APRIL ISSUE 2019

HEAT TREAT NEWSLETTER

Everything to do with heat treating

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CONTENTS

INTRODUCTION

We hope you enjoy the April 2019 issue of **“The Monty”** which for the past 20 years has been providing the heat treatment industry with the most up to date news and trends in the world.

Best regards,

Gord, Dale and Jordan Montgomery

HEAT TREAT NEWS

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

Alloy Theft
Mar 29, 2019

There can't be a captive or commercial heat treater in North America who has not at some point been the victim of "alloy theft". By alloy theft we mean a few base trays, baskets or muffles disappearing out the back door and turning up at the local scrap yard. Probably because the price of alloy has dropped from their all time peaks a few years back we have not heard much about this recently, however this story caught our eye. Obviously these guys were into this big time.

"A third man has been sentenced and ordered to pay more than $1 million after stealing a metal alloy from ArcelorMittal and selling it. Christopher Forster, 31, of Valparaiso, pleaded guilty last year in federal court to four counts of interstate transportation of stolen property. Forster was sentenced Tuesday to 15 months in prison and was ordered to pay $1,414,030 in restitution to ArcelorMittal, according to the U.S. Attorney's Office for the Northern District of Indiana. Between 2013 and 2014, Forster and his co-defendants, Ryan Hendrickson and Robert Watkins, stole a metal alloy called Ferro Columbium from ArcelorMittal's property and transported it across state lines to sell for profit, court records show.
Hendrickson worked for ArcelorMittal in Burns Harbor at the time as a mechanic and welder, and the "nature of his job had him working all over the mill property," court records state. Hendrickson "passed on that knowledge" to his friend Forster and Watkins and Forster committed the thefts, according to court records. Ferro Columbium is a microalloy used in the heat treating process or as a spray on the hot strip mill, according to Pete Trinidad, union negotiator for ArcelorMittal Burns Harbor. It helps with some specialty steel, including some of the more exotic high-strength steel that ArcelorMittal has developed, Trinidad said.
Watkins was sentenced to 15 months in prison and was ordered to pay $1,291,030 in restitution to ArcelorMittal, court records show. He pleaded guilty to three counts of interstate transportation of stolen property. Hendrickson was sentenced to two

years of probation and ordered to pay $123,000 in restitution to ArcelorMittal, court records show. He pleaded guilty to one count of interstate transportation of stolen property."

ALD Vacuum Technologies Changes
Mar 29, 2019

Last week we mentioned how ALD Vacuum Technologies (manufacturers of vacuum and vacuum carburizing systems) was going through some major changes. The changes involved their divisions in the USA, Germany and India. In the USA we have been lead to believe that the President of the division in Michigan (which by the way is based in Wixom, Michigan), *Mr. Jason Sisler* has parted ways with the company.

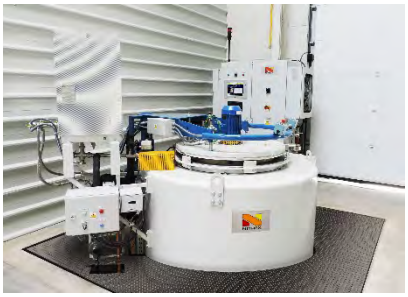
In India we hear that ALD Dynatech will change their name to ALD Vacuum Technology and will only offer sales and service with no more furnace manufacturing. And from Germany we have this press release from March 14, 2019; *"Guido Lober has been appointed President and Managing Director of AMG Engineering. The management board of AMG Engineering is composed of the President, Christian Momm, Michael Protzammn CTO and Steve Daniels Managing Director, Business Development. Within the AMG Group, AMG Engineering is a company of the new AMG Technologies division established on January 1st. "2019."*Our understanding is that Markus Holz who we believe was running the show in Germany was let go by the company earlier this year.

Alu Menziken Extrusion AG, New Nitrex System
Mar 28, 2019

"The Swiss corporation Alu Menziken Extrusion AG, a manufacturer of aluminum profiles and complex extrusion press products, chose a Nitrex nitrocarburizing system for its new state-of-the-art manufacturing facility on a greenfield site in northwestern Romania. Nitrex Metal delivered and installed a turnkey NX-815 nitrocarburizing system that incorporates the Nitreg®-C technology for treating aluminum extrusion dies. The pit furnace has overall chamber dimensions of 31.5" diameter by 59" high (800 x 1500 mm) with capacity optimized to nitrocarburize a 3300 lbs (1500 kg) load.

The process technology adapts to the application requirements to deliver improved performance of extrusion dies. Tailoring the application's surface properties has a positive influence on performance metrics like throughput per run and number of runs per die, which, as a consequence, mitigates the cost of tooling. Alu Menziken also chose the Nitreg®-C technology to reduce the possibility of potential failures like premature washout and flaking that degrade the performance of dies.

"With a focus on the environment, Alu Menziken also sought to introduce eco-friendly technologies for all equipment at its greenfield facility. Not only is there a benefit of reduced process gas use with the Nitrex system, the integral high-efficiency neutralizer also helps comply with environmental regulations," says Marcin Stoklosa, Nitrex European Project Manager. The modern factory situated in Mediesu Aurit, Satu Mare covers an area of 13 hectares and features the latest equipment for producing extrusions. Inaugurated this past November, the plant produces a range of profile products for aerospace and automotive companies, such as Audi, BMW, Bentley and Daimler, looking for lightweight aluminum solutions.



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

Caterpillar, Inc., Waco, Texas, USA
Mar 28, 2019

We can now provide an update on this news item from yesterday. The AFC-Holcroft UBQ furnaces have indeed already been purchased and removed from the auction. We understand they were bought by a used equipment dealer so they will be popping up on the used market in the near future we are sure.

"Back in February of 2018 Caterpillar announced that they would be closing their Work Tools facility in Waco, Texas-a facility which made buckets, couplers, and hammers. The plant did indeed close with production moved to a Caterpillar location in Wamego, Kansas or outsourced to external suppliers.

The remaining equipment will be going to auction this week-March 28 to be exact. The plant had a substantial heat treat department which included several fairly new and quite large AFC-Holcroft UBQ furnaces which can be seen in the photos below. While the auction has obviously not been held yet we understand these furnaces have already been bought and removed from the auction. What does remain is a Williams carbottom and several other heat treat related items."

Caterpillar, Inc., Waco, Texas, USA
Mar 27, 2019

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National Heat Treat, Houston, Texas, USA
Mar 27, 2019

In keeping with our top news item today about Caterpillar in Texas we also have this news item from Texas. National Heat Treat is one of the larger commercial heat treats in the area and boasts a number of different processes. Recently the company has been adding experienced people and this includes *Brian Taylor*who became Business Development Manager just a few week ago after spending some time at other heat treats in the area-his picture can be seen below. The company also announced a new Quality Manager*;*

“National Heat Treat is to proud to announce the addition of our new Quality Assurance Manager, Andy Mishaga . Andy is a quality assurance professional with over twenty years of diverse experience in ISO 9001:2015 and API Q1, in oil and gas fabrication, product manufacturing, aero

structures and R&D. His experience includes quality systems design, implementation and auditing, creating quality policies, procedures and metrics, supplier qualification and management, and documentation management."

The Edge of the World
Mar 27, 2019

Well it's not quite the edge of the world but you can certainly see it from here. During a recent trip to Chile which involved some heat treat related business Dale and Gord Montgomery of "The Monty" had the chance to visit Ushuaia, Argentina at the southernmost tip of South America, a city which bills itself as the "city at the edge of the world". This photo gives you an idea about what the local terrain looks like and why it is considered the edge of the world.

Combustion Burners Long Delivery Times
Mar 26, 2019

Furnace manufacturer Diablo Furnaces is having a very frustrating experience getting gas combustion burners on time as we can see from this note; *"I want to address the Chairman and CEO of Honeywell as I have tried to reach out and email him to no avail. Perhaps this will somehow reach him… We are an OEM Furnace Manufacturer who has been waiting for 3+ months for product. I have to say since your purchase of Maxon, and Eclipse where has the customer service I had received in the past gone? I have never seen a company so screwed up. Your company promises dates and does not deliver. We are told you have internal restructuring of your business (not the customers fault) and cannot meet the demand for your backlog and are looking at the end of Q2 to be caught up to be able to meet quoted lead times. At this point we have 8 units waiting for Honeywell product, if Honeywell misses the date AGAIN they have promised we have no choice but to rip the Honeywell bases out and go with Fire Eye."*

Dowa THT America Inc., Bowling Green, Ohio, USA
Mar 25, 2019

This article appeared in a Toledo, Ohio, USA newspaper *"The Blade"* March 22, 2019. We will add that Dowa is the largest furnace builder in Japan and also the largest commercial heat treater in the country. In addition they have 100's of furnace installations in North America.

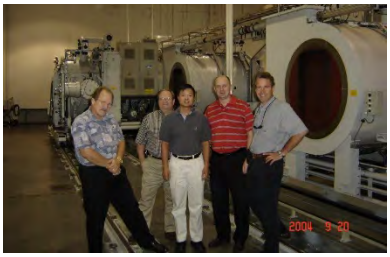
"BOWLING GREEN – The Occupational Health and Safety Administration has proposed more than $1 million in penalties for a Bowling Green metal heat treatment company after the company exposed employees to atmospheric, thermal, electrical, and mechanical hazards as they performed maintenance inside heat-treating furnaces, authorities said. The action is a result of an onsite

inspection OSHA conducted at Dowa THT America Inc., 2130 South Wood Circle, from Oct. 18 to Oct. 29, 2018, according to the citation and notification of penalty released Thursday. In addition to the $1,326,367 in penalties, the company was placed in OSHA's Severe Violator Enforcement Program, according to the Department of Labor.

The company was cited for 25 "willful, serious, and other-than-serious violations for hazards related to confined spaces, falls, machine guarding, respiratory protection, chemical exposures, and electrical equipment," according a written statement released by the department Thursday. Additionally, the company "failed to provide adequate personal protective equipment and train their employees on hazards in the facility." "The violations identified exposed employees to serious, and potentially life-threatening injuries and illnesses," said Loren Sweatt, acting assistant secretary of labor for occupational safety and health, in the statement. "Employers have a legal obligation to assess their workplaces for hazards, and establish appropriate safety and health programs to protect their workers."

From the Archives/Tony WU
Mar 25, 2019

Last week we had several older photos from the industry as part of a news item we entitled *"From the Archives"*. One of these (which you can see here) had to do with an ALD TT plant in South Carolina and one of the individuals in the photo was Tony Wu who we mentioned was now working with Bodycote in China. As it turns out Tony left the company and indeed the industry about a year ago. We stand corrected.



European Springs & Pressings
Mar 25, 2019

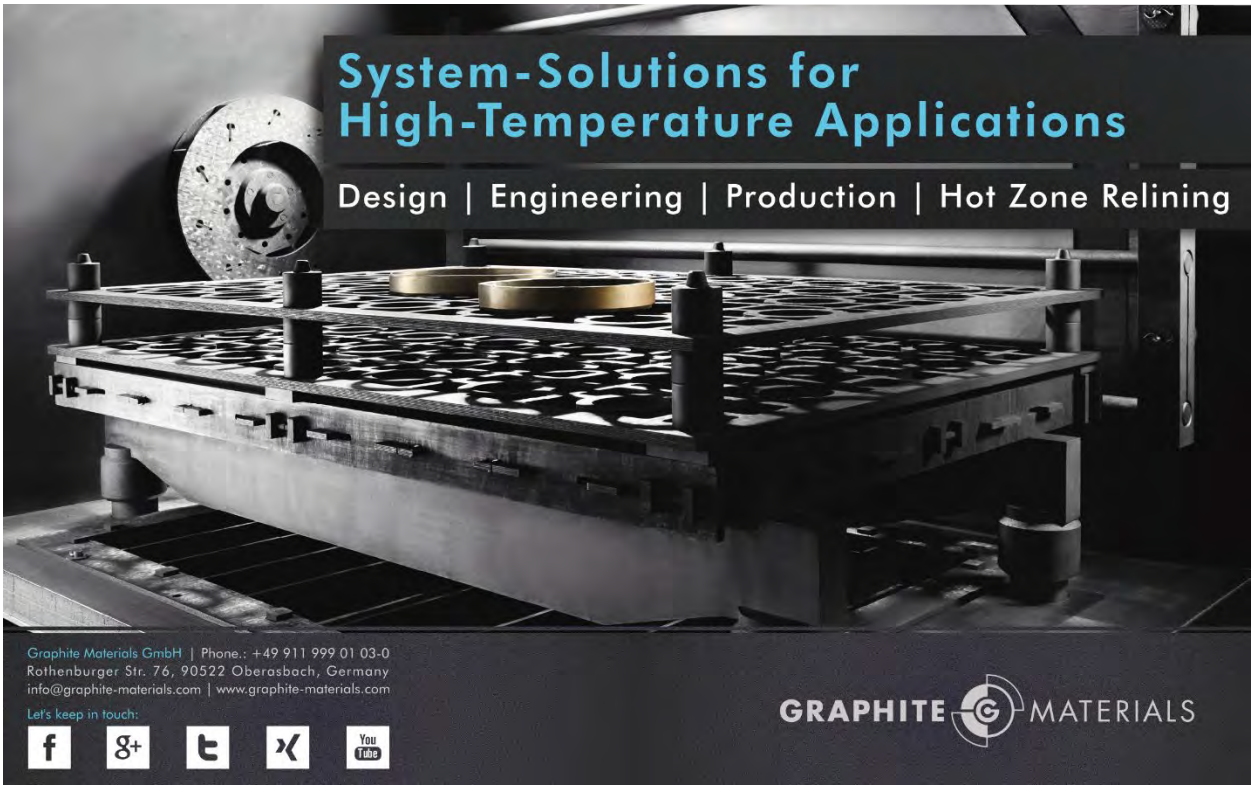
A reader in the UK asked that we mention how a spring manufacturer in Cornish has added some more heat treating capacity. We are happy to oblige although this press release tells us little.

"Over the last year, European Springs & Pressings, has spent about GBP2m on their two Cornish factories with a further GP1m more recently on a number of new advanced technologies. A new powder coating line has been installed in a 700 square metre extension, a new heat treatment oven acquired and two high performance spring end grinding machines completed the recent purchases. The new equipment, spread across the Penryn and Redruth factories, has doubled the grinding capabilities in the company's industrial sector and expanded the automotive sector grinding facilities by 400%.
The new heat treatment oven and powder coating line increases automotive production infrastructure by 200%. Michael Gibbs, managing director of the Cornwall operations said: "Developing enhanced manufacturing capabilities through investment in high tech infrastructure and education, enables us to sustain manufacturing competitiveness. With a global marketplace across multiple industries, it is essential that we maintain our reputation for innovation and manufacturing excellence. "We're accelerating our industrial and automotive sector expertise, through operational focus, in direct response to customer demand. Our programme of machinery financing is strategic, reflecting a number of years of record growth and our parent company, Lesjofors, global position as an investor in manufacturing.

ALD Vacuum Technologies
Mar 22, 2019

Based in Hanau, Germany ALD Vacuum Technologies is one of the largest furnace builders in the world and has offices and manufacturing around the world including in Germany, the US and India-as a matter of fact we recently had a news item about how the company was expanding their facility in Hanau.

As it turns out this is only a small part of the changes the company is going through. Changes which we will mention in the near future include top management changes in the USA and Germany, changes in their sales efforts in North America and changes at their manufacturing facility in India. We will keep you posted.



Thermex Metal Treating Adds Gas Nitriding; Edmonton, Canada
Mar 22, 2019

"With the recent commissioning of our new horizontal gas nitrider, Thermex is now operating two state-of-the-art Gas Nitriding furnaces, enabling us to offer controlled 2-stage gas nitriding, with Post Oxidation when required. In addition, with this new equipment we are offering our new Gas FNC (ferritic nitrocarburizing) + Post Ox, which is a viable alternative to QPQ Liquid Nitriding. The investment in this technology has allowed Thermex to increase total capacity and provides redundancy when one of the furnaces requires maintenance. In addition, this new equipment offers precise and verifiable process control, using continuous in-line hydrogen analysis as a means of controlling Kn, the nitriding potential. The results from these furnaces have been repeatable and reliable, as confirmed by metallurgical testing on our coupons run in every load processed. The two furnaces provide Thermex with scheduling and cycle time options to work with customer turnaround considerations. To learn about the range of case depth and processing options please email Rob Ducharme."

PhoenixTM Achieves UKAS ISO/IEC 17025 Accreditation
Mar 22, 2019

"We are pleased to announce that Phoenix Temperature Measurement has recently obtained UKAS ISO/IEC 17025 accreditation for its Calibration Laboratory in the UK (Laboratory Number 10560). The new accreditation strengthens the quality of after sales service and calibration provided by PhoenixTM to support the comprehensive range of temperature data loggers offered. Such new in-house calibration facilities will provide customers with a quick, efficient UKAS data logger calibration option. This facility will be important to help customers meet CQI-9 and AMS2750E standards for Heat Treatment and Temperature Uniformity Surveys (TUS). Another quality step by PhoenixTM, to help customers Understand, Control, Improve and Certify their particular heat treatment applications."

United Kingdom Accreditation Service

ACCREDITATION CERTIFICATE

CALIBRATION LABORATORY
No. 10560

PhoenixTM Ltd

is accredited in accordance with the recognised International Standard ISO/IEC 17025:2017 - General requirements for the competence of testing and calibration laboratories.

This accreditation demonstrates technical competence for a defined scope as detailed in and at the locations specified in the schedule to this certificate, and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated April 2017).

The schedule to this certificate is an essential accreditation document and from time to time may be revised and reissued by the United Kingdom Accreditation Service. The most recent issue of the schedule of accreditation, which bears the same accreditation number as this certificate, is available from the UKAS website www.ukas.com.

This accreditation is subject to continuing conformity with United Kingdom Accreditation Service requirements. The absence of a schedule on the UKAS website indicates that the accreditation is no longer in force.

Section Head, United Kingdom Accreditation Service

Initial Accreditation date
15 March 2019

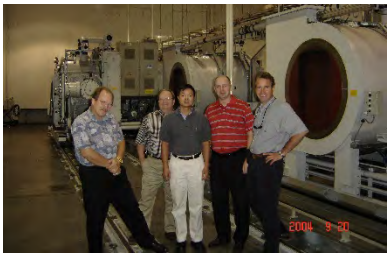
This certificate issued on
15 March 2019

UKAS is appointed as the sole national accreditation body for the UK by The Accreditation Regulations 2009 (SI No 3155/2009) and operates under a Memorandum of Understanding (MoU) with the Department for Business, Energy & Industrial Strategy (BEIS)

From the Archives
Mar 20, 2019

After exactly 50 years in business WG Montgomery Ltd., ("The Monty") has built up quite an archive of heat treating photos which we like to share on an occasional basis. Here are a few from 15 years ago.

ALD South Carolina, USA. It is now almost exactly 10 years since ALD Thermal Treatment closed their facility in Blythewood, SC. The plant was built to service a nearby Bosch facility and as demand changed the plant was not longer needed. In this photo we see Robert Peters on the left (now a consultant), Tony Wu (now with Bodycote, China) in the middle and Gord Montgomery on the right.



Furnaces North America, Nashville, TN, USA. The first show *Furnaces North America* (FNA) had in Nashville was back in 2004. In this picture we see Gord and Dale Montgomery and *Paul Armitage* of *Service Heat Treat* in Milwaukee, USA on the right.

Gord Montgomery and Lisa Hill. Lisa has to have been our all time favorite spare parts person when she worked at furnace builder Ipsen. After Ipsen Lisa worked at the Bodycote, Melrose Park facility until a few years ago at which point she left the industry and we lost track of her.

The “Heat Treat Doctor” himself. Dan Herring, one of the best known heat treat consultants in North America along with his beautiful wife at FNA in Nashville, in 2004.

Thermprocess
Mar 20, 2019

June of 2019 we will be off to the Thermprocess heat treat exhibition in Germany an event which we have attended a few times over the years. We look back on one that we attended 12 years ago and have these photos for you.

Dale Montgomery, Yvan Trouillot, General Manager, ECM

Matt Cross, SSI Europe, Eric Jossart, Atmosphere Engineering, Dale Montgomery

Gerd Mueller-Laessig, HEESS GmbH, Bill Disler, AFC-Holcroft, Karl-Heinz Grosse, ALD Vacuum Systems

Gunther Braus, Dibalog, Dale Montgomery, Laurens Sack, Dibalog

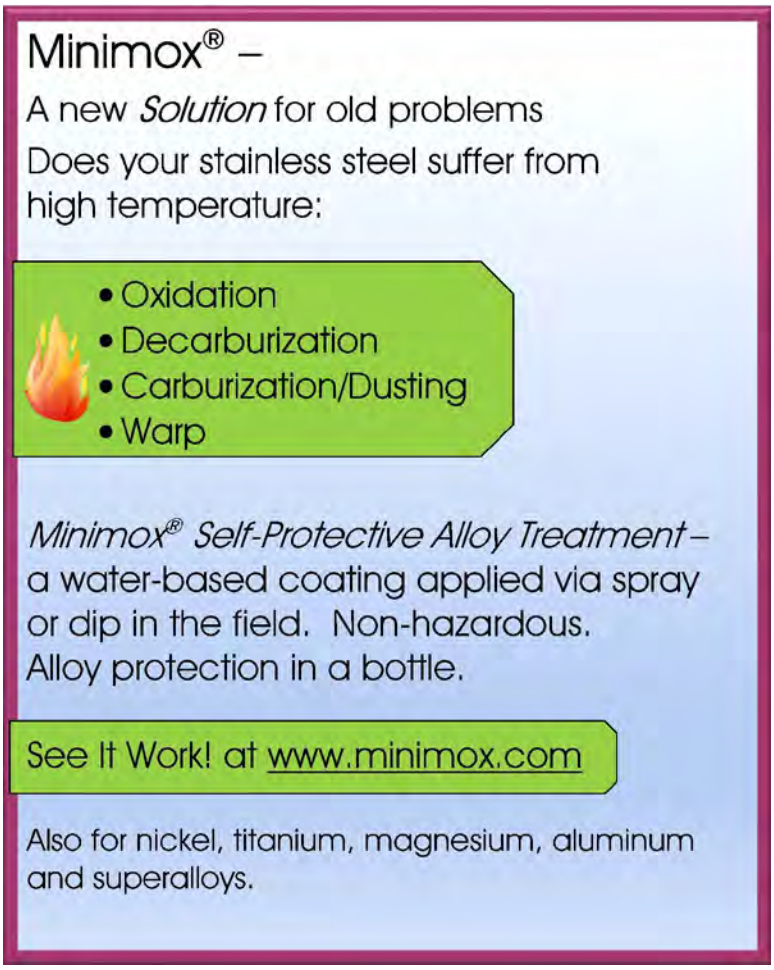
Dale Montgomery, Robert Nöbauer, Rubig

Delta H Technologies, Ohio, USA Expands
Mar 18, 2019

Furnace and oven builder Delta H in Carrol, Ohio sent us this press release with the photo below showing Richard and Neal Conway;

"Delta H Technologies LLC, a manufacturer of industrial furnaces and heat treatment ovens, plans on adding 11 new jobs and investing more than $300,000 for machinery and equipment at their site on High Street, right off U.S. 33. The company makes furnaces and ovens for aerospace maintenance technicians to heat treat components, so they can quickly be repaired and keep the aircraft from being grounded awaiting new parts. The 11 jobs will double the current workforce.

"Thank you, guys, for staying in Fairfield County and staying in Carroll and for



having the entrepreneurial spirit to do what you've done," said Rick Szabrak, economic and workforce development director for Fairfield County on Tuesday at the official announcement. Fairfield County provided a $20,000 Workforce Development Training Grant to help with training of new employees. JobsOhio, through the efforts of Columbus 2020, provided a $50,000 performance grant toward the purchase of new machinery. "We wanted to help in any way that we could as a county," Szabrak said Richard Conway, director and chief technology officer, started the company in 1990 while attending Ohio State University to get his bachelors of science in industrial engineering. He did maintenance and tuning work for industrial furnaces and ovens."

What's It Worth?
Mar 18, 2019

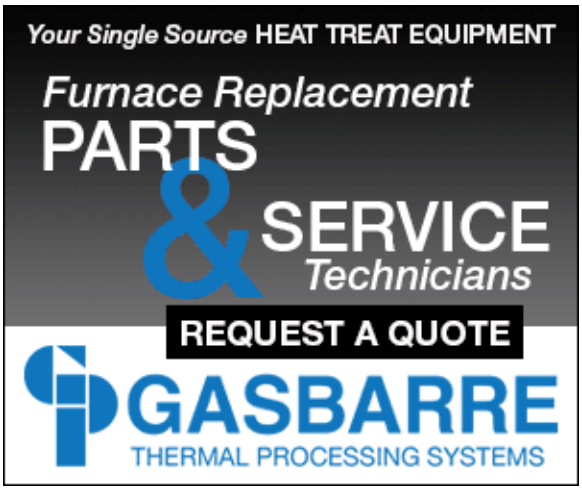
Specs: S/N: 4926. Year: 2007. Three (3) Fans with side mounted disconnects. Overall Size: 6'w x 6'h x 21'l. W-RES, MAWP 75 psi @ 450°F, MBMT -20°F, 75 psi. Asking Price $15,500 USD. So it this a reasonable price for this unit?

We think so but the market doesn't. SBS air cooled quench oil coolers are used around the world, are known by pretty well every heat treater on the planet and last forever. However for reasons unknown to us there is not as much demand for used units as there was just a few years ago. We can recall times when as fast as a used unit went on the market it sold-that is no longer the case. So we would have to say that probably this asking price is on the high side.

Mercedes Heat Treatment Department Flooded
Mar 18, 2019

Last week we had some shocking videos of an in house heat treat department being flooded (the videos can be found further down this page). We were reluctant to provide the name of the company, however it appears that the company itself announced the disaster. It is none other than auto maker Mercedes, and the plant is their transmission components facility in Sao Paulo, Brazil.

"Flooding of a Heat Treatment Department; Earlier this week we had some shocking video of a captive heat treating department flooding. We have decided not to release the name of the company but we will say it is the largest manufacturer of automotive transmission components in South America. The link below will take you to another video from the same department, in it we can see a number of pit nitriders being submerged. What a disaster and what a shame-this is (or was) an extremely impressive heat treat department."



Paulo/Quintus/Hot Isostatic Pressing
Mar 18, 2019

We mention this very interesting news item some time ago, however this version adds some more details. It ties in very neatly with the fact that we just interviewed the President of Quintus, *Mr. Jan Söderström*and his interview can be found at https://themonty.com/mr-jan-soderstrom-quintus-technologies-interview/

"Paulo, a North American leader in the heat treating industry, will add hot isostatic pressing to its thermal processing services with the acquisition of a Hot Isostatic Press (HIP) from Quintus Technologies. The press, model QIH 122 M URC®, is equipped with Quintus' proprietary uniform rapid cooling (URC), a feature that improves material properties in additive manufacturing and investment casting. "We see the market for HIP expanding, with a large part attributed to additive manufacturing," Scott Herzing, Paulo Vice President Engineering, comments.

"We have the leading material knowledge and process expertise to help our customers in this area. The ability to combine HIP and heat treatment will allow us to offer one-stop-shop thermal processing solutions, with faster turnaround times." The HIP will be installed in Paulo's recently expanded Cleveland Division, in Willoughby, OH, which provides specialized brazing and precise vacuum heat treatment. The plant's AS9100 quality management system and Nadcap accreditation make it especially well-suited to serve the needs of the aerospace and power generation industries. In addition to turnkey delivery, the Paulo order includes an extra furnace base, extended warranty, and a five-year Quintus® Care agreement. Quintus Care is not only a rigorous preventative maintenance program to assure safe, trouble-free press operation and optimized functionality at a fixed annual cost.

It also provides customers with significant technical expertise to achieve success in their specific applications. Paulo and Quintus Technologies have also entered into a marketing agreement that reflects the commitment of both companies to work closely together to spread the use of the HPHT process. "Paulo was very intrigued by our ability to offer a complete partnership: the system itself, the Quintus Care program including application support, and the marketing agreement," says Jan Söderström, CEO of

Quintus Technologies. "With this partnership they see the possibility to enter the market in the best possible way." "Working with a market-leading company like Quintus is a good fit for Paulo," says Herzing. "This partnership will allow us to continue to do what we have always done, help our customers succeed."

Heat Treat Auction
Mar 18, 2019

We see that there is an upcoming "Bidspotter" auction which includes a gas fired Surface Combustion Allcase batch IQ furnace with working dimensions of 36" X 48" X 32". A batch IQ furnace this size is guaranteed to sell immediately if the price is right. www.pmi-auction.com

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Flooding of a Heat Treatment Department
Mar 15, 2019

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The SECO/WARWICK Group Financials
Mar 15, 2019

The SECO/WARWICK Group holds strong position with record order portfolio. The SECO/WARWICK Group, one of the 5 largest manufacturers of equipment for the heat treatment of metals and vacuum metallurgy in the world reports a record order portfolio of over PLN 400 million after three quarters of 2018.

The Group's sales in the first three quarters of 2018 increased by 10% compared to the same period of 2017 reaching a record PLN 400.3 million. The operating profit for this period was PLN 20.2 million, while the net profit was PLN 13.4 million.

"A good performance and a rich portfolio of contracts, both completed and newly signed, result from a combination of excellent business relationships, a global reputation for proven technology, and consistently building a strong SECO/WARWICK brand," said Paweł Wyrzykowski, SECO/WARWICK Group CEO.

A record order backlog. The strong market position of the SECO/WARWICK Group is built not only by factories and companies on 3 continents, but above all, stable revenues and a record order portfolio for end-to-end solutions in 5 product categories.
One category of note is atmosphere heat treatment technology and equipment, the SECO/WARWICK product segment that enjoyed robust sales in 2018. The final results reflect great progress for this product segment that has prompted continuing investment in this technology and expansion into new markets. Projects worth mentioning include:

- *The sale of two complete technological lines, each consisting of a two-chamber sealed quench furnace and auxiliary equipment for one of the world leaders in the commercial heat treating market,*
- *Delivery of a continuous operating roller hearth window bending line to the Czech Republic and Poland,*
- *The installation of a fire resistance test furnace for the Scandinavian market.*

- *The latter product deserves a special distinction, because SECO/WARWICK is the market leader most frequently chosen by companies conducting fire resistance tests of their products.*

Another product segment of the Group that recorded spectacular sales results is vacuum metallurgy. A significant increase in sales of vacuum induction melting systems (VIM) in 2018 has already become the success story of the segment. At Purdue University, USA, the Group installed and commissioned a VIM type furnace with a unique oil cooling system – a furnace for infiltrating samples with a zirconium alloy. VIM also was delivered among other vacuum metallurgy projects to an American company serving the aviation industry.

It was the aerospace industry that built a strong order portfolio, 70% of sales, for the Group in 2018, because equipment from the three segments of the Group are devoted to this sector. Particularly noteworthy are furnaces for vacuum heat treatment, which in 2018, SECO/WARWICK sent to customers at least once a week, 65% of the total volume were designed as customized projects. In addition to numerous realizations for the aviation market, the SECO/WARWICK vacuum solutions segment has proudly entered the demanding and difficult Japanese market for tool steel components.

The last but equally attractive product group is equipment for the heat treatment of aluminum and controlled atmosphere brazing (CAB). As shown by SECO/WARWICK in numerous installations around the world, technical experience and an innovative approach make the CAB solution the preferred joining technology for battery cooling plates within the hybrid electric vehicle (HEV) and electric vehicles (EV) market. Interestingly, SECO/WARWICK is the only company in Europe supplying lines dedicated to brazing the aluminum electric car battery coolers.

4 X Stronger Position – Solutions Designed for Industry 4.0. SECO/WARWICK is an award-winning company that has been interested in unconventional and innovative solutions since its inception. The company has developed many intelligent tools to support production processes using artificial intelligence, the Internet of Things (IoT) and the latest concept of Industry 4.0.

Observing the global market trends related to Industry 4.0, SECO/WARWICK launched a research and development project aimed at creating a comprehensive management system for predicting maintenance issues for both metal heat treatment and vacuum metallurgy systems, equipped with a unique failure

detection system. The effect of this project is the SECO/PREDICTIVE system for monitoring furnaces for heat treatment.

SECO/PREDICTIVE, based on predictive analytics, together with the SECO/LENS® based on augmented reality technology, are the latest solutions of the Group supporting production and service processes.

Awareness of the need to implement advanced and intelligent solutions, often called "the brains" of an entire production line, is constantly growing. SECO/WARWICK, as a production company, perfectly understands these needs, offering innovations that increase the resilience of companies and their business performance. This was reflected in the results in 2018, where the Company recorded an increase in the number of electrical projects by 20% compared to the same period in 2017.

Financial data for the full year 2018 will be available in the consolidated periodic report in April this year, which will be posted on the company website www.secowarwick.com.

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Atacama Desert, Chile, South America
Mar 15, 2019

During our visit of heat treats in the South American country of Peru Dale and Gord Montgomery were able to take a couple of side trips around the country. While this has absolutely nothing to do with heat treating the Atacama desert is quite a sight to see.

SECO/WARWICK, Meadville, PA, Doug Glenn
Mar 13, 2019

From the “Meadville Times” in Meadville, PA, USA we have this news item about furnace builder SECO/WARWICK https://www.meadvilletribune.com/

“Worldwide changes in the industrial furnace industry has caused SECO/Warwick Corp. to halt manufacturing operations at its Meadville location, but it continues to have sales and service offices, according to company officials. The company is a division of SECO/Warwick S.A., based in Poland. It had been making industrial heat treat furnaces in Meadville under the SECO/Warwick Corp. name since 1984, but the history of the site as an industrial location goes back almost 100 years. Before SECO/Warwick, it had operated as Sunbeam Equipment Corp. from 1958 to 1984, and prior to that the site was the industrial furnace division of the former Westinghouse Electric Corp. which operated from the early 1920s to 1958.
At the beginning of 2019, SECO/Warwick shifted manufacturing from Meadville to “select local, regional and national subcontractor locations,” according to Doug Glenn, company spokesman. Glenn declined comment on what local and regional subcontractors were being used. Glenn said the Meadville offices have sales, service/support, administration, design, engineering and management personnel, but he did not give specifics. “(There are) no plans to close Meadville,” Glenn said. “This was simply an adjustment to our manufacturing strategy.”

Shocking In House Heat Treating Video!
Mar 13, 2019

After 40 years in the heat treating industry we have never seen anything like this. What you see in this video is the in house heat treating department of a major transmission manufacturer in the process of being flooded. Pit furnaces, pusher furnaces, rotary hearth furnaces all of being submerged as we watch. What a major disaster.

Earlier this week we had some shocking video of a captive heat treating department flooding. We have decided not to release the name of the company but we will say it is the largest manufacturer of automotive transmission components in South America. The link below will take you to another video from the same department, in it we can see a number of pit nitriders being submerged. What a disaster and what a shame-this is (or was) an extremely impressive heat treat department.

Tratamientos Térmicos Panamericana Norte/Santiago, Chile
Mar 13, 2019

We were very fortunate earlier this week to be able to visit the largest commercial heat treater in Chile, a company by the name of *Tratamientos Térmicos Panamericana Norte* located in Santiago which was founded back in 1983. The company is family owned like so many other commercial shops around the world and has roughly 30 employees working 24 hours/day 5 days/week with weekends reserved for overflow work. I am sure it is because of the metal working market in Chile that this is what we would call a “job shop” as opposed to a production shop doing large volume work such as automotive. To take it one step further much of what the company does is related to the main industry in the county which is mining.

What we saw was a great deal of equipment dedicated to tempering, annealing and stress relieving along with the ability to offer salt nitriding, austempering and martempering, basically a strong emphasis of salt. Having said that we had some very in depth conversations about their future furnace requirements all of which are very high tech. Outside of the commercial heat treat industry it would appear that the largest captive in the country is a company by the name of Cormecánica wholly owned by Renault which has made at last count 3 million gearboxes and has an in house heat treating department which consists of several batch IQ furnaces. These photos give you a good idea about the company.

From left to right; Silvano Casagrande, Giuseppe Casagrande, Alberto Hidalgo, Maurizio Moschini, Pedro Vidal, Federico Parissenti, Hector Olivera, Gord Montgomery



Modern Heat Treat Adds AFC Holcroft Batch IQ Line
Mar 13, 2019

In support of its continued growth, Modern Heat Treat, a commercial heat treating operation located in Richland Hills, Texas (USA), has added several additional UBQ (Universal Batch Quench) furnaces and companion equipment to its installed base. Several new equipment orders were placed with AFC-Holcroft months apart throughout the year in 2018, adding similar equipment to that already in operation in their facility.

Modern Heat Treat have benefitted from the modular, flexible UBQ design with the ability to add new equipment to their facility incrementally, creating full production cells that utilize existing controls. Individual furnaces can be added to the operation independently, and the same can be idled then restarted easily as needed for maintenance service, changes in process or production. "These large capacity UBQ furnaces provide Modern Heat Treat with a distinct advantage in the market, since the equipment is scalable to meet their need for flexibility," says Tracy Dougherty, Vice President of Sales at AFC-Holcroft. "AFC-Holcroft is proud to be a part of the continued expansion and growth of Modern Heat Treat"
About Modern Heat Treat: Modern Heat Treat has been serving the metalworking industry since 2009, providing heat treating services such as alloy quench and temper flame hardening, carburizing, and more from small to large-sized

businesses. The business has grown into a 25,000 sq ft facility on a 5 1/2 acre lot, with 57 employees and over 40 pieces of furnace equipment.

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

About AICHELIN Holding: As part of Berndorf AG, AICHELIN Group is a leading provider of heat treatment solutions, such as industrial furnaces, induction hardening plants, industrial gas burners systems as well as automation technology and after-sales services. The AICHELIN headquarters are located in Mödling near Vienna. The company's roots date back to 1868. The long-established brand AICHELIN, as well as AFC-Holcroft, EMA Indutec, SAFED, BOSIO, and Noxmat, make up the group and together employ more than 1,100 people. AICHELIN Group ranges among the world's top 3 heat treatment companies. AICHELIN's subsidiaries in Europe are located in Austria, France, Germany, Slovenia, and Switzerland; the worldwide presence of the company includes subsidiaries and branch offices in China, India, Russia, and the US, as well as a sales network in 22 more countries. http://www.aichelin.com. For more information, contact media@afc-holcroft.com.

Mr. Jan Söderström, Quintus Technologies Interview
Mar 11, 2019

Mr. Jan Söderström, Quintus Technologies. We are very pleased today to have an interview with Mr. Jan Söderström, CEO of Quintus Technologies-the world's largest supplier of equipment for Hot Isostatic Processing.

Over the years I have run across Hot Isostatic Processing many times, but I have to confess I know little about the technology-could you please give us a brief summary about the process and why it is used?

"HIP is mainly used to densify metal castings, containerized powder shapes and ceramic parts. With typical pressures from 1,035 to 2,070 bar (15,000 to 30,000 psi) and temperatures up to 2,000°C (3,630°F). A combination of temperature and pressure for a specific soak time eliminates porosity allowing HIP to achieve 100% of the theoretical density and improve the ductility, fracture toughness and fatigue resistance of critical, high-performance materials. For castings this technology has been extensively used in the aerospace as well as the industrial gas turbine

market, but it is also widely used for powder metallurgy and near net shape production in the Oil and Gas industry. The fastest growing new user of HIP technology is metal Additive Manufacturing (AM), 3D-printing."

Would you consider this a heat treatment process or more of a related process?

"Originally HIP has been one part of several steps in a heat treatment process to create materials with superior properties. However, in the latest development of Quintus HIP systems, very fast cooling rates can be achieved, and multiple heat treatment steps can be included into the HIP cycle. Processes like stress relieving, solutionizing as well as aging and tempering can all be run in one and the same HIP cycle while the high pressure remains. Quintus call this High Pressure Heat Treatment (HPHT). This is possible due to the unique design of Quintus wire wound pressure vessels where very quick cooling rates can be achieved in the HIP under high pressure. So in answer to your question, our modern High Pressure Heat Treatment equipment is definitely a part of the heat treatment World. Traditional phase transition curves might need to be re-written to include pressure as a parameter as this can have a measurable effect on controllability of phase transformations."

"The major benefits of combining heat treatment processes in the same cycle are of course lead time savings, cost savings as well as improved material properties. In comparison with oil quenching High Pressure Heat Treatment has also proved to be very beneficial to prevent distortions and crack propagation in the final product and tailored cycles can help prevent cracking with the use of pressure."

What kind of heat treatment cycles can be run in your equipment?

"As mentioned above our modern HIP systems can be used for multiple parts of a heat treatment process. All of our systems have the possibility to run pressure and temperature independently which gives our customers a big flexibility in how to run their cycles. In addition to this the systems can be equipped with quench functionality where we can achieve cooling rates in which is similar to oil quenching. With these capabilities you can do stress relief, HIP, solutionizing, tempering as well as aging in our HIP systems. With that said it is up to our customers to verify what the most economical way of using the HIP system is for their respective products."

Who is your typical customer, a manufacturer or a commercial heat treater?

"Historically Quintus has sold HIP systems to a few providers of HIP services in the USA, and Europe as well as Asia but this is now changing. Quintus have seen

dramatic increase in interest from commercial heat treaters in the last few years both in USA as well as in Europe. As you reported last year Gord, two new commercial heat treaters entered the HIP market in USA, Paulo and Stack, and Quintus also sold a system to a heat treatment company in Mexico which will be the first HIP service provider there."

"In addition to this we also see an increase of interest from insourcing HIP technology where companies both OEMs and components manufacturers that have used HIP services for a period of time see the economical, the lead time and the Intellectual Property benefits of insourcing HIP technology besides the possibility to freely chose HIP parameters. It is especially the metal Additive Manufacturing (AM) industry that is coming into a production mode that now start to insource HIP and High Pressure Heat Treatment technology. Additive manufactured components can often benefit form specific HIP and heat treatment parameters that are different from the conventional parameters used for castings. This is due to the quite different microstructures seen in material produced by AM compared to cast material. HPHT enables tailoring of microstructures with the help of pressure and high cooling rates and many papers are now being presented on the benefits. This helps to fuel the demand from OEMs."

"Finally, there is a category of metal AM companies that take the whole metal AM production chain into considerations that are now moving to insource HIP and HPHT. Having the possibility to control everything from the powder, printing, post processing etc. is a huge benefit for the final part quality. There has been a great deal of focus on powder and printing over the past few years, and now the industry is moving to look at post processing and lean manufacturing."

How large is the market for HIPing, to phrase it another way how many HIP systems, both yours and competitors, would you estimate to be in operation around the world?

"Today there are around 100 presses operated by service providers (tollers) around the Globe. The market is currently growing by more than 10% annually. The growth can be divided into two categories, the larger presses for traditional HIP use and the compact and midsized presses offering High Pressure Heat Treatment catering to the Additive Manufacturing industry and high performance investment casting."

Geographically is HIPing more prevalent in some regions than others?

"The largest market is USA followed by Europe and Asia."

Feel free to correct me but my impression is that Bodycote is far and away the largest in the world when it comes to HIPing. Having said that I can think of 3 US commercial heat treaters, Lake City, Stack Metallurgical and Paulo who have invested in this technology over the past year. Why this sudden and growing interest by commercial heat treaters?

"You are right in Bodycote being the largest player of HIPing in the USA and Europe but this is not the case for Asia. In Japan MTC is the biggest player and in China you have a multitude of companies offering HIP services. Regarding your question why commercial heat treaters start to invest in HIP now there are several answers to that:

The HIP market is growing dramatically and there is an increasing demand for HIP capacity. The requirements are increasing for the HIP service providers, and customers require much faster turn-around times from despatch to receipt of the part back from the toller. Larger systems dominate the HIP service market, and these require time to fill from various end OEMs, and now Quintus® sees an increased demand of smaller systems that can be run with faster turn around times and tailored heat treatment cycles.

Quintus can today also offer a rigorous preventative Maintenance and Application support program, called Quintus® Care. This program assures a trouble-free operation as well as optimized functionality and usability at a fixed cost. This program can be tailored to fit the specific needs of respective customers.

Finally, I would also like to mention that the Heat Treatment companies entering the HIP service market see this as an investment for the future where they will increase their market share not only for HIP services but also for Heat Treatment services. With the fast-growing market of Additive manufacturing these heat treatment companies will become One-stop-shops that can offer the whole heat treatment package at the same location which will simplify the logistics situation for many customers."

My first impression when I see your systems is that they are highly engineered, heavy duty and complicated which generally translates into expensive. This a rather convoluted way of asking, what do these installations typically cost?

"As you can understand the price range ($0.5-$20 MUSD) is heavily dependent on the size of the equipment and it is especially the diameter of the system that increase the price level. We like to talk about what value a HIP investment brings to our customers and we always do a rigorous business case study together with

our customers to be able to suggest the most economical solution for respective customer. Typical cost of operation is $0.1-$2USD/lbs (0.2-3.8 €/kg) depending on press size and how efficient you can load the components in the press.Typically, customers see a full return on their investment within 2-4 years depending on the size of the equipment"

Lets change gears slightly and look at your company Quintus Technologies. What can you share with us such as the history of the company, total sales, number of employees etc?

"Quintus Technologies has roots going back to the mid-1950s, when ASEA in Sweden was among the first to commercialize the isostatic pressure technology conceived at Battelle Memorial Institute in Columbus, Ohio. The world's first high-pressure press came into operation in 1953 and was used to manufacture synthetic diamonds and other products. ASEA, later ABB, then continued to market sheet metal forming and isostatic presses throughout the world. Today Quintus has global annual sales of around 150 MUSD and we have 230 employees."

Do you have much competition?

"Quintus is the largest manufacturer of Hot Isostatic Presses globally, but competition increases on a daily basis. We specifically see increased competition in China where several HIP providers are working on design improvement. With that said I like competition because we need competition to stay alert and continue to develop our technology leadership. Competition also means more players developing the market."

What differentiates your machinery to that from other suppliers?

"There are a couple of significant differences between our systems and the main part of other HIP systems suppliers and they are:

Pressure vessel design – Quintus uses a high strength steel wire to pre-stress a thin walled forged cylinder. The walls of the cylinder always experience compressive stresses which prevents crack initiation and growth. This manufacturing method was developed in the mid 50's for Quintus® diamond presses and has proven to be a safe and reliable concept ever since. The use of wire winding also makes it possible to use higher pressures for larger pressure vessel diameters. Quintus are today offering 30,000 PSI (2070 bar) for all standard equipment and can design machinery for high pressure ratings also for larger diameters.

Cooling capacity – As an effect of the thin walled wire wound design the pressure vessel can be cooled very effectively giving the opportunity to cool the load very

fast. For the majority of Quintus pressure vessels cooling rates in excess of 400°F/min (200°C/min) up to 4500 C/min can be achieved which gives the possibility to combine HIP and Heat Treatment in the same cycle.
Temperature accuracy – Quintus have optimized its furnaces (Thermal Barriers) as well as the software controlling it and our customers typically experience temperature variations of ±3.6°F (±2°C) during the steady state hold time."

What is your sales strategy? Do you sell through reps, direct sales people, regional offices? Along the same lines will be seeing you at any of the large Heat Treat shows in 2019 such as Thermprocess, ASM, HK19 or the Moscow heat treat show?

"Quintus has a global presence of its sales force and our front-end has expanded quickly during the last few years. As well as our Head Quarters in Västerås, Sweden, which covers large parts of Europe we also have sales offices in United Kingdom, Germany, USA (Columbus, OH), China and Japan. In addition to this we also have a large agent network that covers the rest of Americas, and Asia-Pacific. We also see our Quintus Application Centers being an integrated part of our sales force. There, tests are performed to verify the customers' processes and securing an attractive business case.
You will for sure see Quintus at several trade shows this year and even if we are not exhibiting we will be walking the floor at a multitude of events. For Heat Treatment we will exhibit at MS&T in Portland and Heat Treat 19 in Detroit as well as Thermprocess in Europe. In USA we will also exhibit at AMUG (Chicago), Rapid (Detroit) and Cast Expo (Atlanta). In addition to exhibitions, we are very active at conferences presenting a large number of papers each year in conjunction with industry and university projects."

On a personal note Jan how did you come to be involved in this industry and in particular with Quintus?

"In 2012 was asked by the former owner, a US based PE company if I wanted to be involved in this opportunity- I got very excited. During my earlier time at ABB I had the opportunity to follow the development of the high pressure business close by and I was always intrigued by the highly specialized and powerful machinery."

What does the future hold for Quintus and HIPing in general?

"The future for Quintus and HIPing *is very exciting from many different aspects.* HIPing *is starting to get the traction we at Quintus always have worked for. In the aerospace industry* HIPing *has been used extensively for several decades having realized the benefits and HIP is considered from the start of the design process. Here it is seen as a perfect way to reduce weight and maximize safety since you know that you can rely on your material properties. With the whole metal Additive Manufacturing industry growing extensively this is something they have a direct use for as well. We can now see that more and more industries are applying* HIPing *more extensively including the automotive and orthopedic sectors. The greatest increase can be seen in the growing demand for High Pressure Heat Treatment capabilities, allowing further design improvements through repeatability and improvement of material properties."*

I very much appreciate your time and in particular your very open and forthright answers-I hope to meet in person in Sweden one of these days. Thank you. Gord

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Phoenix Temperature Measurement Hires New Sales Manager
Mar 11, 2019

"We are pleased to announce that Jerram Dawes has recently joined Phoenix Temperature Measurement as Sales Manager. Jerram comes to PhoenixTM with knowledge of the Industrial Temperature Profiling and Heat Treatment markets with 20 years experience of working for a well-known temperature profiling equipment supplier. His previous market experience will be invaluable in helping him provide current and future PhoenixTM customers with a professional consultative service.

Jerram will be supporting the entire PhoenixTM range of 'Thru-process' temperature monitoring and TUS solutions used in Industrial Heat Treatment & Furnace Surveying, Paint Thermal Cure, Food Thermal Processing and Ceramic Firing Markets. Jerram will be working alongside Mike Handscombe to support our activities in the USA. Please join us in welcoming Jerram to the PhoenixTM team and what will be an exciting and challenging new role." Jerram Dawes e-mail: jerram.dawes@phoenixtm.com

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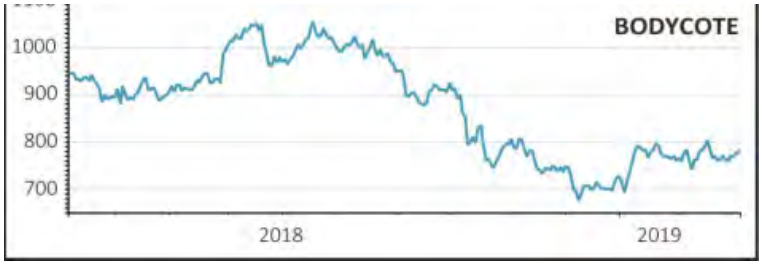
Monday Morning Briefing
Mar 10, 2019

Last week we had a news item about an explosion at commercial heat treater *Advanced Heat Treating* in St. Marys, PA-we now have this update; *"Several explosions were reported at the Advanced Heat Treating Inc. facility in St. Marys, PA on Monday evening that left a worker with minor injuries, several local news organizations reported. Firefighters were dispatched to the Trout Run Road plant at about 11 p.m. and remained on scene until early Tuesday morning. "We found out they had a draw furnace that an individual was operating and for some reason the draw furnace exploded and it caused a secondary explosion," Crystal Fire Department Chief Bill Kraus told CBS News affiliate WTAJ. The fire official said that the worker was hit by a door after the blast occurred, according to the television news station's report. After receiving burns to their face, the worker was transported to an area hospital for treatment."*

Commercial heat treating giant *Bodycote* just released their *2018 Preliminary Results* which can be found at https://www.bodycote.com/ As usual they make for very interesting reading if you want to see all the trends in the worldwide heat

treatment industry. We came across this summary about the results which is probably as good as any-obviously the financial markets seem to be impressed; *"Industrial services firm Bodycote (BOY) surprised the market on Friday with a double-digit increase in 2018 pre-tax earnings, sparking a 10% rally in the shares to 852p. Investors are also being treated to a 20p special dividend, on top of a 9% hike in the full year ordinary dividend to 19p. While the core heat-treatment business, which makes up three quarters of revenues, grew by a fairly sedate 5%, the rest of the businesses generated a 12% increase in revenues with some individual units recording over 30% growth. Bodycote is the world's leading provider of heat-processing services for metal and alloy components. Heat-treating makes parts more durable and extends their life, reducing costs for the end customer. Typical customers are car-makers and plane-makers that need specially-toughened or coated high-performance parts but Bodycote also supplies the energy industry, rail and marine markets and even food and beverage companies. Automotive industry sales were up 7% last year, which is pretty impressive given the weak performance of new car markets in Europe and the US. Sales to the aviation industry were up 8% with a major pick-up to 12% growth in the second half as supply-chain bottlenecks eased and US production of fuel-efficient LEAP engines ramped up, increasing the demand for parts. Energy sector sales were up 13% thanks to demand from the Permian basin in west Texas but there was also a pick-up in shipments for subsea contracts and this segment is continuing to grow. There was a strong contribution from emerging markets with revenues up 21% driven by Mexico and China and Bodycote is upping its investments in these markets to tap into future growth."*



European Heat Treatment Shows. This year we at *"The Monty"* will be attending three heat treat exhibitions in Europe; *Thermprocess* in Germany in June, the *Moscow Heat Treat Exhibition* in September and the *HK 2019* event in Cologne, Germany in October. Out of the three our favorite is the HK show in October which we have attended virtually every year for the past 10. To learn more

about it we would suggest you click on their banner ad on the right hand side of this page. By the way the deadline for the announcement of lectures is March 15 and oral presentations in English are welcome. The photo below was taken in 2015 and front and centre in this picture is *Florian Elwart* of Bodycote.

Where are they now-*Greg McFee*. Greg is a long time heat treater having worked at companies such as Lindberg and Bodycote and at one time running his own heat treat Thermal-Tech in Ohio, USA. Greg took a small detour into the titanium industry but he has returned to his roots and recently set up his own heat treat consulting firm by the name of *Thermal Consultants* in the Akron, Ohio, USA area. *Advanced Heat Treat Corp.*, in Waterloo, Iowa is pretty proud of this award; *"WATERLOO, IOWA – Individuals and businesses will be honored on March 26 at the Greater Cedar Valley Alliance & Chamber Annual Celebration for their ongoing commitment to making the Cedar Valley a better place to work, do business, and live. The winner of the "Business of the Year (full-time equivalent employees 51 or greater)" goes to yes Advanced Heat Treat Corp." Stack Metallurgical Group, USA*; Generally we don't mention when a company in the industry has a new, redesigned website because well usually it makes for a pretty boring news item to be blunt. We will make an exception today though because Stack with their 4 plants in the US Northwest is far and away the largest heat treater in the region and because usually the firm is a little shy about publicity. Their new website however is very open and shares more information than has been available in the past https://www.stackmet.com/ For instance the privately held company talks about their 4 locations, including their newest one dedicated to Hipping and also brags about their SECO vacuum carburizing furnace which with working dimensions of 70" x 70" x 84" and a 10,000 pound capacity is the largest we have ever run across.

Acquisition Rumor. Now this is a rumor which keeps dragging on, let us refresh your memory; *"February 27, 2019. Now here is a very interesting rumor, one which we take seriously enough to mention today. Rumor has it that a Chinese company involved in the auto industry will be announcing possibly as soon as today that they have acquired a large Western based furnace manufacturer. If this is true it would mark the first time that a Western based furnace company has been acquired by an Asian company."* The latest has the two sides still apart on the final pricing and this deal dragging on.

OSR Adding Heat Treat Jobs. This press release has to do with a fastener company in Columbus, Indiana, USA which is expanding and looking to hire more people for their heat treating department. The company currently has 5 mesh belt lines but if they are only investing $2 million in new equipment (as mentioned below) they certainly are not adding another new furnace line; *"COLUMBUS – OSR Inc., a manufacturer of automotive fasteners, has announced plans to increase its manufacturing production in Columbus, breaking ground on a new $7 million expansion that will support its future growth in Indiana. The company, which is a joint venture between Nagoya, Japan-based Owari Precise Products Co. Ltd and Columbus-based Rightway Fasteners Inc. (RFI), will construct and equip a new 82,395-square-foot manufacturing facility near its current facility in Woodside Northwest Industrial Park. With construction set to begin immediately, OSR expects to move into the larger space by the end of 2020, increasing its Indiana footprint by more than 40,000 square feet. The new facility, which will require nearly $5 million in property improvement and $2 million in new manufacturing, quality and logistics equipment, will allow OSR to produce a broader range of metal fasteners. Construction of the new facility is to begin immediately and is expected to be completed by the end of this year."*

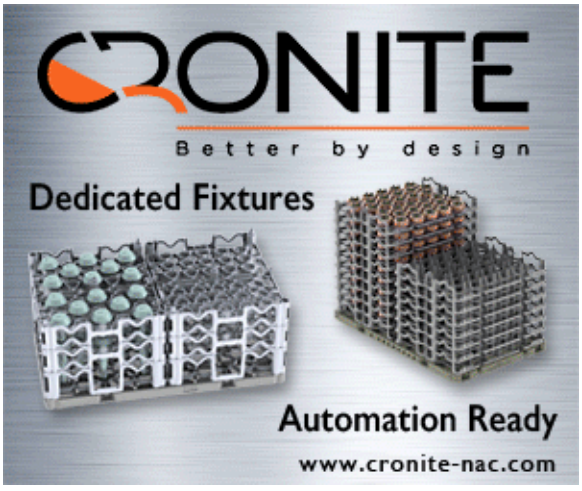
Paulo Monterrey Division adds Vacuum Furnace

Mar 8, 2019

To this press release from commercial heat treater Paulo we have to add-does this furnace look familiar? Back in late January we had a news item about a Chromalloy gas turbine repair facility in Middletown, NY, USA closing down, this was the

picture we used. And yes Paulo is 100% correct, this furnace is a beauty and will be a real asset for the company.

"Paulo is excited to announce the addition of Vacuum Heat Treating to our Monterrey Division. Since startup processing has been focused on stress relieving and ferritic nitrocarburizing. Adding vacuum equipment is the first step to expanding the services offered by Paulo in Mexico. Paulo operates nearly 50 vacuum furnaces across the US facilities supporting a variety of industries and part types. The furnace, which will be ready for production in late April, was previously used for critical aerospace brazing. Once installation and startup are complete the furnace will be capable of both Argon and Nitrogen quenching. The working zone measures 48"x48"x48" with a 3500lb capacity and a maximum temperature of 2400F. The installation will include tempering and testing equipment to support both Annealing and Hardening processes for a variety of materials. "We are excited to expand our services in Mexico to support the manufacturing base located there. Access to local thermal processing is an issue many manufacturers are facing in the region, we look forward to the partnerships and continuing to help our customers succeed," said William Rassieur, Vice President Sales. 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."



What's It Worth?
Mar 8, 2019

What we have here is an Ipsen bottom load vacuum furnace built in 1978 with working dimensions of 48″ X 48″, new controls, installed and apparently in quite good condition. So how saleable is it and what is it worth? The biggest issue for this furnace is that very few captive or commercial heat treaters have a need for a bottom load unit. As an example if lets say 200 new vacuum furnaces a years are sold in North America (we are talking heat treating, brazing and tempering only) probably only 10 of those would be bottom loaders. Effectively this means that unless somebody has an immediate need for a bottom loader the value is pretty well zero unless the vendor can afford to wait until there is a demand. In this particular case the vendor would like the space but does not need it immediately. Consequently they set an aggressive price asking price of $99,000 USD on the basis that they would like to sell the furnace but are not prepared to give it away. Our prediction is that it will sell within a few months at this price.

Hot Isostatic Processing
Mar 7, 2019

Three times over the past year we mentioned about heat treaters in North America installing brand new Hot Isostatic Processing systems, a technology which has always been on the fringes of conventional heat treating. So why this sudden interest? We went to the CEO of the largest supplier of such equipment, Mr. Jan Söderström, CEO of Quintus Technologies and asked him a number of questions about why HIPing and why now? His very in depth answers will be featured next week, but for now we have this brief summary.

Mr. Jan Söderström, Quintus Technologies. We are very pleased today to have an interview with Mr. Jan Söderström, CEO of Quintus Technologies-the world's largest supplier of equipment for Hot Isostatic Processing.

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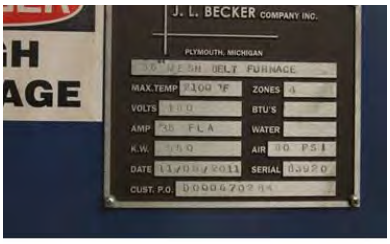
Tratamientos Térmicos Panamericana Norte
Mar 7, 2019

So who the heck is *Tratamientos Térmicos Panamericana Norte* and why would we care? Founded in 1983 Tratamientos Térmicos Panamericana Norte is based in *Santiago, Chile* and is the largest commercial heat treater in the country. And the reason we mention them today is that this Saturday *"The Monty"* will be visiting the company with details and photos about the firm available on this page next week. It is probably the first time a commercial heat treater in Chile has made the news section of an international heat treat news site.

J.L. Becker Nameplate
Mar 7, 2019

Most heat treaters in North America will have seen this nameplate on a furnace or a generator at some point in their careers-a nameplate identifying the "*J.L. Becker"* company as the builder or rebuilder. Well according to a news item we had yesterday this will slowly become a thing of the past and relegated to the history books. The owners of the brand announced that going forward they are transitioning to the new name of *"Gasbarre Thermal Processing Systems"*, a change which is part of a whole host of investments and new ideas that the company is implementing.



United Process Controls (UPC) Changes
Mar 6, 2019

One of the world's largest and best known suppliers of controls for the heat treat industry, *United Process Controls* has seen a couple of personnel changes in Europe; *"United Process Controls GmbH and Messrs Edgar Falkowski (previously Director Engineering) and Jens Baumann (previously Director Sales) parted company on 25 February 2019. As current contact person in place of Mr. Falkowski in the Engineering Division please contact our Ms. Soldani, phone +49 7161 94888-38, e-mail; Emily.soldani@group-upc.com. Our existing team will continue to work with you in a professional and uninterrupted manner; the replacement of both positions is already in progress."* On the right side of this page you will find a banner ad for UPC. This photo was taken in Germany back in 2015; Edgar is third from the right and Jens is on the right.

Advanced Heat Treating Explosion, St. Marys, PA, USA
Mar 6, 2019

We really know nothing beyond this news report. We can say that this is a good sized operation which has been around for many years and that the company has a very experienced team. This photo was taken last year when we visited the plant. *"Saint Marys, Elk County Pa. – Emergency crews are at the scene of an explosion and fire at a factory in Elk County. We're told at least one explosion sparked a fire at the Advanced Heat Treating Factory along Trout Run Rd. in Saint Marys around 11:22 p.m. According to dispatch, at least one person with unknown injuries was taken to the hospital in a private vehicle. We're told that fire was under control by 12:15 a.m."*

J.L. Becker transition to Gasbarre Thermal Processing Systems
Mar 6, 2019

Valued Customer,

We would like to announce that we will no longer be using the J.L. Becker name, but instead, are transitioning to our new name, Gasbarre Thermal Processing Systems. This move is representative of the enhancements made by Gasbarre leadership to focus on reliable equipment with great service that is fundamental to the Gasbarre name.
Thermal Processing Systems is one of the three new business units that now comprise Gasbarre Products, Inc. The other two units are Powder Compaction Solutions and Manufacturing Technologies. Rebranding the Gasbarre corporate structure into these business units allow us to better align our diverse product offering with our end users.
The product lines of Gasbarre Thermal Processing Systems include: continuous mesh belt and pusher furnaces for sintering, brazing, annealing, and steam

treating applications; continuous and batch vacuum furnaces that serve a wide range of thermal processing applications and are adaptable to nearly any production process; and continuous and batch atmosphere equipment that serve customers in the aerospace, agriculture, automotive, commercial heat treating, energy, industrial equipment, and military industries.

Since inception, a key strategy of ours has been to develop a passionate and knowledgeable staff that not only knows our equipment, but understands our customers' challenges. In recent years, we've strategically recruited and hired staff from all aspects of the industry. Here is a brief introduction to some of the new members of our team:

• Patrick Weymer, National Sales Manager – over 25 years of heat treating equipment experience • Eric Buchanan, Regional Sales Manager – nearly 20 years of experience in the commercial heat treating business working in roles such as quality, operations, and sales • Mike Harrison, Sales & Metallurgical Engineer – over 15 years of' experience in the commercial heat treating business working as a metallurgist, as well as, experience starting up new facilities, general management, and also brings extensive knowledge of the nitriding and FNC processes • Nick Levine, Electrical & Controls Engineer – designed electrical and controls systems for heat treating equipment for over 30 years • John Kaske, Mechanical Engineer – over 25 years of experience designing equipment for the thermal processing industry • Anwelli Okpue, Project Engineer – has worked for Gasbarre for

nearly 5 years • Jake Verdoux, Manufacturing Manager – has worked for Gasbarre for over 5 years.

In recent years, Gasbarre has successfully completed multi-million dollar systems for both international and domestic customers, and highly complex projects for Fortune 500 companies. We've developed new technologies with family owned commercial heat treaters, and updated/upgraded current equipment designs.

We are excited to introduce our new Vacuum Purge Nitriding and FNC System. This system utilizes the latest technology for Kn & Kc control ensuring compliance to AMS 2759/10 & 12 specifications. Our fan, retort, and baffle systems give excellent temperature uniformity to meet AMS 2750 requirements. Optional items include pre- and post-oxidation control, an ammonia dissociator, and a rapid cooling system. This state-of-the-art furnace is designed, manufactured, and serviced here in the United States, which gives us the ability to offer competitive prices as well as domestic support from a staff knowledgeable in the equipment and processes.

Since the addition of J.L. Becker in 2011, Gasbarre has worked diligently at transforming the organization and products to accurately represent the performance, reliability, and service that Gasbarre customers have come to know. Through the hiring of talented, knowledgeable, and passionate personnel, we've improved our processes to ensure consistent communication and quality to our customers. We've made major advancements in our existing products and have introduced new products into the market. We are proud of the progress we've made and look forward to advancing our brand and products into the thermal processing industry worldwide.

Best Regards,

Benjamin T. Gasbarre President – Industrial Furnace Systems Division

AICHELIN Subsidiary EMA Indutec is Supplier for Ship Lift in China
Mar 5, 2019

When most people think of Austrian furnace builder AICHELIN they think of atmosphere furnaces which is largely true. However the company also has an Induction division which goes by the name of EMA Indutec which is the focus for this press release. This press release caught our attention because many years ago Mr. David of Chinese furnace builder *Powermax* took us on a tour of the Three Gorges Dam as you can see in this picture.

"Mecklesheim/Wuhan (ptp/26.02.2019/10:30) – Test operations have been in full swing for the past two years for the largest ship lift in the world, by the Yangtze River in the Chinese Hubei province. This vertical hoist enables ships with up to 3,000 tonnes of displacement to cross the Three Gorges Dam within one hour. AICHELIN subsidiary EMA Indutec has supplied the hardening plants for the gigantic toothed racks of the ship lift. The water level behind the dam is up to 113 meters higher than the river downstream. To overcome this great height, a ship lift with a basin sized 120 m (length) x 18 m (width) x 3.5 m (depth) is required. The lock gate, the mechanic systems and the water itself weigh more than 15,500 tonnes in total. The ship lift was installed as an addition to the five-storied lock, which is also the largest of its kind in the world and has been in operation since 2003. The freight volume on the dam has since quadrupled from close to 35 million tonnes to over 140 million tonnes per year. This rise is due to the booming water transportation sector in the mountain regions around the Three Gorges and the adjacent south-western Chongqing region."

Global Fastener Manufacturer Purchases New AFC-Holcroft Mesh Belt Furnace
Mar 5, 2019

"A Midwestern facility of a US-based leader in the manufacture of safety-critical fasteners and assembly solutions has purchased a new MB48-120 mesh belt furnace from AFC-Holcroft. The new equipment will replace an older AFC-Holcroft installation. The new mesh belt furnace will integrate with existing companion equipment such as a loading system, pre- and post-wash systems, oil quench and temper furnace. The new mesh belt furnace will be used in the production of metal fasteners. AFC-Holcroft mesh belt lines can be customized with a variety of options, including oil and salt quenching. These systems also include the latest energy saving technologies to reduce atmosphere and gas consumption. Delivery and start-up of the new equipment are expected in the first quarter of 2019."

Monday Morning Briefing
Mar 4, 2019

We are going to start off the week with this press release from *Ipsen*; *"Cherry Valley, ILLINOIS (March 1, 2019) – Ipsen USA is pleased to announce the promotion of Matt Clinite from Midwest Regional Sales Owner to Ipsen Customer Service Sales Manager, effective immediately. The position is new to Ipsen, and in it, Clinite will be responsible for building the Ipsen Customer Service sales team to provide the best in the industry aftermarket support for parts, engineered solutions and service. Clinite joined the company in June 2014 as a Sales Engineer and for the past four years has served as the Regional Sales Owner for the Midwest Region. Matt earned his bachelor's degree in business administration from Illinois State University in 2011. "Since day one, Matt has influenced Ipsen in a positive direction," said Pete Kerbel, Vice President of Sales, Ipsen USA. "Matt has excelled because of his work ethic and determination to solve problems for customers." Ipsen's customer service team is responsible for providing customers with comprehensive aftermarket support and services. Clinite's experience and proven approach to customer service, combined with his technical ability, makes him the ideal fit for this role."*

Remember this news item from last week? *"Are the Chinese Taking Over? Now here is a very interesting rumor, one which we take seriously enough to mention today. Rumor has it that a Chinese company involved in the auto industry will be announcing possibly as soon as today that they have acquired a large Western based furnace manufacturer. If this is true it would mark the first time that a Western based furnace company has been acquired by an Asian company."* Well we still expect that it will turn out to be true, however these acquisitions can grind on at an amazingly slow rate. As soon as we know something, you will know something.

Paul Zettler/AlphaTek. Down in Texas Paul Zettler had a growing business by the name of AlphaTek which did service, repairs and installs of vacuum furnaces (Paul worked for Mercer Technologies another company in the industry for a number of years). We're not entirely sure what happened but it sounds like Paul has left the heat treating industry for something entirely different. This photo shows Paul (second from the right) and his team 5 years ago). For some reason there seems to be a high casualty rate amongst vacuum service companies in Texas. Another one which prospered for a while before going down in flames was *Texas Vacuum Solutions* which was founded by *Matt Burnett*. Matt and his company completely disappeared a few years ago with no forwarding address leaving only one vacuum furnace rebuilder based in Texas, *Industrial Furnace Specialties* founded by *Randy Rowland* which is absolutely top notch.

Furnace Manufacturer *Rohde* in Germany sent us this press release about a recent order for a pit furnace. *"This photo was taken during the successful final acceptance test at the Rohde plant in Hanau. This pit furnace with cooling station was designed and built for S.C.A.I. Adaptors D.O.O. in Bosnia and Herzegowina. In this photo we have from the left; Andreas Wiesemann (technical director of Rohde), Paolo Fossati (Metalconsulting Italy), Raphael Raatz (deputy technical director of Rohde), Natasha Rohde, Roberto Bagnasco (CEO of S.C.A.I. Adaptors D.O.O.), Giuseppe Milano (quality manager S.C.A.I), Norbert Plass (director electrical department at Rohde)."*

According to this press release a German company by the name of *SCHWING Technologies* want to bring *Fluidized Bed Furnace* technology to North America. Our first thought is that we hope the salespeople are working on salary and not commission. At the end of the day there is nothing wrong with the technology and probably some advantages however the bottom line is not 1 heat treater out of 100 in North America would even consider this technology. The photo below shows a typical system. *"Thermal cleaning solutions and fluid bed process technology firm SCHWING Technologies is opening a new sales office in the U.S., the company announced this week. The newly founded SCHWING Technologies North America Inc. is based in Princeton, NJ. The North American office is headed by chemical engineer Michael J. Robinson, a proven expert in fluidized bed process technology and previous manager of the Fluidized Bed Process Technique Department at SCHWING Technologies GmbH in Germany. Andrew S. Dickinson, who has extensive knowledge of thermal processing, will serve as Sales Manager for North America. The two specialists will advise and support customers in the USA and Canada on all issues relating to fluidized bed process technology, heat treatment, and thermal cleaning."*

Where are they now-*Aaron Flesher*. A metallurgist by background Aaron's work experience looks like a "whose who" of some of the largest captive heat treaters in North America; *Honda, Presrite* and *Oerlikon* are all included. It would appear that Aaron is now a heat treat engineer at one of the largest captive heat treaters in North America, *Caterpillar* in West Lafayette, Indiana. *Morris Crafton/Thermcraft*; *"On Valentine's Day, Thermcraft lost its founder, Mr. Morris L. Crafton, at 93. Nearly 50 years ago in January of 1971, Mr. Crafton and his wife Clara, founded Thermcraft on the principal of providing the best customer service available in the thermal processing industry." Roger Jones, Solar Atmospheres/ASM Cleveland Chapter, March 26; "Join us in welcoming Mr. Roger Jones, FASM, who is CEO Emeritus of Solar Atmospheres and a Trusteee of ASM International. As part of our technical program, he will give a talk on "Vacuum Heat Treating of Additive Manufactured Components". March 26 will also be Awards Night for the Chapter. Abstract: Additive Manufacturing is rapidly becoming today's buzz word. AM is rapidly replacing various manufacturing processes as its being accepted in various machining markets. The vacuum furnace plays a vital role in the proper heat treatment of AM parts. This presentation will review basic AM procedures, and the role that vacuum heat treating is utilized as a support function of the final product."*

And to round things out we have this announcement from *Abbott Furnace* about their upcoming *Continuous Brazing Symposium* in Mexico;*"Abbott Furnace Company is pleased to announce it will be hosting its Fifth Annual Continuous Brazing Symposium in Mexico this spring in Puebla, Mexico from May 21 – 23, 2019. This training event is a unique gathering opportunity for manufacturers and suppliers to the brazing and powder metal sintering industries. It is an excellent opportunity for those new to the industry as well as seasoned professionals interested in honing their*

knowledge of brazing. For two and a half days attendees will hear from experts in the areas of continuous furnaces, filler metals, belts, CQI-9, furnace atmosphere generation, and atmosphere flow control, troubleshooting, maintenance and optimization, Lecturers are Penn State University Adjunct Professor, Dr. Steve Feldbauer, who serves as Abbott Furnace Company's Director oF Research and Development, Miguel Martel, Mechatronics Engineer at Abbott Furnace Company, Mexico, Victor Zacarias, Managing Director, Global Thermal Solutions, Mexico, Creed Darling, Director, Technical Sales, Bellman-Melcor LLC, Cory Bloodsworth, Director, New Business Development, Cambridge Engineered Solutions, Antonio Mendoza, Supplier Technical Assistance at Ford Motor Company, Mexico, Joel Gutierrez, Account Manager of Kymera International, and Eric Jossart, Director of Sales, Heat Treat at United Process Controls. For more information about Abbott's Fifth Annual Continuous Brazing Symposium in Mexico or future symposiums in the US, please contact Julianne Inzana at jinzana@abbottfurnace.com or call 814-781-6355.

75th Heat Treatment Congress/Cologne, Germany
Mar 1, 2019

Our favorite European heat treat exhibition has always been the annual HK event held every October for the past 75 years in Germany. For years it was held in the pleasant little town of Wiesbaden until it was moved to Cologne 5 years ago. This year it is being held 22nd – 24th October 2019 and as always we look forward to it.

From 22-24 October 2019, the Arbeitsgemeinschaft Wärmebehandlung und Werkstofftechnik e. V. (AWT) will organise the 75thHärtereiKongress/HeatTreatmentCongress (HK). This year is the sixth time the event will take place at the Koelnmesse, in Cologne, Germany. The event is the largest annual European forum on topics relating to heat treatment and materials technology. Each year, around 3000 specialists from hardening shops, the industrial furnace construction sector, suppliers, testing device manufacturers and employees from the automotive and steel industries visit the event to exchange knowledge about the latest products, future trends and sector

information. The HeatTreatmentCongress is the traditional event for the sector, informing participants about new developments and processes in materials technology, with a special focus on heat treatment procedures. At the exhibition that takes place simultaneously, around 200 exhibitors from Germany and abroad present their product innovations over an area of 13000 m^2. The congress will engage with the following main topics this year:

- *Materials for light-weight design*
- *Functional coatings*
- *Intelligent process control*
- *Partial heat treatment of components*

Talks on different topics and innovations in the field of heat treatment, materials technology, process engineering and production technology can also be registered, however. The 75th anniversary will be celebrated with an honorary speech of Stefan Hock (General Secretary of IFHTSE) and a photo exhibition about 75th years HK history.

AWT, a large-scale research community including 870 company/personal members and 18 materials technology committees, is sure to provide quality lectures and a well organized fair. The form of the event, as a congress with an adjoining exhibition, also has the advantage that employees from all departments of a firm can take part in the event: management, research and development, quality management, engineering practice and sales. This ensures high-quality conversations with customers, including in the exhibition.

On www.hk-awt.de you can find not only extensive exhibitor information but also get in contact with the exhibitors directly to arrange a meeting. An online marketplace offers you the opportunity to find out about products and sector news year-round.

Key data

- *500 congress visitors*
- *3000 fair visitors*
- *200 exhibitors at 180 stands*
- *13000 m^2 exhibition space*

- *Event website: www.hk-awt.de*

Oral presentations can be announced up to the 15th March via www.hk-awt.de. Exhibition stands can be registered by Mrs. Mueller, phone +49 421 3972850 or e-mail at contact@congressmanagement.info. The ticket shop for the congress and fair opens at the start of June on www.hk-awt.de.

USED EQUIPMENT

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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#IQ464 Ipsen T-4 Batch IQ Furnace

Ipsen Model: T-4 Batch IQ Furnace, Serial # 52506
Type: Straight Through Atmosphere Integral Quench Furnace
Processes: Carburizing, Neutral Hardening and Carbonitriding
Heat Input: Natural Gas-Fired (8 ceramic radiant tubes)
Work Zone: 24"W x 36"D x 18"H
Max. Temp: 1850°F (Typically operated at 1750°F)
Max. Load Wt.: 850 lb at 1550F
Quenchant Heating and Cooling: Yes (SBS Oil Cooler)
Loading/Unloading: Ipsen 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 3 & 7 controllers, Digital data logging (currently tied into plant-wide SSI Super Data system), SSI eFlo Electronic Flowmeters for natural gas and air.
Insulation Type: Brick-lined
Included: Any available spare parts, Ammonia Tank.
Footprint: 5'5" Wide x 17'-10"Long x 13'-2" High per literature (We measure 93"W x 21'L x 14'H)
Alloy: Grids and baskets may be available

Asking Price $39,000 USD

https://themonty.com/project/itemb464-ipsen-t-4-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#IQ462 Beavermatic Batch IQ Furnace

Beavermatic Batch IQ Furnace. Standard “Beavermatic” Integral Quench Furnace which includes top cool chamber, dunk & spray wash, 1400°F atmosphere temper, charge car and air to oil heat exchanger. This furnace has a

total of eight (8) single ended radiant tubes with recuperators, four (4) on each sidewall. Quench tank is heated. Natural gas fired with a max temperature of 1950°F. Model # 46-26-I.G.LQ.F and Serial # 1192-50-1. Voltage 460/3/60. Working dimensions of 24″W x 24″H x 36″L and external dimensions of 100″W x 12’5″H x 18’L. Controls Mounted & wired in a free standing panel includes a Honeywell UDC 3000 digital controllers for control and high-limit, Honeywell UDC 5000 for carbon control and Honeywell digital round chart recorder. Very good condition and available immediately.

Asking Price $55,000 USD

https://themonty.com/project/itemb462-beavermatic-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#IQ442 SOLO Quenching Machine

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

For Pricing Please Contact Jordan@themonty.com

https://themonty.com/project/itemb442-solo-quenching-machine/

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 $85,000 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

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#B473 Pit Carburizing Furnace "Like New"

Unitherm Industries Pit Carburizing furnace with working dimensions of 36″ diameter X 72″ deep. Model GP3672. Installed in 2015 and in operation until December 2018 when the plant was closed down. Maximum operating temperature of 1850F, maximum load 2,000 pounds. Gas-Fired with Eclipse Thermjet TJSR55.0060 Self-Recuperative Burners (3 each) designed for a maximum temperature of 2200F. Corrugated Alloy Retort with cast support grid and alloy fan located in the bottom of the furnace. Controls; Super Systems, Inc. 9120, Series 7, Series 7SL, Digital Data Recording. Floor Space Requirement as Installed Now: 30'W x 15'D x 15'6″H. Pit Required: 136″W x 20'L x 7'-10″Deep. Also included is a 2015 Unitherm Endothermic generator Model: EG2000, S/N: 102113-13-2, CFH: 2000 CFH. Gas fired. Other extras included; Gas collection hood, Overhead Crane, Quench Oil tank, Alloy baskets and work carriers. Excellent condition! Available immediately.

For Pricing Please Contact Jordan@themonty.com

https://themonty.com/project/itemb473-pit-carburizing-furnace-like-new/

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

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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.

For Pricing Please Contact Jordan@themonty.com
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.

For Pricing Please Contact Jordan@themonty.com
https://themonty.com/project/itemb464-lindberg-box-furnace/

Item#BOX463 Lindberg Box Furnace

Lindberg Box Furnace. This furnace has an air operated vertical lift door with foot pedal control. “Rod Overbend” heating elements are located in the hearth and both sidewalls. An Alloy hearth with brick piers supports the work load. The atmosphere system consists of a “Waukee” Nitrogen flowmeter and flame curtain. Atmosphere enter the furnace chamber through the rear wall. Manuals and drawings are included with this furnace. Electrically heated with a max temperature of 2000°F. Model # 11-ROMT243618-20A and serial # 859266. Voltage is 460/3/60/40 kW, 92V Secondary. Working dimensions of 24″W x 18″H

x 36″L with external dimensions of 6’W x 9’H x 8’L. Controls Mounted in a free standing panel includes a Honeywell UDC digital temperature controller, Honeywell Dial-a-Trol high limit and a Honeywell strip chart recorder. The step down transformer for the heating elements is mounted in the same enclosure. Power to the heating elements is controlled through a “Halmar” SCR. This electrical enclosure is air conditioned to prevent overheating of the SCR.

For Pricing Please Contact Jordan@themonty.com
https://themonty.com/project/itemb463-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#BOX449 Lindberg Atmosphere Box Furnace

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

Asking Price $60,000 USD

https://themonty.com/project/itemb449-lindberg-atmosphere-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/

Item#BOX352 Pacific Scientific Box Furnace

Working dimensions of 72″ wide X 120″ long X 48″ high, Gas fired radiant tube, maximum operating temperature of 2050F. Air operated vertical lift door, fiber lines, new refractory piers (12), hi-temp horizontal radiant tubes (6 above, 6 below), full safeties, side exhaust guard. Free standing control panel-prewired panel with Honeywell Tru-Trend circular chart and Honeywell digital controllers and overtemp. Atmosphere capable. Comes with spare radiant tubes. Very good condition.

Asking Price $70,000 USD

https://themonty.com/project/itemb352-pacific-scientific-box-furnace/

CONTINUOUS FURNACES

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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#C335 SOLO Compact Belt Furnace

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

For Pricing Please Contact Jordan@themonty.com

https://themonty.com/project/itemc335-solo-compact-belt-furnace/

Item#C330 Lobo Hornos Mesh Belt Furnace Line

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

For Pricing Please Contact Jordan@themonty.com
https://themonty.com/project/itemc330-lobo-hornos-mesh-belt-furnace-line/

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#C321 Ipsen Austempering System

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

Asking Price $20,000 USD
https://themonty.com/project/itemc321-ipsen-austempering-system/

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#C308 AFC Mesh Belt Hardening Furnace

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

Asking Price $75,000 USD

https://themonty.com/project/itemc308-afc-mesh-belt-hardening-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#C283 Denton Thermal Rotary Hearth

Denton Thermal Systems (O'Brien & Gere) 2150˚F Rotary Hearth Furnace System. Includes high temperature furnace, Nitrogen-Methanol Panel and Quench Press. Working Zone: 6 ft Diameter Hearth, Door Opening is 14″W x 13″H Overall Size: 9ft-8in Diameter x 10ft-10″Tall. Heating: Electric, 125 kW, 1 Zone, Globar Heating Elements. Power Requirement: 200 Amps, 480V/3Ph/60Hz. Temperature Rating: 2150˚F. Water Requirement: 3 GPM. Air Requirement: 100 PSI. Controls: GE90 PLC. Honeywell Temperature Controller and Overtemp (missing but will be replaced). Marathon Monitors Carbon Control System. Includes Quench Press that was handling up to 5″ Diameter bearings. Prior user reference available upon request.

Asking Price $29,000 USD

https://themonty.com/project/itemc283-denton-thermal-rotary-hearth/

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/

Item#C265 Sunbeam Pusher Carburizer

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

Asking Price $40,000 USD

https://themonty.com/project/item265-sunbeam-pusher-carburizer/

DRAW/TEMPER OVENS

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Item#T362 Electric Temper 30" X 48" X 30"

Manufactured by Selas (Pacific Scientific). Model PKMD 100-E, Serial number 662-0585. Working dimensions of 30"X 48" X 30". Operating temperature of 1450F. 65 KW, 460 Volt, 3 Phase. Very good condition.

Asking Price $19,500 USD

https://themonty.com/project/itemt362-electric-temper-30-x-48-x-30/

Item#T361 Tempers 30" X 48" X 30" (2 available)

Manufactured by Pacific Scientific these have working dimensions of 30" x 48" x 30". Model PKMD 100-E. Serial numbers 662-0208P and 662-0420. Electrically heated and rated for 1450°F. 65 KW, 460 Volt, 3 Phase. Very good condition

Asking Price $17,500 USD Each

https://themonty.com/project/itemt361-tempers-30-x-48-x-30-2-available/

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#T357 Surface Combustion Electric Tempering Furnaces (3 available)

Surface Combustion Electric Tempering Furnaces (3 available). Bricked Lined Box Tempering Furnace complete with Alloy Roller Rail Hearth, Stainless Steel Air Baffles, Top-Mounted Recirculating Fan, and Vertical Rising Pneumatic Door.

Model # BX41758-1. Serial # BX41758-1. Working dimensions of 30” Wide x 48” Deep x 30” High. Electric – 460/3/60 – 81 KW. Max operating temperature of 1400° F. Controls consist of Side-Mounted Control Panel complete with Love Series 2500 Digital Temperature Controller, Love Series 16 Digital High Limit Controller, and Honeywell Truline 12” Round Chart Recorder. Overal dimensions of 8’ Wide x 7’ Deep x 11’8” High. Approximate weight of 8,000 lbs.

Asking Price $39,500 USD Each

https://themonty.com/project/itemt357-surface-combustion-electric-tempering-furnaces-3-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#T355 Wisconsin Oven Temper Furnace

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

Asking Price $19,000 USD

https://themonty.com/project/itemt355-wisconsin-oven-temper-furnace/

Item#T352 Pyradia Tempering Oven

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

Asking Price $39,000 USD

https://themonty.com/project/itemt352-pyradia-tempering-oven/

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#T341 McLaughlin Services Temper Furnace

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

Asking Price $91,000 USD

https://themonty.com/project/itemt341-mclaughlin-services-temper-furnace/

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 Tempering Ovens (4 available). Built by Eisenmann in 2002, Model # HN-FNC-002. Working dimensions of 108” Wide x 96” Deep x 64” High. Natural gas fired, 3.2 million BTU’s per hour. Operating temperature of 1200F.
Description; Stainless Steel Lined Recirculating Box Tempering Oven complete with Top-Mounted Alloy Recirculating Fan (20 HP – 13,000 CFM), Rear-Mounted Heater Box with Eclipse Burner System, Alloy Skid Hearth, Forced Cool Down Fan System (7,333 CFM), Vertical Rising Motor Driven Front Door, and Stationary Loading Table.
Instrumentation; Free Standing Control Panel with Eurotherm Digital Set Point Programmable Temperature Controller, High Limit, Chessel Strip Chart Recorder, and Honeywell Flame Safety System.
OVERALL DIMENSIONS: Oven: 13’ Wide x 20’ Long x 17’8” High (includes Door Structure. (Shipping Dimensions: 12’6” Wide x 20’ Long x 10’8” High). Loader: 9’6” Wide x 12” Long x 4’ High. Approximate weight 20,000 pounds. Excellent condition, operational.

Asking Price $72,500 USD

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#G203 Surface Combustion Generator 9000 CFH

Surface Combustion 90000 CFH Modular Endothermic Generator with Atmosphere Engineering EndoInjector and Super Systems EZ- Dew System. Air cooled. S/N # AC-43443-1. Model #: RX-3. Natural gas heated. Excellent condition.

Asking Price $49,000 USD

https://themonty.com/project/itemg203-surface-combustion-generator-9000-cfh/

Item#G202 AFC Endo Generator

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

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

Asking Price $45,000 USD

https://themonty.com/project/itemg202-afc-endo-generator/

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#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#L12 Leco MicroHardness Tester

LECO Hardness Tester Model M400. "As is/where is"

Asking Price $7,500 USD

https://themonty.com/project/iteml12-leco-microhardness-tester/

Item#L11 Leco Metallagraph

Leco Metallagraph.

Asking Price $8,500 USD

https://themonty.com/project/iteml11-metallagraph/

Item#L7 Leco Micro Hardness Tester

Model M400. Complete and in good condition. Unit has become surplus to the vendors organization.

Asking Price $7,000 USD

https://themonty.com/project/iteml7-leco-micro-hardness-tester/

Item#L3 Microtrac Laser Diffraction Particle Size Analyzer

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

Asking Price $5,000 USD

https://themonty.com/project/iteml3-microtrac-laser-diffraction-particle-size-analyzer/

Item#L1 Spectra-Tech Infrared Microscope

Model WHK 10X 201, Reflected & Transmitted light, multiple objectives, Polaroid 4×5 attachment.

Asking Price $6,500 USD

https://themonty.com/project/iteml1-spectra-tech-infrared-microscope/

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#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#M420 SBS Quench Oil Coolers

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

Asking Price $1,000-$5,000 USD

https://themonty.com/project/itemm420-sbs-quench-oil-coolers/

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/

Item#M380 Bronco Wheelabrator

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

Asking Price $20,000 USD

https://themonty.com/project/itemm380-bronco-wheelabrator/

Item#M366 Wheelabrator Rubber Belt Tumblast

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

Asking Price $55,000 USD

https://themonty.com/project/itemm366-wheelabrator-rubber-belt-tumblast/

Item#M363 SBS Quench Oil Cooler

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

Asking Price $11,500 USD

https://themonty.com/project/itemm363-sbs-quench-oil-cooler/

Item#M346 SBS Quench Oil Cooler

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

Asking Price $5,500 USD

https://themonty.com/project/itemm346-sbs-quench-oil-cooler/

Item#M341 AFC Charge Car

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

Asking Price $28,500 USD

https://themonty.com/project/itemm341-afc-charge-car/

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#VF354 ALD Degussa Bottom Loader Vacuum Furnace

Bottom loading vacuum furnace built by ALD Degussa in 1985 and rebuilt in 2016. Working dimensions of 1500 mm diameter and 1500 mm high. Load capacity of 1,000 Kg. Vacuum System; High vacuum system with diffusion pump. Vacuum Level : 10exp-4 …. 10exp-5 mbar. Used in the aerospace industry and suitable for AMS2750 regulations. Complete and in excellent condition. Located in Germany.

Asking Price $110,000 Euro

https://themonty.com/project/itemvf354-ald-degussa-bottom-loader-vacuum-furnace/

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#VF351 GCA/Vacuum Industries Vacuum Furnaces (3 Available)

MANUFACTURER: AVS/VACUUM INDUSTRIES
TYPE: VACUUM FURNACE
I.D.: 12”W X 36”Ð X 12”H
SERIAL#: 42093
MODEL: WORK HOUSE 3040
MAX. TEMP: 3000 F
ELECTRICS: 460V/77KW/3PHASE
CONTROLS: HONEYWELL DCP 700 DIGITAL PROGRAM CONTROLLER, HONEYWELL OVER TEMP CONTROL, HONEYWELL CHART RECORDER MOUNTED IN AN ENCLOSED PANEL.

GENERAL: HORIZONTAL DOUBLE WALL WATER COOLED VESSEL WITH SIDE SWING DOOR, FAN IN REAR, METALLIC HOT ZONE, AND STAINLESS INNER WALL. OUMPING SYSTEM INCLUDES A WELSCH MECHANICAL PUMPAND A 6” DIFFUSION PUMP.

Asking Price $22,500 USD

https://themonty.com/project/itemvf351-gca-vacuum-industries-vacuum-furnaces-3-available/

Item#VF350 Ipsen Bottom Load Vacuum Furnace

Model VVFC, Serial number **#**57411. Working dimensions of 48” X 48”. Max. temp 2300F. 225KW heating power. 2 speed 25 HP cooling fan. Increased internal heat exchanger coils. Insulated hot zone with moly hot face. Stokes 412 mechanical pump with ROOTS CONNERSVILLE 1016 booster. New SSI programmer/controller. Built 2/6/78. Graphite heating elements and graphite hearth. Installed but not in use. Good condition.

Asking Price $99,000 USD

https://themonty.com/project/itemvf350-ipsen-bottom-load-vacuum-furnace/

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#VF347 Vacuum Furnaces Available

We have available 6 very large, lower temperature Ipsen, Abar/Ipsen and Lindberg vacuum furnaces. Vendor would like to sell them as a package for $500,000 USD but will consider selling individual items. Furnaces are located in California, USA and are installed but not in operation.

1. Lindberg Vacuum Furnace. Working dimensions of 42” W x 59” L x 35” H. Stokes vacuum pumps and Varian diffusion pump. Single zone of control. Operating temperature/uniformity 900F +-25, 1000F-1400F +-15F, 1400F-1600F+-25F. All Metal Hot Zone. Honeywell Controls with Honeywell Paper Chart Recorder. Thermocouples; Controls type K, Load type K, SAT type N. MKS Vacuum Controller.
2. Abar/Ipsen Vacuum Furnace. Working dimensions of 51” W x 120” L x 42” H. Stokes vacuum pumps and Varian diffusion pump. 2 zones of control. Operating temperature/uniformity 900F +-25, 1000F-1400F +-15F, 1400F-1600F +-25F. All Metal Hot Zone. Honeywell Controls with Honeywell Paper Chart Recorder. Thermocouples; Controls type K, Load type K, SAT type N. Inficon Vacuum Controller.
3. Ipsen Vacuum Furnaces (2 available). Working dimensions of 84” W x 120” L x 58” H. Stokes vacuum pumps and Varian diffusion pump. 2 zones of control. Operating temperature/uniformity 900-1000F +-25F, 1000-1400F +-25F, 1400 - 1750 +-25. All Metal Hot Zone. Honeywell Controls with Honeywell Paper Chart

Recorder. Thermocouples; Controls type K, Load type K, SAT type N. Inficon Vacuum Controller.

4. Ipsen Vacuum Furnace. Working dimensions of 83” W x 143” L x 65” H. Stokes vacuum pumps and Varian diffusion pump. 3 zones of control. Operating temperature/uniformity 900-1000F +-25F, 1000-1400F +-15F, 1400 -1750 +-25. All Metal Hot Zone. Honeywell Controls with Honeywell Paper Chart Recorder. MKS Vacuum Controller.
5. Ipsen Vacuum Furnace; Working Dimensions of 60” W x 119” L x 59” H. 480 Volts. Stokes vacuum pumps and Varian diffusion pump. 2 zones of control. Operating temperature/uniformity 900-1000F +-25F, 1000-1400F +-15F, 1400 -1800 +-20. All Metal Hot Zone. Honeywell Controls with Honeywell Paper Chart Recorder. Inficon Vacuum Controller.

Asking Price 500,000 USD

https://themonty.com/project/itemvf347-vacuum-furnaces-available/

Item#VF344 C.I. Hayes Vacuum Furnace

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

Asking Price $90,000 USD

https://themonty.com/project/itemvf344-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#VF340 Vac Aero Vacuum Furnace

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

Asking Price $220,000 USD

https://themonty.com/project/itemvf340-vac-aero-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#VF331 Elnik Vacuum Furnace

High Temperature Vacuum Furnace 2300. Manufactured by Elnik this is a MODEL T-3000 unit, built in 1993. The vacuum furnace consists of a

watercooled cylindrical chamber, a molybdenum hot zone with tungsten heaters, a roughing pump, a holding pump, a diffusion pump, a heat exchanger assembly, and all associated valving.

• The furnace runs on 480 volts
• Working dimensions of 18” X 18” X 18”
• External dimensions of furnace 6’ X 6’, water tank 5’ X 5’
• Ultimate vacuum 10-5
• Stokes roughing pump Model 148 H-9
• Holding pump (Walsh) 1402
• Varian diffusion pump – VHS-6
• Water system – Model WCS 305-ET with a 300 gallon stainless steel recirculating tower model 1CT4-64
• 2300F operating temperature
• Ut35 temperature controller controls the temperature of the furnace as programmed by the operator via the computer’s profiler utilities
• Complete and in Good Condition

Asking Price $19,950 USD

https://themonty.com/project/itemvf331-elnik-vacuum-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#VF319 Vacuum Induction melting System

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

Asking Price $285,000 USD

https://themonty.com/project/itemvf319-vacuum-induction-melting-system/

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#VF315 AVS Vacuum Furnace (Rebuilt)

Manufactured by Advanced Vacuum Systems (AVS) this furnace has a Model Number HMF-24-24-48-1100, S/N 4-1284-0490. Built approximately 1990. Chamber: Cylindrical, Horizontal, Stainless Steel with front & rear access doors. Hot Zone: New in 2015, All-metal, shielded (Moly and Stainless Steel), Moly Hearth, Moly Elements. Hot Zone rated for 2400F. Vacuum System: Currently 10-9 Torr, Cyrogenic and Turbomolecular Dry Pumps. Pumps: CTi Cryogenics 10” Cryo Ultra High Vacuum Pump; MAGintegra 10” High Vacuum Turbomolecular Pump (New in 2015); Pfeifer Balzers Duo 120 2-stage Rotary Vane Roughing Pump; Agilent Technologies SH-110 Dry Scroll Holding Pump for Cryo. Power: 480V/3Ph/60Hz, 300 Amp, 250 KVA Heating, Hunterdon VRT with Halmar Power Control. Floorspace Requirement: Approx. 15’ x 15’ x 11’H. Work Zone: 24”W x 48”D x 24”H. Max. Load Rating: > 1500 lb. Controls: ProVac computer based control system. New in 2015. Gas Cooling: External VFD Drive Blower and Heat Exchanger, 1 Atmosphere Pressure. Loader: Included. Cooling Water: 90 GPM @ 25-40 PSIG (40 Max.), Open Drain. Air: 1 cu. ft./hr @ 80-100 PSIG. Inert Gas: 35 cu. ft./Load @ 6-8 PSIG. Other: Includes 24” x 48” 2-Tier Molybdenum Grid Fixture, Has blanked off 20” port for easy change to diffusion pumping, if desired. Both front and rear doors have

ports for adding end heating elements, if desired. Rear door also has a port for a circulation fan, if desired.

Asking Price $195,000 USD

https://themonty.com/project/itemvf315-avs-vacuum-furnace-rebuilt/

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 $169,000 USD

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

Item#VF266 Vacuum Pump

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

Asking Price $5,700 USD

https://themonty.com/project/itemvf266-vacuum-pump/

Item#VF243 Diffusion Pump

35" Diffusion Pump. CVC Model PMC-32C, 35" Diffusion Pumps (Today this is the Varian HS-35. Varian purchased CVC rights to this pump.) Rebuilt condition with a 12 Month warranty. 35" Throat Diameter. Bolt Circle is approx. 38-3/4" with 14 Holes on approx. 8-9/16" Centers. Flange O.D. is 41-3/4". O-Ring Center Diameter is 36-1/8". Approx. 72-3/4" Overall Height (79" on 48" x 48" shipping pallet). Note: Mating 35" Cryo-Baffle is also available for improved low-range vacuum and elimination of backstreaming (See Item# 3161 Below). 6" Foreline with approx. 9-1/2" Bolt Circle with 8 Holes on approx. 3-5/8" Centers. 1/4" dia. O-ring is approx. 8-7/8" diameter to center. Shipping Wt. with pallet approx. 2050 lb. Price in Warranty Rebuilt Condition, Painted: (with existing working elements. Add $6,000 if you want brand new elements.)

Asking Price $12,250 USD

https://themonty.com/project/itemvf243-diffusion-pump/

Item#VF242 Diffusion Pump

35" Diffusion Pump. CVC Model PMC-32C, 35" Diffusion Pumps (Today this is the Varian HS-35. Varian purchased CVC rights to this pump.) Can be purchased

either in As-Is condition or in Rebuilt condition with a warranty. 35” Throat Diameter. Bolt Circle is approx. 38-3/4” with 14 Holes on approx. 8-9/16” Centers. Flange O.D. is 41-3/4”. O-Ring Center Diameter is 36-1/8”. Approx. 72-3/4” Overall Height (79” on 48” x 48” shipping pallet). Note: Mating 35” Cryo-Baffle is also available for improved low-range vacuum and elimination of backstreaming (See Item# 3161 Below). 6” Foreline with approx. 9-1/2” Bolt Circle with 8 Holes on approx. 3-5/8” Centers. 1/4” dia. O-ring is approx. 8-7/8” diameter to center. Shipping Wt. with pallet approx. 2050 lb. Price in Warranty Rebuilt Condition, Painted: $ 12,250.00 (with existing working elements. Add $4,500 if you want brand new elements.)

Asking Price $6,400 USD

https://themonty.com/project/itemvf242-diffusion-pump/

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.

For Pricing Please Contact Jordan@themonty.com

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

Item#W426 Mart Corporation Table Washer

Mart Corporation Table Washer. Equipped with: Thermal Insulated Skins, Rinse Pump for Hand Wand, Wash-Rinse, Gas Heat, Oil Skimmer, Variable Pressure Switch Low-High, Rinse Pump Off-Auto, Turntable Off-On, Turntable Jog, 24 Vee-Jet Wash Nozzles, Oscillating Manifold 4 Revolutions Per Minute, 30 Minute Cycle Timer, 55 HP Duplex Pumps 399 GP, Reservoir Capacity 967 Gallons 260 Gallon Sludge Capacity, Table Load Capacity 20,000 lbs. Initial Heat Up Time 45-60 Minutes. Note: Unit is in very good condition. Table Bearings are good all maintenance up to date, recent items include, turntable drive replaced, as well as pump rebuild. Heated with natural gas. Model # Hurricane 84 and Serial # H3013. Max temperature 140°F – 180°F with a voltage of 480 3 Phase 60 HZ, 71 FLA. Working dimensions of 84″ Diameter x 75″H and external dimensions of 143″ W x 139″H x 125″L – 16,000 pounds. Controls Mounted and wired in an enclosure attached to the left hand side of the washer includes.

Asking Price $49,000 USD

https://themonty.com/project/itemm426-mart-corporation-table-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#W422 Surface Combustion Dunk/Spray Washer

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

Asking Price $22,500 USD

https://themonty.com/project/itemm422-surface-combustion-dunk-spray-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/

EMPLOYMENT OPPORTUNITIES ADVERTISING

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

Item#O368 Second Shift Supervisor

Tri-City is searching for a 2nd Shift Supervisor. The successful candidate will be accountable for aspects of plant performance and will ensure that objectives are attained in a cost-effective and safe manner that is consistent with quality requirements.

Responsibilities:

- Manage daily operations in our facility.
- Ensure safety and efficiency of the facility.
- Remain in compliance with facility ISO standards, rules and policies.
- Train, evaluate, and dismiss staff.
- Monitor staff to ensure they meet performance and safety requirements.
- Carry out quality control programs to make sure the finished product meets customers’ level of quality.

Preferred experience in the following:

- Controls heat-treating furnaces, baths and quenching equipment to alter physical and chemical properties of metal objects, using specifications and methods of controlled heating and cooling, such as hardening, tempering, annealing, case-hardening, and normalizing.

- Minimum 3 years working knowledge with various principles, methods and aspects of Heat Treating of metal materials (technology)
- Minimum 3 years of previous leadership/supervisory experience

Please forward resumes to Laceyl@tcht.com

Item#O367 Evening Shift Furnace Operator

Seeking an individual with previous Heat Treating experience and knowledge for immediate deployment on the evening shift in Ajax Ontario. Other requirements include on time arrival, attention to detail, mechanical aptitude and willingness to work as a Team player. Interested, please submit your resume outlining your interest in this position to chris@atlanticheattreat.ca.

ATLANTIC HEAT TREATING

Item#O366 Furnace Welder / Fabricator

The Furnace Source needs a full-time, highly skilled welder/fabricator. We build one-of-a-kind industrial furnace equipment. You must have strong skills in MIG and TIG, as well as fabrication. Must have the ability to set up and run jobs independently. We offer a great, clean, air-conditioned working environment with stability and the opportunity for professional growth. Pay to be determined upon qualifications and experience. Benefits offered include health insurance, retirement benefits/accounts, and paid time off. We are located in Terryville, CT 06786. Please email resume to Kelly Hoffman: info@thefurnacesource.com.

Item#O365 Field Service Engineers

Looking to Hire: Passionate Field Service Engineers AREAS WITH IMMEDIATE OPENINGS: Connecticut, Southern California, South Carolina, Pacific Northwest; Houston, Texas; Indianapolis, Indiana; Toronto, Canada

Ipsen designs and manufactures world-class heat treating equipment and is sprinting into its sixth consecutive year of record furnace sales. We are committed to giving our customers world-class support and have several openings for experienced* service technicians who: ⎫ Are passionate about customer satisfaction. ⎫ Thrive in a challenging technical environment. ⎫ Are highly motivated to learn, teach and solve.

* Ipsen will consider intermediate and entry-level technicians who display the right attitude and basic skill set. Less experienced candidates with the right stuff will be enrolled in the 2019 Ipsen Corporate Academy and spend (up to) 6 months of comprehensive classroom and hands-on, paid training before transitioning to their permanent assignment. Learn more about the Ipsen Corporate Academy, an exclusive program that emphasizes the expertise needed to be an effective Field Service Engineer.

Ipsen serves a diverse group of customers, and members of our Field Service Team have the opportunity to work with leading Aerospace, Medical, Energy and Automotive companies. You will: • Supervise equipment installation • Troubleshoot problems • Install upgrades • Perform preventative maintenance • Provide personnel training

If you have experience with large capital equipment, enjoy variety, stay calm in stressful situations, have solid electrical and mechanical skills, and are available to travel regularly, Ipsen may have the opportunity you are looking for.

Read enough and think you have what it takes? Send your resume to Resumes@IpsenUSA.com.

Want to know more? You can find a job description here.

Item#O364 Quality Manager

Our people are the heart of our business. As the world's largest provider of thermal processing services, Bodycote employs thousands of highly skilled staff around the globe, some of the best engineers, scientists and technicians in the industry. Our staff are encouraged to develop their skills through professional career development and our in-house training resources.

At Bodycote what we do matters and as a member of our team, what you do matters too. Are you familiar with quality systems? Are you technical in the area of metallurgy or material science? At Bodycote, Quality is essential. Start your career with Bodycote and ensure our quality standards are implemented and maintained for our customers in the aerospace, automotive, general industrial and oil & gas industries.

This position will implement and maintain documented quality programs that meet customer requirements. Ensure conformance to quality program requirements through external/internal audits, corrective action program and qualify associates through testing and training. We are looking for someone that has or is willing to obtain Six Sigma Green Belt. Someone that is thoroughly familiar with commercial (AMS, ASTM), automotive specifications and quality systems. Minimum of three years' department management and two years direct supervisory experience. This position must satisfy ITAR compliance requirements, therefore candidates must be U.S. Citizens or Permanent Resident Card Holder.

Bodycote will provide relocation for this position.

Interested candidates may send their resumes
to: Meagan.Boyer@Bodycote.com

Bodycote

Item#O363 General Manager

Thermal Process Holdings is seeking General Manager candidates who are eager to grow and enjoy the personal success of leading their business' success.

In our style of running Thermal Process Holdings team of businesses a General Manager is THE leader of their business. You must be technically competent in heat treating, safety, quality systems, Human Resources, customer relations, sales, maintenance of equipment and facilities, administrative duties, community relations, compliance with all laws and regulations, strategic planning, annual

budgeting, monthly performance review and anything, you will be accountable for every aspect of your company's performance.

The ideal candidate will be an engineer with 5+ experience in commercial / captive heat treat. Have a burning desire to make positive things happen. Be committed to growing and developing team members and customers. High personal / business ethics. We offer very competitive pay and benefits package plus an annual performance bonus up to 30% of base pay as well as the opportunity for equity. We are an equal opportunity employer.

If you have the desire to step up contact us at: JHubbard@heattreating.com

John D. Hubbard, P.E., Chairman, Thermal Process Holdings, Inc

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Item#O345 Multiple Positions Available

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

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

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

In Parting

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

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