrubber is currently operational but is not being used. Almost new heating elements with one spare included.**Asking Price $99,000 USD**

https://themonty.com/project/itemb452-aht-fluidized-bed-furnace/

Item#B448 Kleenair Products Tip Up Style Furnaces

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

Asking Price $55,000 USD Each

or

$150,000 USD For All Three

https://themonty.com/project/itemb448-kleenair-products-tip-up-style-furnaces/

Item#B436 Lindberg Pit Gas Nitrider

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

Asking Price $50,000 USD

https://themonty.com/project/itemb436-lindberg-pit-gas-nitrider/

Item#B426 Plateg 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 1250 mm high. Load capacity 1000 kg. Installed power 95 kW, 400 V, 50 Hz, 160 A. Located in Turkey.

Asking Price $98,000 Euro

https://themonty.com/project/itemb426-plateg-plasma-nitriding-unit/

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 USD

https://themonty.com/project/itemb415-j-l-becker-car-bottom/

Box Furnaces

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

Item#BOX471 Lindberg/MPH 1500°C Heavy Duty Tube Furnace

- Model #54679
- Serial No. AO30680
- (New price is approx. $15,000)
- Furnace is approximately 10 years old, however in excellent condition
- 208/230 3ph
- 19.8 KW
- Max temp 1500°C
- Porter Flow Meters
- Max recordable flow of nitrogen is 281 cc/min
- Max recordable flow of hydrogen is 744 cc/min
- Hydrogen burn off feature
- Ceramic tube 2.5" OD x 2.25" ID x 68" long approx.
- Insulated box is 50" long
- Three zone programmable digital control

Optional: 460V/230V, 25kVA, 3 phase step down transformer: $1,200.00

Prices are FOB Souderton, Pa., packed for shipment. Complete with all operational drawings and instruction manuals and spare part heating elements.

Asking Price $3,000 USD

https://themonty.com/project/itembox471-lindberg-mph-1500c-heavy-duty-tube-furnace/

Item#BOX470 GLOBAR Heated Box Furnace

Manufacturer: Pereney
Inside Dimensions: 18” high x 18” wide x 18” deep
Heated: Electric, 440/3/60, 34 KW
Temperature: 2700 deg. F
Model Number: SM–7800-117
Serial Number: N/A
Description & Features: Manual hinged door. Fully brick lined heat chamber. Silicon carbide hearth. Globar heating elements above and below the hearth. Tap changing transformer.
Temperature Controls: Wall-mounted control panel with indicating controller and overtemp.
Condition: Very good.

Asking Price $11,500 USD

https://themonty.com/project/itembox470-globar-heated-box-furnace/

Item#BOX469 SierraTherm Forced Convection Elevator Batch Oven

SierraTherm LTCC16-24-4A 8500 Series Forced Convection Elevator Batch Oven. The internal dimensions of the chamber are approximately 18” inches wide by 18” inches deep by 24” inches high. The advertised temperature achievable is 1050°C. The Oven comes with the two computers, one monitor, one mouse, & one keyboard, as shown. One computer has the SierraTherm Furnace Monitoring System Software loaded on it, as shown. The power requirements are 240Vac 3-phase 60Hz. Each of the computers power-up although only one has the SierraTherm Furnace Monitoring System Software loaded on it.

Asking Price $42,500 USD

https://themonty.com/project/itembox469-sierratherm-forced-convection-elevator-batch-oven/

Item#BOX468 SierraTherm Elevator Hearth Box Furnace

Model; LTCC-16-24-4A. Voltage; 240V 3Ph 109A 60Hz. Maximum operating temperature of 1050 degrees C. Working dimensions of 16” high x 24” wide x 24” deep.

General Application Parameters:

- Maximum Temperature Rating: 1050° C
- Atmosphere System: Designed for air atmosphere.
- Heating Method: Ceramic fiber block with imbedded resistive wire heating elements.
- Batch processing: bottom load elevator

Rated to 1050 °C, this SierraTherm Series features an energy efficient, ultra clean, low mass refractory heating chamber. All models include the MicroTherm Windows based user interface with 20 segment temperature and gas flow programming. Temperature cycling can be programmed using starting and ending temperature, rise and cooling rates, and time duration. Multiple vertical heated zones, as well as power trimming to all four element panels (left, right, front, back) provide for precise temperature stability and control throughout the process chamber. A sophisticated atmosphere inlet and exhaust system features four independently adjustable gas inlets and corresponding exhaust ports to efficiently extract burn-off effluents throughout the process chamber. Excellent condition.

Asking Price $59,500 USD

https://themonty.com/project/itembox468-esierratherm-elevator-hearth-box-furnace/

Item#467 L & L Special Furnace Box Furnace

Model MDL.FB777-FA11-01-G394-480R39H96, Serial Number H496LN. Electrically heated 480/3/60/150 kW/187 Amps. Maximum operating temperature of 1800F. Working dimensions of 72″W x 72″H x 72″L (7’Cube Inside), outside dimensions of 9’W x 12’5″H x 8’L. Controls; Mounted and wired in a free standing NEMA 1 enclosure with fused disconnect on the left hand side of the furnace. Honeywell UDC digital temperature controls for control and high limit. Strip chart recorder and process timer is also included. SCR provides consistent power to

the heating elements. A cooling blower with filter helps with cooling the enclosure. Furnace is lined with ceramic fiber on all sides, top, and bottom between the castable piers. The door is a double hinged right hand swing type door with four (4) hand wheel clamps for a tight seal. The furnace hearth consists of 4 rows of castable spaced evenly for forklift loading. Hearth capacity is 10,000 pounds. Alloy based nickel chrome coiled heating elements are located on both side walls, rear wall and door which provides uniform heating. There is a 2 HP roof mounted fan in this furnace. Door limit switch cuts power to the heating elements and fan when the door is open. Very good condition.

Asking Price $47,500 USD

https://themonty.com/project/item467-l-l-special-furnace-box-furnace/

Item#BOX466 Grieve Top Loading Furnace

Model# PT-3642, Serial# 140. Manufactured by Grieve this is a top loading furnace with working dimensions of 36” Wide X 42” Deep X 36” Long and a capacity of 31.5 cubic feet. Electrically heated 460/3/60 @ 70 KW, 2,000 F maximum operating temperature. Description; Manually operated counter balance door, brick lined, helical coil Kanthal heating elements on all four sides, gasketed cover fully self contained. Temperature Controls; Honeywell “Dial a Troll” control with “Dial a Pak” Overtemp. Built in 1982. Very good condition.

Asking Price $14,500 USD

https://themonty.com/project/itembox466-grieve-top-loading-furnace/

Item#BOX465 Electra Box Furnace

Electra Box Furnace. Floor model high temperature box style furnace with a manually operated vertical lift door with counterweight for easy operation. A door limit switch cuts power to the elements when the door is opened. The furnace is refractory lined and has a silicon carbide hearth plate supported on brick piers. Twenty four silicon carbide elements mounted horizontally across the furnace chamber, 12 elements over the top and 12 under the hearth for good uniform

heating. Electrically heated with a max operating temperature of 3000°F. Model # 6724 and serial # 1184. Voltage of 460/3/60/16 kW. Working dimensions of 8″W x 6″H x 30″L and external dimensions of 44″W x 90″H x 70″L. Controls are located on the right hand side at the rear of the furnace. There is a Barber Colman model 560 digital controller, a Barber Colman 560 high limit and a Barber Colman strip chart recorder. Also on the rear of the unit in a protected area is a Robicon SCR to control the elements and a high limit contactor. A voltage reduction transformer is mounted on the framework under the furnace chamber.

Asking Price $8,500 USD

https://themonty.com/project/itemb465-electra-box-furnace/

Item#BOX464 Lindberg Box Furnace

Lindberg Box Furnace. Pneumatically operated vertical lift door with convenient foot pedal operator. The door slides up and down on the sloped front breast plate. A flame curtain is mounted directly under the door. A limit switch activates a solenoid to start the flame curtain to burn off any escaping atmosphere. The interior is refractory lined. Heavy gauge rod style heating elements are located on both side walls, and on the floor under the alloy hearth plate for excellent temperature uniformity. The alloy hearth pan has 2″ high sides to prevent product from falling off the pan. Flow meters attached to the side of the furnace regulate the flow of atmosphere into the furnace. There is an Endothermic gas flow meter and a Natural Gas flow meter. Electrically heated with a max temperature of 2000°F. Model # RO 122410-A and serial # 19229. Voltage is 480V/3/60/15 kW, 67V. Working dimensions of 12″W x 10″H x 24″L with external dimensions of 54″ wide x 64″ long x 85″ high. Controls are mounted and wired in a separate enclosure. There is a Leeds & Northrup digital temperature controller with display screen and a Leeds & Northrup model 2077 high limit safety. Control switches are flush mounted on the front of the panel. The panel has a Square D flange mounted fused disconnect switch. Honeywell flame safety relay, purge timer relays and control transformer are mounted inside the enclosure A second

enclosure with circuit breaker disconnect switch houses the Halmar SCR power controller. A step down transformer is supplied to provide low voltage to the elements.

Asking Price $7,500 USD

https://themonty.com/project/itemb464-lindberg-box-furnace/

Item#BOX458 Noble Furnaces Box Furnace

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

Asking Price $80,000 USD

https://themonty.com/project/itemb458-noble-furnaces-box-furnace/

Item#BOX425 Lindberg Box Furnace

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 Price $85,000 USD

https://themonty.com/project/itemb425-lindberg-box-furnace/

Item#BOX397 Drever Atmosphere Box Furnaces

“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 Price $325,000 USD Each

https://themonty.com/project/itemb397-drever-atmosphere-box-furnaces/

Item#BOX374 R&G Services 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 USD

https://themonty.com/project/itemb374-rg-services-atmosphere-box-furnace/

CONTINUOUS FURNACES

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

Item#C359 Rogers Engineering Belt Temper/Anneal Furnace

Serial Number CC-3977-0. Natural gas fired mesh belt temper/anneal furnace. Operating temperature of 1700F. 3.8 million BTU's/hour. Voltage: 480/3/60. Work Area: 60″W x 32'L heated length. External dimensions of 10'W x 11'H x 40'L – Approximately. Controls: Complete with Honeywell UDC digital controls. Mesh belt furnace with four (4) zones of control and forced cooling. Built in 2000. Excellent condition.

Asking Price $350,000 USD

https://themonty.com/project/itemc359-rogers-engineering-belt-temper-anneal-furnace/

Item#C358 Lindberg Rotary Retort Austempering Line (AUSTRALIA)

This is a complete Lindberg rotary retort austemper line consisting of rotary retort pre-wash, high heat rotary retort furnace, salt quench tank, rinse/dry system and Endothermic Generator.

- Pre wash
- High heat furnace has a capacity of 300 pounds/hour, retort is 9' long with three zones of control. Operating temperature of 975Celcius.
- Salt quench tank with an operating temperature of up to 400 celcius.
- Rinse tank with dryer at end of line.
- System is installed but not in operation. Was used for processing pins.

- Mains are run off 415V and control is run off 240V.
- System is complete and in good condition.
- Located at a captive manufacturer in Australia

Best Offer

https://themonty.com/project/itemc358-lindberg-rotary-retort-austempering-line-australia/

Item#C357 Holcroft Direct Fired Roller Hearth

Manufacturer: Holcroft

Category: Roller Hearth Furnace

Type: Direct Fired Roller Hearth

Heated: Natural Gas – 5.0 MBTU's/Hour

Model Number: Roller Hearth

Serial Number: CJ-4142

Max. Temperature: 1600°F

Voltage: 460/3/60

Work Area: 104″W x 24″H x 51'L Heated Length

External Dimensions: 13'10'W 15'H x 65'L – Approx

Controls: Mounted and wired in a free standing panel includes all necessary temperature controls, burner flame safties, motor starters etc. for proper operation.

Description: This furnace has a 6'L load vestibule and a 6'L unload vestibule. Furnacehas 5″ diameter rolls on 16″ centers with four (4) water cooled roof

mounted axial type fans for excellent temperature uniformity. Furnace insulation consists of ceramic fiber in walls and roof with “IFB” in the floor. There are a total of twelve (12) North American Burners model 6422-3 and 6422-2. This furnace includes approx. (36) 48″ x 46″ trays and corrugated tubs, return conveyor w/cooling station. Drawings are included with this furnace.

Condition: Very Good

Asking Price $250,000 USD

https://themonty.com/project/itemc357-holcroft-direct-fired-roller-hearth/

Item#C356 CM High Temperature Pusher Furnace

Manufacturer: CM Furnace

Category: Pusher Furnace

Type: High Temperature Pusher Furnace

Heated: Electric

Model Number: 344-36-3Z

Serial Number: 0200029 (2002)

Max. Temperature: 1700°C

Voltage: 480/3/60/30 kW

Work Area: 4″w x 4″h x 36″ heated 3 Zone

External Dimensions: 4’W x 6’H x 11’L

Controls: Controls mounted in an enclosure attached to the furnace frame. Flange mounted disconnect handle operates the 40 amp circuit breaker. 3 Zone control with 3 Honeywell UDC 3300 microprocessor based temperature controllers, 3 Eurotherm digital high limit controls, Eurotherm cooling controller

are flush mounted in the door of the enclosure. Also in the door are 3 percent meters for voltage to the heating elements and 3 percent meters indicating element amp draw, an Eagle purge timer and control switches and process indicating lights. Allen Bradley Micrologix 1000 programmable logic controller inside enclosure.

Description: Inclined front door, air operated with foot pedal operator. Atmosphere burn-off at the entry. protective atmosphere flush chamber followed by a 24″ long cooling zone. Manually operated inner door prior to the entry vestibule. 3 zone heating chamber with Moly wound alumina oxide “D” shaped muffle. Heated section is lined with high alumina insulation package. Protective atmospheres enter the muffle through the rear. Standard gas panel includes all needed pressure switches, flow meters, pressure regulators, solenoid for processing atmosphere and safety Nitrogen purge. Product is manually loaded and unloaded.

Condition: Very Good

Asking Price $62,500 USD

https://themonty.com/project/itemc356-cm-high-temperature-pusher-furnace/

Item#C355 Despatch Solvent Rated Conveyor Oven

Manufacturer: Despatch

Category: Continuous Ovens

Type: Solvent Rated Conveyor Oven

Heated: Electric

Model Number: PCC30x120x7-1E

Serial Number: 165237

Max. Temperature: 500°F

Voltage: 480/3/60/32 kW

Work Area: 30″W x 6″H x 10’L

External Dimensions: 64″W x 8’8″H x 14’2″L

Controls: Controls are located in an enclosure attached to the side of the oven. There is a West model 1422 digital temperature controller, a West model 1162 high limit and a Partlow MRC 7000 round chart temperature recorder are flush mounted in the door of the enclosure. Control switches with indicating lights are also flush mounted in the enclosure door. The enclosure also has a flange mounted fused disconnect handle. Solid state relays, high limit contactor, motor starters, fuses etc. are mounted inside the enclosure.

Description: Variable speed flat wire conveyor belt with 1″ x 1″ openings. The belt drive has a DC motor / speed reducer combination with speed control potentiometer and digital speed readout. There is a 24″ long load table at the entrance and a 24″ long unload table. Aluminized steel interior with an access door on the side. Coiled style heating elements are located above the work chamber. Circulating fan is mounted through the roof. Heated air is circulated in a “top – down” airflow pattern through adjustable louvered air ducts and down through the belt for good uniform heating. A powered exhaust fan is mounted on top of the oven. ** Rated for use with some solvents (.041 GPH of MEK @230 F.)

Condition: Excellent

Asking Price $17,500 USD

https://themonty.com/project/itemc355-despatch-solvent-rated-conveyor-oven/

Item#C354 MOCO Thermal Industries Conveyor Oven

Manufacturer: MOCO Thermal Industries

Category: Continuous Ovens

Type: Conveyor Oven

Heated: Natural Gas – 1 MBTU Eclipse Burner

Model Number: Conveyor Oven

Serial Number: 7147

Max. Temperature: 500°F

Voltage: 480/3/60

Work Area: 24″W x 18″H x 10’L

External Dimensions: 8’w x 12’h x 14′ long

Controls: Mounted and wired in a NEMA type electrical enclosure with fused disconnect. Enclosure is mounted on the left hand side closest to the charge end. Mounted to the front face of the enclosure includes a Honeywell UDC digital temperature controller and a Honeywell UDC digital high limit controller. Push buttons and signal lights for control power, exhaust fan, recirc. fan, combustion air blower, conveyor drive, purging/purge complete lights etc. There is a Altivar AC variable speed drive for conveyor speed. Protection Controls flame safety with spark ignition and flame rod.

Description: This oven has a flat wire conveyor belt with a 24″ long charge end and a 24″ long discharge end. Oven also has two (2) access doors, one (1) on each side of the oven. Top mounted combustion chamber with recirculating fan, Eclipse AH burner and powered exhauster.

Condition: Very Good

Asking Price $24,500 USD

https://themonty.com/project/itemc354-moco-thermal-industries-conveyor-oven/

Item#C353 Mesh belt furnace SOLO 322-50/300

Loading chassis, heating zone with exit chimney, colling zone with exit chimney, unloading chassis, drive system with mesh belt, oximeter, dew point measuring devise, EUROTHERM controler type 6180, gas distribution cabinet, electric control cabinet with management system, type HYDROBELT

Technical data

- Year of manufaturing : 2011
- Serial N° : 9114
- Maximum temperature : 850°C
- Operating voltage : 3 x 400 V – 50 Hz / TN-C
- Total power input : 124 kW
- Heating power : 120 kW
- Heated length : 3000 mm
- Cooled length : 6000 mm
- Power per heating zone : 3×40 kW
- Chanel section : 520 x 140 mm
- Usefull height : 120 mm
- Conveyor belt width : 500 mm
- Belt speed : 10-60 cm/min
- External dimensions : L 14100 mm x l 1300 mm x H 1920 mm

Excellent condition, well-maintained. With manufacturer’s instuction manual. Currently located in Switzerland : Porrentruy (2900)

Asking Price € 165’000 Euro

https://themonty.com/project/itemc353-mesh-belt-furnace-solo-322-50-300/

Item#C352 Can Eng Mesh Belt Furnace

This is a complete mesh belt furnace line consisting of;

- -Metro Scale vibratory loading system
- -Pre Wash
- -High Heat Furnace. 36” Wide belt with 3” clearance over belt. 500 pounds per hour capacity. Gas fired with eclipse recuperated burners, 3 heating zones, 1750 Deg F, 9 lbs/ft2, endothermic atmosphere, underground oil quench tank. 797,000 BTU/hour input. Brick work in very good condition.
- -Post Wash
- -Mesh belt temper furnace. 700F operating temperature. 500 pounds per hour. Gas heated.

Line is installed, complete and operational but not currently in production. Spare parts including a mesh belt are included. Built in 2000. Overall in very good condition. Perfect for processing fasteners.

Asking Price $150,000 USD

https://themonty.com/project/itemc352-can-eng-mesh-belt-furnace/

Item#C350 BTU Mesh Belt Furnace

Manufactured by BTU Engineering in Massachusetts, USA this is a mesh belt furnace/dryer, Model TFF141-590N48GT. Belt is 9” wide with 2 ½” clearance over belt. Electrically heated with 19’ of heating and a 17’ dryer. Operating temperature of the furnace is 1000C and dryer is 200C. Dryer has 4 zones of

control and furnace has 5 zones of control. Currently installed and in operation. Very good condition.

Asking Price $5,000 USD

https://themonty.com/project/itemc350-btu-mesh-belt-furnace/

Item#C349 Rotary Hearth Furnace & Press Quench System Available (EUROPE)

Located in Spain we have available an electrically heated Aichelin rotary hearth furnace, HESS quench press and continuous belt washer also made by Aichelin. Rotary hearth furnace was producing 50Kg/hour of parts but based upon the heating power of 100Kw the furnace is capable of 350-400Kg/hour. Operating temperature of 800-900C, maximum temperature 950C. Atmosphere N2 + CH3OH. Controller with a CO-CO2 analyzer with a Carb-o-Mat controller. HESS press quench system can handle parts to a maximum diameter of 360mm. The entire system was built in 1990 for a major auto parts supplier but saw very limited use, 16,400 hours (approximately 2-3 years) production in total. Currently in indoor storage. **Asking price for the entire system is 150.000€.**
Also available is an Ipsen batch temper furnace model Ipsen DL 10 G with working dimensions of 760x1220x760mm. Gas heated with Ipsen Burners and kromschroeder control. Maximum operating temperature of 450C. Built in 1994, very good condition. **Asking 22.000€**
An Ipsen batch washer is also available, model Model: WSD 10 G. Built in 1994. **Asking Price: 8.500€**

https://themonty.com/project/itemc349-rotary-hearth-furnace-press-quench-system-available-europe/

Item#C348 BTU Belt Furnace 1100°C

Manufactured by BTU this is a high temperature mesh belt furnace.
Model BTU TFCA94-6-54E48GT, Serial Number RFMT-1. Max Temperature of 1100°C. Hydrogen Capabilities, Belt is 9” wide with 4” clearance over the belt. 6

zones of control with a heated length of 54” heat and a 48” long cool zone. Gas Tight. Excellent condition.

Asking Price: $69,500 USD

https://themonty.com/project/itemc348-btu-belt-furnace-1100c/

Item#C347 SierraTherm Series 2500

SierraTherm Series 2500. Vintage: 2000. Model: 9K9-117C91-9NCHS. Brazing and Copper Firing Conveyor Furnace. One Owner – company closed due to retirement of owner bought new from SierraTherm. Full Manuals included.General Specifications. Belt Width: 9 inches. Heated Length: 117 inches. Cooling Length: 91 inches. Product Clearance above belt: 1” with 2” baffles. Temperature: 1050 degrees C. Atmosphere: N2 or H2. Input Power: 200/240VAC. 3Ph, 3 Wire, 50/60 Hz, 46kVA max. Zones Heated: Nine [9]. Entry / Exit Tables: 24”. Overall Length 292 inches. Height: 50 inches. Width: 44 Inches. Conveyor Height: 36 inches. Leveling Range: +-1. Belt Speed Range minimum: 1.0/min. Belt Speed Range maximum: 10.0/min. Weight approximate: 4000 lbs

Asking Price: $89,500 USD

https://themonty.com/project/itemc347-sierratherm-series-2500/

Item#C342 Two CM High Temperature Pusher Furnaces

Each system includes …Common frame with power and control components. Heavy gage welded construction. Atmosphere containment doors with protective atmosphere flushing. “Moly” elements wound a ceramic tube muffle. Alumina brick insulation. Water jacketed cooling section. Microprocessor temperature controller. Phase angle fired SCR control units. Overtemperature protection controller. Type “C” thermocouples.

Model 345-48-3Z. 4” opening x 5” wide x 48” long heating chamber, 3 zones. 54 KW, 480/3/60. Hydrogen/Nitrogen atmosphere with safety system. Max. temperature rating: 1700 deg.C.

Asking Price: $23,450.00

Model 366-48-1Z. 6” opening x 6” wide x 48” long heating chamber, single zone. 45 KW, 480/3/60. Hydrogen/Nitrogen atmosphere with safety system. Max. temperature rating: 1700 deg.C.

Asking Price: $22,550.00

https://themonty.com/project/itemc342-two-cm-high-temperature-pusher-furnaces/

Item#C341 CI Hayes Mesh Belt Furnace

Used CIHayes Conveyor Type Muffle Furnace. Super Solitaire 27. NH3 & Nitrogen Inlet Flowmeters. Combustible atmosphere system with N2 purge. Inconel Muffle with internal hearth plates. Furnace (6) Nichrome Ribbon Elements. AD150 (6) Nichrome Ribbon Elements 314SS Mesh Belt rated 3# per linear foot loading @ 2000F. Type: Model LAC-MB-030627-AD. Hot Zone: 27”Long Heated Length, 6”wide Mesh Belt, 3”Work Height. Overall Dim.: Approx 2-1/2’ Wide x 5’ High x 20’ Long. Max Temp.: 2100F (1150C) Continuous at 2000 deg.F Elec Utilities: Furnace 18kw, Contactor Power Switching, Wired 240/3/60. AD150 15kw, Contactor Power Switching, Wired 240/3/60 Controls: Honeywell Temp Control & Honeywell Overtemp Control, Both. Furnace and 150 CFH Ammonia Dissociator. Rear mounted Belt Drive with Indexing Control. Digital speed readout 0-20ipm. Extended Front Entrance Tunnel with Nitrogen Curtains and Burn-off Stack.

Asking Price 18,000 USD Loaded On A Truck

https://themonty.com/project/itemc341-ci-hayes-mesh-belt-furnace/

Item#C339 Can Eng Mesh Belt Furnace

Operating temp. to 2050 F. Work zone: 18” wide x 12” high x 132” heated, 33’ stainless steel cooling section. Power: 575 volt, 3 phase. 176 KW. 2 zone

temperature control. Brick lined chamber. Silicon carbide heating elements above and under the belt. Silicon carbide hearth tiles. 2 tap transformers. Approximate overall size: 8' wide x 7' high x 60' long.

Asking Price 14,900 USD

https://themonty.com/project/itemc339-can-eng-mesh-belt-furnace/

Item# C337 Mesh Belt Furnace Line, 4,000 Pounds/Hour

Manufactured by Atmosphere Furnace Company in 1995 this is a complete mesh belt furnace line designed for hardening of fasteners. Gas fired. 4,000 pounds per hour capacity. Line included Metro Scale loading system, hydraulic bin dumper, vibratory shaker and scale, belt width 60". Oil quench and temper. Line is complete, installed but has not been run recently. Very good condition. More details and photos to come.

Asking Price $250,000 USD

https://themonty.com/project/item-c338-mesh-belt-furnace-line-4000-pounds-hour/

Item#C324 C.I. Hayes Mesh Belt Furnace

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

Asking Price $49,500 USD

https://themonty.com/project/itemc324-c-i-hayes-mesh-belt-furnace/

Item#C323 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 used for processing automotive bearings. Recently removed from operation and now in indoor storage. Excellent condition.

For Pricing Please Contact Jordan@themonty.com
https://themonty.com/project/itemc323-aichelin-cast-link-furnace-line/

Item#C314 Wellman Roller Hearth Furnace

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 Price $225,000 USD
https://themonty.com/project/itemc314-wellman-roller-hearth-furnace/

Item#C301 Rogers Engineering Cast Link Furnace Line

Manufactured by Rogers Engineering 4,000 pounds/hour cast link belt furnace line consisting of a 1750F high heat furnace and 1700F temper furnace. Serial # CC-3977-0 (1997). High Heat Furnace: 48″W Omega Cast Link Belt, 4″ pitch, 3″ sides. Furnace has a 30’L heating section. Four (4) zones of control with three (3) roof mounted in the last three (3) zones. Maximum operating temperature of the hardening furnace is 1750°F. Furnace is radiant tube heated with recuperators. Furnace is currently set up for Endothermic w/Enriching Natural Gas & Air. Total BTU’s for hardeneing furnace is 3,180,000 BTU/HR. Controls; All mounted in a free standing panel includes Allen Bradley PLC w/HMI Touchscreen, Honeywell UDC Digital Temperature Controls, SSi Carbon Controls. Voltage 480/3/60/200kW.
Tempering/Anneal Furnace: 60″W mesh belt with support rollers. Furnace has a 35’L heating section. Four (4) zones of control with four (4) roof mounted fans. Maximum operating temperature is 1700°F. Total BTU’s for the tempering/annealing furnace 3,790,000 BTU/HR. Please note that this furnace has two (2) different modes of operation. Click on ‘PDF” below for more information on the different modes of operation.
The sequence of this furnace is as follows:
– Load parts into pre-wash dump loader
– Pre-Wash, 190°F, Gas Heat
– Parts vibrate onto mesh (soft load) then onto cast link belt.
– High heat cycle
– Quench cycle, 200°F, Gas Heat, 8000 Gallon
– Wash cycle, 190°F, Gas Heat
– Temper cycle
– Oil blackening cycle
Includes:
– 5600 CFH Air Cooled Endothermic Gas Generator
– SBS Air to Oil Heat Exchanger which consists of three (3) 5 H.P. fans.-
Manuals & Drawings
Very good condition, available immediately.

Asking Price $650,000 USD

https://themonty.com/project/itemc301-rogers-engineering-cast-link-furnace-line/

Item#C269 C.I. Hayes Mesh Belt Furnace

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

Asking Price $29,000 USD

https://themonty.com/project/itemc269-c-i-hayes-mesh-belt-furnace/

DRAW/TEMPER OVENS

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.

Item#T382 Wisconsin Oven – 8'W x 14'D x 8'H

Wisconsin Oven model EWN-814-8G, 500F, 8'W x 14'D x 8'H, gas fired with an 800,000 BTU burner, 480/3, vertical door one end, digital controller, disconnect switch, hi-limit, process timer, aluminized steel interior, adjustable louvers, never been run, ready for immediate shipment, two available.

Asking Price $47,500 USD Each

https://themonty.com/project/itemt382-wisconsin-oven-8w-x-14d-x-8h/

Item#T381 Cabinet Oven (2 Available)

Manufacturer: Blue M
Category: Cabinet
Type: Cabinet Oven
Heated: Electric
Model Number: DC-606-G-MP550
Serial Number: DC-9172
Max. Temperature: 600°F
Voltage: 480/3/60/24 kW/34 F.L.A.
Work Area: 36″W x 60″H x 48″L
External Dimensions: 80″W x 93″H x 63″L
Controls: Controls are located in a small enclosure attached to the right hand side. Yokogawa Pro 550 digital programmable temperature controller and a Partlow high limit along with high limit contactor, motor starter, solid state power relays, fuses relays etc. are mounted inside the enclosure. Fused disconnect is mounted on the back side of the electrical enclosure.
Description: This oven has a single swing door with silicon rubber gasket and cam action closure that latches in three places for a good seal. The interior of the

oven is constructed of stainless steel. The heating elements and direct driven circulating fan are in a separate compartment above the work area. The heated air is circulated horizontally across the work area through perforated panels on each side. There are nine (9) shelf brackets, three (3) shelves are included. Shelve brackets are on 6″ centers. A manual is included with this oven.
Condition: Excellent – Tested
Availability: Immediate

Asking Price $14,500 USD

https://themonty.com/project/itemt381-cabinet-oven-2-available/

Item#T380 Gruenberg Walk In Oven 450F

ID: 68” wide x 72” deep x 72” high, electric—480/3/60—48kw; 450F recirculating complete with insulated floor, Honeywell digital controls, double swing out front doors. Taken out of production 3 months ago.

Asking Price $5,000 USD

https://themonty.com/project/itemt380-gruenberg-walk-in-oven-450f/

Item#T379 Grieve Oven 36″ x 36″ x 36″

Manufacturer: Grieve
Inside Dimensions: 36”high x 36”wide x 36”deep
Heated: Electric 460/3/60, 33 Amps, 24 KW
Temperature: 1250 deg.F
Model Number: AB–1250
Serial Number: 95862A1008
Temperature Controls: Partlow Circular Chart Recorder MRC5000.
Watlow Control. Partlow 1161 overtemp.
Description & Features: 1 HP fan motor. Air flow switch. Double swing–open doors. Front to back horizontal air flow. Stainless steel interior. Provisions for 5 shelves, 4 included. Checked out and operational.
Condition: Excellent

Asking Price $18,500 USD

https://themonty.com/project/itemt379-grieve-oven-36-x-36-x-36/

Item#T378 Despatch Recirculating Walk In Oven

Inside Dimensions: 66”high x 54”wide x 68”deep
Heated: Gas fired. 250,000 BTU
Temperature: 500 deg.F
Model Number: V-41
Serial Number: 53101
Temperature Controls: Updated solid state controls.
Tempco CEC-4100 controller. Honeywell overtemp.
Description & Features: Double swing open doors, horizontal air flow, insulated floor with tracks for a cart, powered exhaust blower, top mounted combustion and fan chamber. Atmospheric type burner system. Complete combustion controls and safeties. Oven will be cleaned and painted, checked out and test fired prior to shipment.

Asking Price $16,500 USD

https://themonty.com/project/itemt378-despatch-recirculating-walk-in-oven/

Item#T377 Despatch Aluminum Horizontal Heat Treat Equipment

Manufactured by Despatch Industries this is a horizontal quench aluminum furnace with working dimensions of 40” X 40” X 40”. Serial number 162815. Normal operating temperature 1000F, maximum operating temperature of 1050F. Electrically heated, heater capacity 125KW. Control voltage 120V-1PH-60HZ. Designed to heat treat aluminum parts for BF Goodrich. Rated for 500 pounds per load with a heating time of 30 minutes. Complete and in very good condition.

Asking Price $99,000 USD

https://themonty.com/project/dispatch-aluminum-horizontal-heat-treat-equipment/

Item#T376 Grieve Oven 60″ x 60″ x 60″

GRIEVE TRUCK OVEN TCH-550. Hardworking ovens designed for baking, drying, preheating or any other application where a dependable source of heated air to 550°F is required. Complete with temperature controllers that offer the latest in heat-sensing technology and built-in floor level guide tracks that make truck loading easy.
Vintage: 2017
ID: 60″ x 60″ x 60″
125 CU FT
OD: 80″ x 91″ x 74″
550°F
Blower: 2000 CFM, 2 HP
6″ Insulation
Double Doors
24 kW
175,000 BTU
Control Accuracy: ± 0.3%
Uniformity: ± 5°F
Temp Ramp: 38 min
Weight: 3160 lbs
2 years old – low use, dark mark on back panel is a *scuff*. UL LISTED CONTROL PANEL. Standard Truck Ovens from Grieve meet the requirements of National Fire Protection Association Standard 86, Industrial Risk Insurers, Factory Mutual and OSHA standards. For some applications, such as those involving flammable solvents or hazardous locations, the above organizations require additional safety devices.

- Controls – Digital, microprocessor based, thermocouple actuated, indicating temperature controller

- Modulating burner on gas ovens
- Motor control push buttons and on-off heat switch
- LED pilot lights
- Safety Equipment—Electric Oven
- Adjustable, thermocouple actuated, manual reset excess temperature interlock
- Separate heating element control contactors
- Recirculating blower air flow safety switch
- Safety Equipment—Gas Oven
- Adjustable, thermocouple actuated, manual reset excess temperature interlock
- Electronic flame safeguard protection
- 325 CFM powered forced exhauster for combustion venting
- Exhauster air flow safety switch
- Recirculating blower air flow safety switch
- Purge timer
- High gas pressure switch
- Low gas pressure switch
- Two pilot safety shutoff valves with leak test stations
- Two main safety shutoff valves with leak test stations
- Valve position indicator on main safety shutoff valves
- Choice of air flow patterns specially adapted for truck processing
- Aluminized steel interior
- Aluminized steel exterior with enamel finish
- Brushed stainless steel control panel face
- Explosion venting latches
- 6″ of 10 lbs/cf density industrial rockwool insulation
- Built-in baffles prevent radiant heat
- Silicone rubber door gasket
- Insulated floor with truck tracks
- Adjustable fresh air intake and exhaust dampers
- High pressure recirculating blower

Asking Price $17,500 USD

https://themonty.com/project/itemt376-grieve-oven/

Item#T375 Grieve Walk-In Oven 5’W x 5’L x 6’H

Manufacturer: Grieve
Type: Walk-In Oven with Cart
Model: WTH 566-750
Maximum Temperature: 750F
Work Zone: 5’W x 5’L x 6’H
Footprint: 7’W x 7’L x 9’H
Manuals and electrical schematics included
Power: 460V, 84A, 3Ph, 60Hz
Heat Input: 60KW
Fans: Exhaust fan and circulation fan (largest motor 5HP)
Controls: Honeywell UDC 2300 Temperature Controller and analog high limit controller
Uniformity: Appears to have been designed as +/-10F, was last used as if it was +/-25F
Condition: Excellent

Asking Price $24,500 USD

https://themonty.com/project/itemt375-grieve-walk-in-oven/

Item#T374 Pacific Scientific 30” x 48” x 30” Electric Temper

Pacific Scientific 30” x 48” x 30” Electric Temper. Model PKMD 100-E. Serial number: 662-0208P . Heating: Electrically. Power Req: 65 KW, 460 Volt, 3 Phase. Max Temperature: 1450°F.

Asking Price $15,000 USD

https://themonty.com/project/itemt374-pacific-scientific-30-x-48-x-30-electric-temper/

Item#T373 Pacific Scientific 30” x 48” x 30” Electric Temper

Pacific Scientific 30” x 48” x 30” Electric Temper. Model PKMD 100-E. Serial number: 662-0420. Heating: Electrically. Power Req: 65 KW, 460 Volt, 3 Phase. Max Temperature: 1450°F. Nitrogen Capable.

Asking Price $14,500 USD

https://themonty.com/project/itemt373-pacific-scientific-30-x-48-x-30-electric-temper/

Item#T372 Selas (Pacific Scientific).

Model PKMD 100-E Selas (Pacific Scientific). Model PKMD 100-E, Serial number 662-0585. Working dimensions: 30”X 48” X 30”. Max Temp: 1450°F. 65 KW, 460 Volt, 3 Phase. Very good condition.

Asking Price $17,500 USD

https://themonty.com/project/itemt372-selas-pacific-scientific-model-pkmd-100-e/

Item#T371 Recirculating Box Type Draw Oven

Lindberg Model 152418-E12 recirculating box type draw oven. Working dimensions of 18″ high X 15″ wide X 24″ deep. Electrically heated 230/3/60, operating temperature of 1250F. This is a standard Lindberg “Cyclone” design . Coiled Nichrome heating elements are housed in a separate chamber. A high velocity paddle wheel fan delivers the heat to the work chamber and provides for good uniformity. Plug type swing open door. Brick lined door, stainless steel interior. Provisions for two shelves, one shelf included. Furnace will be checked out and reconditioned, cleaned, painted and test fired. Includes a 30 day warranty. Very good condition. ALSO AVAILABLE ARE 4 OTHER TOOL ROOM BOX DRAWS IN STOCK.

Asking Price $5,950 USD

https://themonty.com/project/itemt371-recirculating-box-type-draw-oven/

Item#T368 Surface Combustion Super 30 Temper

Manufactured by Surface Combustion in 1972 this is an electrically heated temper with working dimensions of 30″ X 48″ X 30″. Serial Number BC-39686. Maximum operating temperature of 1250F. Currently installed but not in use. Complete and in good condition.

Asking Price $29,000 USD

https://themonty.com/project/itemt368-surface-combustion-super-30-temper/

Item#T360 Wisconsin Oven

Model SBH-222, 650F, inside dimensions 2'W x 2'D x 2'H, horizontal airflow, Allen Bradley Panel View Plus 600, hi-limit, door switch, audible/visual alarm, 240/3 with 12 KW heater, Honeywell chart recorder, 2 shelves.

Asking Price $7,900 USD

https://themonty.com/project/itemt360-wisconsin-oven/

Item#T359 Seco Warwick Vacuum Temper Furnace

Model VTR-5050/48. Serial Number 586/2005. Purchased 3/21/2006. Work Zone Dimensions, 36W X 48D X 24H. Originally qualified for 900°F to 1260°F with +/- 10°F uniformity. Vacuum pump is Stokes Model 212-11, Blower is Stokes Model 310-41. The operating system is Wonderware Intouch. Internal circulation fan. 460 VAC 3 phase. The buyer will be responsible for removal. The furnace will be available for removal in April 2019. It is currently still in operation.

Asking Price $50,000 USD Or Best Offer!

https://themonty.com/project/itemt359-seco-warwick-temper-furnace/

Item#T358 Wisconsin Oven Like New (2 Available)

Wisconsin Oven Model EWN-55-5G8, 800F, 5'W x 50'D x 6'H, overall 9'6" W x 11'D x 11'H, 10HP/7000CFM recirculating fan, combination airflow, adjustable louvers, airflow switch, 600 CFM exhaust, Eclipse 450,000BTU burner, UL listed control panel, Honeywell recorder, Honeywell programmer, digital hi-limit, disconnect switch, vertical rise doors on both ends, insulated floor, exhaust hood. Excellent Condition.

Asking Price $29,500 USD Each

https://themonty.com/project/itemt358-wisconsin-oven-like-new-2-available/

Item#T356 Wisconsin Oven Temper Furnace

Wisconsin Oven Temper Furnace. 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. Manuals & drawings are included with this furnace. Natural Gas – 1 MBTU's/Hour. Model # SDB-6616-10G and serial # 033899307. Max operating temperature is 1000°F with a voltage of 480/3/60/16 Amps. Working dimensions of 36″W x 36″H x 96″L with external dimensions of 96″W x 13'4″H 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 controllers 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 and Barber Colman digital round chart recorder. 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.

For Pricing Please Contact Jordan@themonty.com

https://themonty.com/project/itemt356-wisconsin-oven-temper-furnace/

Item#T349 Eclipse Recirculating Box Furnace

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

Asking Price $39,500 USD

https://themonty.com/project/itemt349-eclipse-recirculating-box-furnace/

Item#T342 Precision Quincy Recirculating Walk In Oven

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 Price $16,500 USD

https://themonty.com/project/itemt352-precision-quincy-recirculating-walk-in-oven/

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.

For Pricing Please Contact Jordan@themonty.com
https://themonty.com/project/itemt340-safed-borel-annealing-furnace/

Item#T335 Despatch Temper

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. Operating temperature of 500F. 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 Price $5,500 USD
https://themonty.com/project/itemt335-despatch-temper/

Item#T325 Despatch 3-Station Temper Furnace

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

desired.). Just rebuilt. New heating elements, new hearth ceramics, New stainless steel side panels, new paint.

Asking Price $20,000 USD

https://themonty.com/project/itemt325-despatch-3-station-temper-furnace/

Item#T320 Pifco Conveyor Oven

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

Asking Price $59,000 USD

https://themonty.com/project/itemt320-pifco-conveyor-oven/

Item#T318 Eisenmann Box Tempers (4 Available)

*Large Box Temperin*g 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

https://themonty.com/project/itemt318-eisenmann-box-tempers-4-available/

Item#T303 Pifco Temper Furnace

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

Asking Price $20,000 USD

https://themonty.com/project/itemt303-pifco-temper-furnace/

Item#T286 Lindberg Box Temper

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

Asking Price $65,000 USD

https://themonty.com/project/itemt286-lindberg-box-temper/

GENERATORS

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

Item#G200 Rogers Engineering Endothermic Generator 5600 CFH

This is an air cooled endothermic gas generator with three (3) retorts and SBS cooler. Gas heated, Serial Number 3977. 5600 CFH capacity, 1950F operating temperature, Voltage 460/3/60. External Dimensions: 8'w x 13'H x 12'L – Approximately. Pumping system consists of Waukee pump with mixer. Built in 2000.

Asking Price $62,500 USD

https://themonty.com/project/rogers-engineering-endothermic-generator-5600-cfh/

Item#G199 2000 CFH Endothermic Generator New 2015

Manufactured by Unitherm Industries in 2015. Model EG 2000, Serial Number 102113-2. 2,000 CFH capacity. Maximum operating temperature 2000F. Natural Gas fired. SSI atmosphere controls includes AC-20, Series 7 Temperature control, 7SL Hi Limit. Installed but not in use. Excellent condition. Last operated December 31/2018.

Asking Price $29,500 USD

https://themonty.com/project/itemg199-2000-cfh-endothermic-generator-new-2015/

Item#G197 Lindberg 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 USD

https://themonty.com/project/itemg197-lindberg-ammonia-dissociator/

Item#G196 Surface Combustion 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 Price $31,500 USD

https://themonty.com/project/itemg196-surface-combustion-endo-generator/

Item#G178 Sargeant & Wilbur Ammonia Dissociators (4 Available)

Built by Sargeant & Wilbur, 4 electrically heated Ammonia Dissociators. Model GAD3000E. 3,000 CFH capacity. Maximum temperature 1759F. Voltage 480/3/60/60 kW. External dimensions of 5’W x 6’H x 8’L. **Controls:** Mounted and wired in a free standing panel includes the following:
– Yokogawa UT 350 digital control for dissociator undertemp.
– Yokogawa UT 350 digital control for dissociator overtemp.
– Yokogawa UT 350 digital control for dissociator temperature control.
– Two(2)Yokogawa UT 350 digital controls for vaporizer lower/upper zone.
– Yokogawa UT 350 digital control for vaporizer overtemp.
– All necessary signal lights, timers etc.
Mounted in the same control cabinet are three (3) SCR’s. Two (2) “Halmar Robicon” and one (1). “Ametek”. One is for dissociator heating elements and the other two are for vaporizer lower/upper zone heaters.

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

Asking Price $29,500 USD

https://themonty.com/project/itemg178-sargeant-wilbur-ammonia-dissociators-4-available/

Item#G176 Surface Combustion Endo Generator

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 Price $75,000 USD

https://themonty.com/project/itemg176-surface-combustion-endo-generator/

Item#G173 Lindberg Endo Generator

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

Asking Price $17,500 USD

https://themonty.com/project/item173-lindberg-endo-generator/

Item#G169 Gasbarre / Sinterite 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 Price $29,500 USD

https://themonty.com/project/itemg169-gasbarre-sinterite-endo-generator/

INDUCTION HEATING SYSTEMS

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

Item#I184 Pillar Mark 11 100kW 10 kHz Power Supply

Manufacturer: Pillar
Model No. Mark 11
Mfg. Date: 1996
100 kW, 10 kHz
Runs well, in good condition. Was running until recently when uninstalled.

Asking Price $15,000 USD With Shipping Included

https://themonty.com/project/itemi184-pillar-mark-11-100kw-10-khz-power-supply/

Item#I183 Pillar Single Spindle Induction Scanning System

Manufactured by Pillar Induction this is a Model; AB7102-107/MK 11, Serial Number 3815. Voltage; 480V/3/60/266 Amps/222 KVA. Power supply; 200 kW, 3 kHz with a 24″ Scanner. System is skid mounted with a footprint of 8'W x 10'H x 12'L. Controls; Mounted and wired inside an enclosure with fused disconnect includes an Allen Bradley SLC5/04 with touchscreen interface. This system includes a Pillar MK 11 200 kW, 3 kHz power supply, stainless steel DI water system w/plate & frame heat exchanger, 24″ scanner attached to heat station and stainless steel electrically heated quench tank. Very good condition.

Asking Price $75,000 USD

https://themonty.com/project/itemi183-pillar-single-spindle-induction-scanning-system/

Item#I182 2007 Ajax/Tocco 48″ Vertical scanner

2007 Ajax/Tocco 48″ Vertical scanner (42″ max hardening length). Single spindle with a 300# weight capacity
Touchscreen controls with 15″ monitor. Recipe storage for 500 part files. Quality assurance signature monitoring includes: Energy monitor at the coil, quench pressure, flow and temperature 400 KW, 1.1 – 3.0 kHz power supply integrated to the vertical scanner. Both scanner and power supply are in excellent operating condition.

Asking Price $75,000 USD
https://themonty.com/project/itemi182-2007-ajax-tocco-48-vertical-scanner/

Item#I181 Pillar Induction Heat Treat System 50 kW, 50 kHz

This is an automatic Lift and Rotate Machine with a single lift position and TWO heat stations allowing for heating in two different locations in one machine cycle. The two heat stations are controlled by a transfer switch that transfers power from one position to a second position. This is a manual load/unload automatic cycle machine with Allen Bradley controls and Panelview 1000 operator interface. It has an automatic door close/open and light curtain for operator safety. Power Supply is a Pillar MK11 50 kW, 50 kHz IGBT Type. Entire unit is mounted on a common base for easy transport and re-installation. Other details include:

Rotational Drive Speed (Variable): 0- 200 RPM
Integral Quench Reservoir: 100 Gallon
Dimensions (Induction Heater) (L x W x H): 155″ x 120″ x 115″
Weight Estimate: 20,000 Lbs.

Asking Price $49,500 USD
https://themonty.com/project/itemi181-pillar-induction-heat-treat-system-50-kw-50-khz/

Item#I179 Semi-Automatic Pin Hardening System 25kW, 3/10 kHz

Ajax Pachydyne 25kW, 3/10 kHz pin annealing/hardening system. This is a small automatic system for Induction Heat Treating small pins. Includes a power supply with matching heat station and a small fixture for heating and drop quenching small diameter parts. Also includes a small conveyor to drag out the parts from the quench container and water to water cooling and recirculating system and a quick-change coil bus adapter. Good condition.

Asking Price $14,900 USD

https://themonty.com/project/itemi179-semi-automatic-pin-hardening-system-25kw-3-10-khz/

Item#I178 Inductoheat Pick & Place Induction System

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

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

• Auto Lube System • Quench cooling and recirculating system with bag filter
• Water cooling and recirculating system.
• PLC Control with Panelmate interface
• Most Drawings and DVD Manual Included.
• Optional 6 Ton Chiller available.

Asking Price $85,000 USD

https://themonty.com/project/itemi178-inductoheat-pick-place-induction-system/

Item#I177 Ajax 2 Station Spindle Scanners

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

Asking Price $89,500 USD

https://themonty.com/project/itemi177-ajax-2-station-spindle-scanners/

Item#I174 Ajax Tocco Induction Power Supply & Heat Station

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

work at 480V input voltage. In order to switch to 660V, buyer needs to change the input breaker. Excellent condition.

Asking Price $120,000 USD

https://themonty.com/project/itemi174-ajax-tocco-induction-power-supply-heat-station/

LAB EQUIPMENT

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

Item#L23 Leco Rockwell Hardness Tester

This Leco Rockwell hardness tester with direct verification was purchased new in 2005 and has seen very little use as it was only used as a spare. Also available are a number of older Rockwell weighted machines as well as many portable Rockwell testers.

Asking Price $5,000 Canadian or best offer.

https://themonty.com/project/iteml23-leco-rockwell-hardness-tester/

Item#L22 ATM Brilliant 250H Wet Saw

Available is an ATM Brilliant 250 H wet saw and ATM pump with wash down and filtration. Saw can accept a 12 inch blade. This unit is operated manually, works well and is in daily use. daily. Vendor has upgraded his lab and this is surplus.

Asking Price $8,000 Canadian (roughly $5,500 USD) or best offer.

https://themonty.com/project/iteml22-atm-brilliant-250h-wet-saw/

MISCELLANEOUS HEAT TREAT EQUIPMENT

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

Item#M435 Cast Alloy Baskets, Fabricated Baskets And Cast Base Trays (Used)

We have available 36 heavy duty cast alloy stackable baskets nearly new with working dimensions of 36" x 24" x 6" high. Also available are 40 fabricated rod baskets with course mesh liners all in 330SS material, again in good, usable condition. Included in this package are 30 reversible base trays in HU material with working dimensions of 36" X 24" in very good condition. Asking prices to come but all offers at this point will be considered.

Best Offer

https://themonty.com/project/itemm435-cast-alloy-baskets-fabricated-baskets-and-cast-base-trays-used/

Item#M434 Cryogenic Processor with Integral Tempering

Type: Cryogenic chamber with integral heater
Work Zone: 18"W x 42"L x 18"H (height can be increased to 34" with extension box)
External dimensions: 30"W x 61"L x 35"H
Temperature: -300F to at least +350F
This heavily insulated cryogenic chamber has an integral tempering heater. The unit can connect to a Liquid Nitrogen tank or a Dewar with an insulated hose. The cryogenics and the heater work well. The temperature controller and the chart recorder need to be repaired as they are outdated. A height extension box for processing larger parts is included. The unit is on wheels.
Selling As-Is.

Asking Price $12,000 USD

https://themonty.com/project/itemm434-cryogenic-processor-with-integral-tempering/

Item#M432 Super Systems 9200 Control System

For sale Super Systems 9200 control system mounted in free standing panel including multiple spare HMI touch screens and spare power supplies

Asking Price $19,000 USD

https://themonty.com/project/itemm432-super-systems-9200-control-system/

Item#M431 Eclipse Singe Ended Recuperative Burners (20 available)

We have 20 Eclipse single ended recuperative burners and 20 65 inch long silicon carbide inner and outer tubes for sale. Also 20 Honeywell flame relays and all solenoids and gas and air valves also 20 ignition transformers. This system is still installed. New in 1998 and used very little. We can provide removal and packaging. We prefer not to separate. Burners and tubes are currently mounted vertically but can be installed and operated horizontally. These burners are good for any atmosphere furnace such as belts or batch or pits.

Best Offer

https://themonty.com/project/itemm431-eclipse-singe-ended-recuperative-burners-20-available/

Item#M427 Used Houghton MAR-TEMP Oil 355

Mar-Temp 355 is a high performance accelerated hot quenching oil suitable for use at temperatures of up to 375°F (190°C). It is based upon solvent-refined mineral oils and contains a specialty formulated additive package which provides accelerated quenching characteristics and excellent oxidation resistance and

thermal stability. Mar-Temp 355 has a high flash point and will provide long life under arduous operation conditions.

Features & Benefits

- Short vapor phase and fast maximum cooling rate for optimum hardness and physical properties
- Premium hot quenching (martempering) oil providing maximum distortion control of quenched components eliminating the need for rework due to distortion
- Excellent oxidation and thermal stability: Resists formation of sludge and breakdown of oil in use to ensure maximum oil life

22,000 Liters are available immediately and 16,000 Liters in a month or two.

Asking Price $1.25 USD Per Litre (Located In Canada)
https://themonty.com/project/itemm427-used-houghton-mar-temp-oil-355/

Item#M426 Midbrook Belt Washer

Midbrook hurricane 5024, stainless steel conveyor through feed type 4-stage parts washer, s/n 44674 (2004), 24″ x 24″ opening, wash/rinse/rinse/blow off/dry stages, allen-bradley panelview 1000 control, stainless steel metal mesh belt conveyor, demagnetizer, 24″ wide plastic infeed and outfeed power belt conveyors. Comes with over 50′ of automated feed conveyor. Currently installed without power.

Asking Price $89,000 USD
https://themonty.com/project/itemm426-midbrook-belt-washer/

Item#M425 Kolene Salt Bath Nitriding Line (gas)

Manufactured by Kolene this was purchased new in 1995 by the vendor. This is gas fired with pot dimensions of 42″ diameter X 6’ deep. Was typically producing 1,000 pounds per hour but capable of more. Line includes the following;

- 3 overhead transfer cranes
- Air scrubbing unit

- Bronco continuous belt blasting unit, large very effective machine with 36” belt and 8 multi directional blasting motors (vendor will sell this separately)
- 3 vibratory polishers
- Many fixtures
- Used salt*
- New salt*
- Extra pot (weld repaired)
System is installed and was in operation until late 2018. Complete and in good condition.

Asking Price $365,000 USD For Everything

https://themonty.com/project/itemm425-kolene-salt-bath-nitriding-line-gas/

Item#M421 Berg Chiller

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

Asking Price $8,000 USD

https://themonty.com/project/itemm421-berg-chiller/

Item#M417 Soluble Oil Dunk Tank

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

Asking Price $8,000 USD

https://themonty.com/project/itemm417-soluble-oil-dunk-tank/

Item#M416 Wheelabrator

Wheelabrator 6′ Diameter.6″ Diameter table blast wheelabrator. 30 HP belt drive. Installed and in use until March 2018. Recently reconditioned with rebuilt auger. Brand New wheel and wheel housing. Good controls with pneumatic operated

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

Asking Price $75,000 USD

https://themonty.com/project/itemm416-wheelabrator/

Item#M414 Vacuum Residual Gas Analyzer (3 Available)

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

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

Asking Price $8,800 USD Shipping Included

https://themonty.com/project/itemm414-vacuum-residual-gas-analyzer-3-available/

Item#M411 SBS Quench Oil Coolers (2 Available)

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

Asking Price $13,500 USD Each

https://themonty.com/project/itemm411-sbs-quench-oil-coolers-2-available/

VACUUMS FURNACES

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

Item#VF369 Surface Combustion 2 Bar Quenching Vacuum Furnace

Manufactured by Surface Combustion in 1991 this is a model IHVP 36-48-36 PC. Electrically heated with a maximum operating temperature of 2200F and a minimum of 1200F. 360 KW, 480V, 3PH, 60HZ. Working dimensions of 36″ X 48″ X 36″. Stokes pumping system. No diffusion pump however there is a port for one. Data Vac and SSi controls. Always operated on a closed loop cooling system. Furnace installed but not in use. Furnace will require work on the hot zone, the fan motor needs to be rebuilt, it will also require a transformer, vacuum gauge and electrical contactor. Consider this a rebuild project but this will be reflected in the asking price which will be available shortly.

Asking Price $49,000 USD

https://themonty.com/project/itemvf369-surface-combustion-2-bar-quenching-vacuum-furnace/

Item#VF368 Solar Manufacturing Vacuum Furnace 2 Bar – Like New

History: This furnace was previously installed in a customer's facility, fully tested and accepted, but was never placed into service, therefore it is like-new and is in excellent condition. The furnace went into operation in May, 2013 and was only run for a few months during their qualification process. Subsequently, the process that they were developing went away and the furnace just sat and collected dust. However, it was under vacuum and tied into a Dry Coolers system (not included) that Solar Mfg provided charged with water treatment. Everything is completely intact.

- Manufacturer: Solar Manufacturing

- Model: HFL-4251-2IQ Vacuum Furnace
- The entire hot zone consists of a 1-1/2” graphite insulated hot zone supported on a heavy-duty #304 stainless steel structure.
- Hot zone measuring 26″ W x 26″ H x 52″ D
- Double walled, water cooled A-36 carbon steel chamber designed for Two (2) bar positive pressure Nitrogen or Argon gas cooling.
- Weight capacity of up to 1,800 pounds
- Energy efficient graphite felt insulation for operating temperatures up to 2150°F
- Temperature uniformity of ±10°F between 500°F to 2150°F
- 50 horsepower high velocity gas recirculating system
- Stokes Model 412J / 615MHR, Mechanical / Booster Pump
- Allen Bradley Variable Frequency Drive for 50 HP gas blower
- Single inert gas backfill system
- 195 KVA VRT hot zone power supply
- SolarVac® 5000 control system
- Type “K” thermocouples for over temperature and control
- Twelve (12) type “K” workload thermocouple assembly with thermocouples
- EMT conduit between control cabinet and furnace
- One year warranty (from date of shipment)
- One service engineer to commission the furnace, post assembly at Customer’s facility in continental USA

Asking Price $300,000 USD

https://themonty.com/project/itemvf368-solar-manufacturing-vacuum-furnace-2-bar-like-new/

Item#VF367 ABAR HR6660 Refurbished Horizontal Loading Vacuum Furnace LOCATION UK

-Working dimensions of 600mm Wide X 760mm High X 1200mm deep, 1000kg capacity

-Floor space required 6 m wide X 4.0 m high X 6.0 m deep

-Maximum operating temperature of 1270F. +-5 C from 600-1200C
-Connected load 165Kva
-Ultimate vacuum 1.0 X 10-5 mbar
-Operating vacuum 5.0 X 10-5 mbar
-Partial pressure Nitrogen/Argon 0.1 X 10 mbar
-Mechanical Pump-Model Edwards GV600 or Leybold SP630
-Booster Pump Model Edwards EH4200 or Leybold WAU 2001
-Diffusion Pump Model Varian HS32
-Cooling fan rated at 110Kw
-Nitrogen Quenching gas maximum pressure 800mbar
-Gas consumption at max pressure 10m3 approximately
-Graphite Hot Zone and heating elements
-VCS+ controller
-Siemens PLC
-VCS+ temperature/vacuum recorder
-Pirani Vacuum Gauge-Edwards
This is a completely rebuilt vacuum heat treatment and Brazing furnace Model Abar HR6660 which comes with a new vessel, new control system, new hot zone and vacuum pump overhaul. Delivery 10-12 weeks with a complete warranty. LOCATED IN THE UK.

Price and further details available upon request

https://themonty.com/project/itemvf367-abar-hr6660-refurbished-horizontal-loading-vacuum-furnace-location-uk/

Item#VF366 Dynatech DFHH1500 Rebuilt Horizontal Loading Vacuum Furnace (LOCATED IN THE UK)

-Working dimensions of 1500mm wide X 1500mm high X 1500 mm deep
-Maximum load 3200 kg
-Floor space required 10 m width X 4.0 m high X 10.0 m deep
-Maximum operating temperature of 1280C
– +-6C from 600C to 1200C

-Ultimate vacuum of 1.0 X 10-5mbar
-Operating vacuum of 5.0 X 10-5mbar
-Partial pressure Nitrogen/Argon 0.1 X10 mbar
-Mechanical pump (X2) Leybold Model SP630
-Booster Pump (X4) Edwards Model EH4200
-Argon quenching gas maximum pressure 1 Bar
-VCS+ Controller
-Allen Bradley PLC
-VCS+ temperature/vacuum recorder
-Pirani Vacuum Controller-Edwards
-Graphite Hot Zone & Graphite Heating Elements
-Gas fan cooling is included@1 Bar abs
This is a vacuum heat treating and brazing furnace Model # Dynatech DFHH 1500. It includes a new control panel and VCS+ system, refurbished hot zone, vacuum pump overhaul and delivery, installation and commissioning. Completely rebuilt with a 12 month warranty on new components and a 6 month warranty on all other items. LOCATED IN THE UK. Asking price and complete technical details available upon request.

Asking price and complete technical details available upon request

https://themonty.com/project/itemvf366-dynatech-dfhh1500-rebuilt-horizontal-loading-vacuum-furnace-located-in-the-uk/

Item#VF365 Ipsen Model VFC 524 R Vacuum Furnace

Manufactured by Ipsen in 1978 this is a model VFC-524-R vacuum furnace. Serial #62632. Rectangular hot zone has working dimensions of 24” X 36” X 24”. Hot zone in fair condition, will need to be replaced in the near future. 1 bar nitrogen quenching. Roughing pump and diffusion pump. Operating temperature of 2100F. In place but not operating. Needs to be removed.

Best offer

https://themonty.com/project/itemvf365-ipsen-model-vfc-524-r-vacuum-furnace/

Item#VF364 TM Vacuum Furnaces (2 available)

Manufactured by TM Vacuum Products in 1989. Both are model SS 1216 M units. Serial numbers W1944-1-89 and W2104 2-89. Work zone dimensions of 12” X 12” X 40” deep, load capacity of 200 pounds. Stainless Steel construction, Cryopump Vacuum system. 3 zones of temperature control. Leybold roughing pumps with Varian Cry Pumps. Moly hot zone and elements. 3000 F operating temperature. Vacuum level of $1\times10^{-4.}$ Currently installed but not in use. Hot zone in 1 unit in reasonable condition, hot zone in the second will need to be replaced. Honeywell controls.

Asking Price $35,000 USD For Both

https://themonty.com/project/itemvf364-tm-vacuum-furnaces-2-available/

Item#VF363 Vacuum Oil Quench Carburizing Furnace

Manufactured by Abar Ipsen this is a Vacuum Oil Quench Carburizing furnace. Abar Ipsen Model; Carburizer LOG-3436C-GLO. Working dimensions of 26” wide X 36” deep X 26” high. Operating temperature of 1700F. Uniformity of +-10F at 1675F. Power supply 126KVA. Utility requirements; Electrical: 480V/3Ph/60Hz, 500 Amp circuit breaker. Graphite heating elements. Cylindrical graphite hot zone. Stokes 412-014 roughing pump, vacuum booster. Single SCR with three rheostats, Hunterdon VRT’s.

Controls: Beckhoff 15” Touchscreen and Computer with fully-interactive HMI and full recipe control; Allen Bradley Compact Logix PLC with an L32E processor; Honeywell Temperature Controller and Over-temperature Controller; Yokogawa CX1000 digital chart recorder.

Footprint: Furnace 18’W x 18’L x 15’H above floor. Pit 9’W x 17’L x 28”D. Controls 3’W x 11’L.

Asking Price $250,000 USD

https://themonty.com/project/itemvf363-vacuum-oil-quench-carburizing-furnace/

Item#VF362 Abar Ipsen Model HR-120x152VC Vacuum Furnace

This vacuum furnace manufactured by Abar Ipsen in 2002 has a Hydrogen Purge, Graphite Hot Zone, Controlled Cooling and a “Rotator System”. Working Dimensions of 120″ D x 120″ L (Rotator); 84″ W x 84″ H x 152″ L (Hearth). Maximum load and temperature; 5000-Lbs @ 2400°F (w/ Hearth); 2500-Lbs @ 2200°F (w/ Rotator). 6 Bar positive pressure cooling. Argon backfill and partial pressure hydrogen purge. Graphite heating elements, Graphite Board & Felt insulation. Varian DS602 35″ diffusion pump with Stokes vacuum pumps.Compuwatch control system with Allen Bradley Panelview 1400E PLC. Honeywell chart recorder and Honeywell overtempt indicators. Inficon Digital vacuum gauges, oxygen analyser, moisture monitor, cooling system and tower. All details available upon request. Excellent condition. Still installed.

Best Offer

https://themonty.com/project/itemvf362-abar-ipsen-model-hr-120x152vc-vacuum-furnace/

Item#VF361 Sunbeam Vacuum Furnace

Description: Front Loading Sunbeam Vacuum Furnace. Currently in storage but has been operational in the past year. Well maintained and in excellent condition. Used exclusively for Aerospace brazing applications. All manuals, prints and maintenance records are available.

Specifications:

- Model: 4014
- Work Zone: 48″ H x 48″ W x 60″ L
- Pumps: Stokes 212 roughing, MD Pneumatics 5514 blower, Varian 32 Diff and Welch 1376 holding.
- Max. Temperature: 2400 Degrees F
- Uniformity: +/- 15 F
- Power Requirements: 460/3/60

Controls:

- CompuVac control cabinet, new in 2008.

- AllenBradley Model SLC5/05 PLC.
- Two Televac Pirani Gauge Tubes.
- Televac Cold CathodeGauge Tube.
- Honeywell Digital Chart Recorder.
- Honeywell Over-temperatureController.
- Compuvac Work Station with Flat Panel Touchscreen.
- MM200 TelevacVacuum Gauge.

Also included are extra heating elements, loader and serpentine furnace rack.

Asking Price $125,000 USD

https://themonty.com/project/itemvf361/

Item#VF360 Vacuum Aluminum Brazing Furnace

Manufacturer: PV/T, Inc. (Now an Inductotherm Group company)

Type of Furnace: Vacuum Aluminum Brazing

Work Zone: Horizontal, 24” Wide x 37” Long x 33” High

Temperature Rating: 1250°F

Used for: Brazing Radiators

Design Temperature Uniformity: +/- 5°F (6 zones of control)

Hot Zone Design: Rectangular Shape, Elements all 4 sides, top & bottom

Hot Zone Condition: Good

Vacuum Pumps: Varian HS-16 Diffusion Pump (New in 2005), Stokes 412-H Roughing Mechanical Pump, Stokes Mechanical Booster Pump, Welch 1402 Holding Pump

Floor Space Requirement: 8 ft x 11ft for furnace, 2 ft x 5 ft for control panel

Power Requirement: 480V/3Ph/60Hz, 200 Amp Disconnect

Controls: Honeywell, Barber-Coleman

Accessories Included: Loader, Water Cooling System (as shown in photos)

Disassembly: No charge, Just pay for rigging

Asking Price $95,000 USD

https://themonty.com/project/itemvf360-vacuum-aluminum-brazing-furnace/

Item#VF357 Abar Ipsen Rebuilt Vacuum Furnace

– Manufacturer: Abar Ipsen
– Model: HR 46X72
– Condition: Rebuilt in 2015, used through 2016. Very good.
– 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).
– Pumps: Stokes 212 mechanical pump was rebuilt in early 2016. Welch 1398 holding pump was rebuilt in 2015. Stokes 615 blower recently rebuilt.
– Estimated Footprint: 21’ Wide (+ water surge tank which could be relocated 4’x10’x6’H). 24’ Deep (+10’ deep loader). 12’ High. Spool piece adapter added to remove need for diffusion pump pit.
– 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 is currently disassembled in storage. Furnace was in production until January 1st, 2017.

Asking Price $350,000 USD

https://themonty.com/project/itemvf357-abar-ipsen-rebuilt-vacuum-furnace/

Item#VF355 Vacuum Furnace Control Panel

Built by Loy Instruments in 2014 for use on an Abar Vacuum furnace. System consists of a free standing, 2 door panel with Honeywell 900PLC with Honeywell Over Temp and Televac vacuum controller. Panel was used for 2 years before it was removed from service. Panel has always been in a controlled atmosphere environment maintained at 70F. Very clean and in excellent condition. New this was $60,000 USD.

Asking Price $26,000 USD

https://themonty.com/project/itemvf355-vacuum-furnace-control-panel/

Item#VF353 Bottom Load Vacuum Furnace 60” X 60”

Vac Aero Rebuilt Bottom Load Vacuum Furnace, working dimensions of 60″ x 60″. Model: VAV-6060-BL. Hot Zone: Moly face with graphite insulation. Vacuum Pumps: 35″ Diffusion Pump, Stokes 1722 Package. Quench System: 125 HP external quench. Rebuild in progress: Complete exterior reconditioning. Interior of pipes, fna house and vessel receive sand blasting and new high temp white epoxy paint. New hosing. New hot zone. New quench heat exchanger. Rebuilt 125 HP motor. Rebuilt mechanical pump and blower. (New controls available at extra cost). PHOTO BELOW SHOW FURNACE BEFORE REBUILD.

Asking Price $495,000 USD

https://themonty.com/project/itemvf353-bottom-load-vacuum-furnace-60-x-60/

Item#VF348 C.I. Hayes Vacuum Furnace

C.I. Hayes Vacuum Furnace. The front door is mounted on an I-Beam trolley and slides to the side for access to the interior. Quench section is located directly in front of the heat chamber with a hydraulically operated door separating the chambers. Hot zone is lined with graphite felt backed up with ceramic fiber blanket.Six graphite rod elements are mounted horizontally across the chamber, 3 over and 3 under the work area. Hearth rails supprt the work load. Hydraulic cylinder transfers the load between the chambers. Hydraulic pumping system lowers and raises the work load into the tank. There is a Kinney vacuum Electrically heated with a voltage of 480/3/60/20 kW. Model # VCQME and serial # 16482 (1987). Max operating temperature is 2400°F. Working dimensions of 8″W x 6″H x 14″L with external dimensions of 5′ wide x 9′ 6″ long x 8′ 5″ high Furnace only – not including pumps, transformer. Controls are mounted and wired in a separate enclosure. There is a Honeywell DCP 511 programmable controller and a Honeywell round chart recorder / high limit with digital readout. MKS vacuum gauge indicates vacuum level in the quench area and the heat chamber. Control switches for all functions of the furnace including

temperature, vacuum, nitrogen backfill, gas fan and oil agitator are flush mounted in the enclosure. Controls for transferring the load and elevator controls are located next to the furnace door. Voltage reduction transformers with DC power drivers are mounted in a NEMA 12 enclosure.

For Pricing Please Contact Jordan@themonty.com
https://themonty.com/project/itemvf348-c-i-hayes-vacuum-furnace/

Item#VF342 Ipsen Bottom Load Vacuum Furnace

Ipsen Bottom Load Vacuum Furnace 48” X 54”. Completely Re-Manufactured IPSEN 48″ Dia x 54” High Vertical Bottom Loading Vacuum Furnace for your Heat Treating and Brazing requirements. This furnace complies and meets the SAE Aerospace Material Specification AMS2750 Latest Revision E (AMS2750E) and NADCAP. Operating temperature from 800°F (427°C) to 2400°F (1315°C). Temperature uniformity ±10°F (±6°C) between 1004°F (540°C) to 2400°F (1315°C). Equivalent to Class 2 Furnace in AMS2750E standards. Circular one-piece gas plenum/hot zone support structure provides strong, uniformly expanding support for elements Work Zone Dimensions are 48” (1219 mm) Diameter x 54” (1372 mm) High. Hot Zone Insulation is composed of the following layers:
Hot Face
First Layer
Second Layer
– 0.060” Thick Graphite Foil with CFC Sheet at ends
– 1.00” Thick High Purity Graphite Felt
– 1.00” Thick High Purity Graphite Felt
Hearth gross load weight capacity of 3000 lbs (1361 kilograms) at 2400°F (1316°C). Ultimate Vacuum (nominal) 10-5 Torr Range. Re-manufactured Stokes 412H-11, 300 C.F.M. (8,500 litres per minute) mechanical roughing pump. Re-manufactured Stokes 900-615, 2,000 C.F.M. (56,600 litres per minute) as blower pump. Re-manufactured Varian NHS-35” Diffusion pump, pumping speed 50,000

litres per second. Comes with Safety Guard against hot body surfaces. New Leybold Trivac 8B, 5.7 C.F.M.(161 litres per minute) Rotary Vane Vacuum pump as holding pump. New Oil Mist Filter System for pumping system exhaust. One (1) Re-manufactured External 4400 CFM 50HP Spencer Turbine Co. Gas Fan Cooling Motor and heat exchanger system. One (1) Re-manufactured step-up transformer for Gas Fan Motor. One (1) Backfill Reservoir Gas Tank @ 120 p.s.i.g of 5,000 litres capacity. Argon Quenching To Maximum 2 Bar. Consider this basically a new furnace with a 12 month warrantee. Asking $525,000 USD with start up and training included. Half the price of new.

Asking Price $525,000 USD

https://themonty.com/project/itemvf342-ipsen-bottom-load-vacuum-furnace/

Item#VF335 ALD Vacuum Carburizing Furnace

Loading Dimensions : Width 400 x Length 400 x Height 400 mm. Loading Capacity : 80 kg max. Cooling Fan Motor : 75 kW, 3000 rpm for 10 bar N2. Vacuum System : Leybold SV100 Mechanical Pump. Leybold WA501 Roots Pump. Leybold E250 Mechanical Pump. Leybold WA1001 Roots Pump. Vacuum Level : <5x10-2 mbar. Leak Rate : <5x10-3 mbar l/s. Heating Zone : 120 kW, 2 zones. Plasma Chamber : 60 kW, 1 zone. Diffusion Zone : 180 kW, 3 zones. Max. Tempereture : 1250 °C (Heating chamber). Operating Temperature : 800-1100°C. Process Gases : Nitrogen, Methan, Argon, Hydrogen. Installed Power : 700 kVA, 3x400V 50 Hz. Manufacturing Year : 2002.

Asking Price $75,000 Euro

https://themonty.com/project/itemvf335-ald-vacuum-carburizing-furnace/

Item#VF330 Surface Combustion 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 USD

https://themonty.com/project/itemvf330-surface-combustion-vacuum-furnace/

Item#VF327 Surface Combustion Vacuum Temper Furnace

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

Asking Price $50,000 USD

https://themonty.com/project/itemvf327-surface-combustion-vacuum-temper-furnace/

Item#VF326 Ipsen Vacuum Furnace

Ipsen 924 Vacuum Furnace. Ipsen Model: VFC-924-R Vacuum Furnace S/N: 58699. Working dimensions of 32″ wide X 53″ deep X 26″ high. Maximum operating temperature of 2400F, recently surveyed from 1400-2000F at +-25F. Molybdenum faced hot zone. Stokes 412 roughing pump, Stokes 615 booster pump, and Varian HS-20 diffusion pump. 40 HP fan. Water cooled. One zone of control. Honeywell controllers and chart recorder. MKS 937B Vacuum Gauge

Controller. Good operating condition. 480 Volts. Was used in an aerospace facility before it was very recently removed.

Asking Price $80,000 USD

https://themonty.com/project/itemvf326-ipsen-vacuum-furnace/

Item#VF321 Ipsen Vacuum Furnace

– Manufacturer: Ipsen
– Model: VFC-524, working dimensions of 24” wide X 36” deep X 24” high
– Temperature: 2400F
– Moly-faced hot zone
– Graphite heating elements
– 18″ Ipsen Diffusion Pump
– Stokes 412H-10 mechanical pump
– 50 kVA power transformer
– Top-mounted cooling fan with 15 HP Motor
– 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

Asking Price $58,000 USD

https://themonty.com/project/itemvf321-ipsen-vacuum-furnace/

Item#VF320 Thermal Technologies 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 parts washer.

Asking Price $75,000 USD

https://themonty.com/project/itemvf320-thermal-technologies-vacuum-furnace/

Item#VF316 AVS Vacuum Furnace

Manufacturer: Advanced Vacuum Systems (AVS). Model: HMF-24-24-48-1100, S/N 4-1284-0683 Approx. 1990. Chamber: Cylindrical, Horizontal, Stainless Steel with front & rear access doors for ease of maintenance. Hot Zone: Used, All-Metal Moly/SS Shielded Hot Zone with Moly Elements and Moly Hearth Ass'y. Vacuum System: Stokes Mechanical Pumps and Varian Diffusion Pump (Typ. 10-4 to 10-6 Torr ultimate) Pumps: Varian HS-20 warranty rebuilt Diffusion Pump. Stokes 310 warranty rebuilt mechanical blower pump (booster). Stokes 212 warranty rebuilt Mechanical Roughing Pump. Holding Pump for diffusion pump. Power: 480V/3Ph/60Hz, 300 Amp, 250 KVA Heating. Floorspace Requirement: Approx. 15' x 15' x 11'H. Work Zone: 24"W x 48"D x 24"H. Max. Temperature Rating: 1100°C (2012°F) Max. Load Rating: > 1500 lb. Upgraded Controls: SSI 9220 Controller with 12.1" Advantech Touch Screen HMI and built in digital data acquisition, SSI Series 804L Hi-Limit, SR12 Remote Input Satellite Recorder, New Allen-Bradley Micrologix 1400 PLC, Televac vacuum instrument & gauges. Gas Cooling: External VFD Drive Blower and Heat Exchanger, 1 Atmosphere Pressure. Other: Included – 24" x 48" used 2-Tier Molybdenum Grid Fixture. Both front and rear doors have ports for adding end heating elements, if desired (not included). Rear door also has a port for a circulation fan, if desired (not included).

Asking Price $170,000 USD

https://themonty.com/project/itemvf316-avs-vacuum-furnace/

Item#VF314 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

https://themonty.com/project/itemvf314-ipsen-bottom-load-vacuum-furnace/

Item#VF313 GT Technologies Top Loading Vacuum Furnaces

Top Loading Vacuum Furnaces (2 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 Price $175,000 USD Each

https://themonty.com/project/itemvf313-gt-technologies-top-loading-vacuum-furnaces/

Item#VF312 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 Price $149,000 USD

https://themonty.com/project/itemvf312-vacuum-furnace/

Item#VF299 Sunbeam Vacuum Furnace

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

Asking Price $95,000 USD

https://themonty.com/project/itemvf299-sunbeam-vacuum-furnace/

Item#VF282 AVS Vacuum Debinding/Sintering Furnace

This is a horizontal graphite vacuum debinding sintering furnace for steel MIM parts completely rebuilt from top to bottom by AVS in 2010. Working volume – approximately 18 cubic feet, 28” wide x 26” high x 42” long graphite retort, 1500# capacity. Temperature – rated for continuous operation at 1400°C ±10°C in vacuum, 1450°C burn-out. 50µ ultimate vacuum; leak rate <10µ / hour, CEDORT (Clean, Empty, Dry, Outgassed, Room Temperature). De-bind system – nitrogen

or argon sweep gas, 0 – 100 torr differential pressure controlled by PLC and automatic I-to-P modulating vacuum valve, binder trap, condenser assembly; options available for hydrogen gas and burn-off. De-bind lines heated to keep vapor from condensing in vacuum lines. Fast cooling with circulation fan and automatic gas re-circulation ports. Control system – AVS ACE™ control/data acquisition system. Estimated cold-to-cold cycle time of 16 to 20 hours with AVS "Fast Cool" option. Horizontal jacketed chamber – 60" dia. x 80" long, nominal dimensions, flanged, on legs. SA-516-70 mild steel construction on water jackets and door + body flanges. Stainless Steel inner jacket & dished head plus all power ports Front-loading chamber with 2 doors – both doors on adjustable hinges, with buna o-rings, manual clamps, for operation from 50 millitorr vacuum to 3 psig positive pressure; rear door opens for service. Ports – rough line on side of chamber, delube line from bottom, fan housing flange on rear door Additional PORTS added to the system to accommodate future system modifications for processing 'sinter-hard' P/M materials – a total of up to 7 additional ports ranging from 18" in diameter down to 1" in diameter will be added. Further details available upon request. Currently installed and in excellent condition.

Asking Price $149,000 USD

https://themonty.com/project/itemvf282-avs-vacuum-debinding-sintering-furnace/

WASHERS

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.

Item#W428 Abar Ipsen Parts Washer

Model WRD-5-G Dunk/Spray washer. Serial number 60099. Working dimensions of 24" X 36" X 24", maximum load capacity 1200 pounds. Gas heated. 460/3/60 electrical. Currently installed. Very good condition.

Asking $19.900.00 USD.

https://themonty.com/project/itemw428-abar-ipsen-parts-washer/

Item#W425 Proceco Rotary Table Washer

Proceco Rotary Table Washer. Standard Proceco "Typhoon" stainless steel rotary table washer with 2000 pound table capacity. This washer has a wash stage, rinse stage and electrically heated blow-off stage. Wash tank is 600 gallons, rinse tank is 295 gallons. 25 HP wash pump, 360 GPM, 40 psi. 7-1/2 HP rinse pump, 115 GPM, 60 psi. Manual and drawings are included with this washer. Washer options include the following: Center Nozzle Pipe (CNP), Full Flow Filtration, Exhaust Blower, Oil Skimmer, Fresh Water Rinse, Oil Coalescer, PLC Controls, Stainless Steel Construction. Electrically heated with voltage 460/3/60/39 Amps. Model # HD 62-60-S-2000-CO-2-R-BO-SS and Serial # 96-224. Working dimensions of 62″ Diameter x 60″ High with external dimensions of 8'W x 16'H (11'H shipping) x 13'L. Controls Mounted and wired in a free standing panel includes an Allen Bradley SLC 500 PLC control with operator interface flush mounted to the door. There are three (3) digital temperature controllers, 1 for 1st stage, 1 for 2nd stage and 1 for blow-off stage. Excellent condition and available immediately.

Asking Price $55,000 USD

https://themonty.com/project/itemm425-proceco-rotary-table-washer/

Item#W415 Surface Combustion Parts Washer

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

For Pricing Please Contact Jordan@themonty.com
https://themonty.com/project/itemm415-surface-combustion-parts-washer/

Item#W348 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.

Asking Price $35,000 USD
https://themonty.com/project/itemm348-ipsen-automatic-dunk-spray-washer/

Item#W314 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 Price $18,500 USD

https://themonty.com/washers/

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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