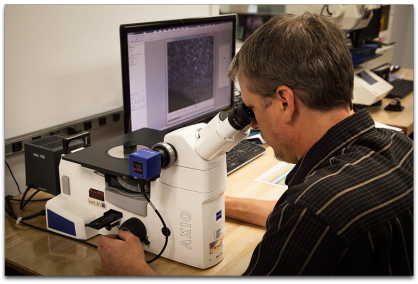
SOLAR ATMOSPHERES
Vacuum Heat Treat Services

eSpotlight

Fall 2014
www.solaratm.com

Testing Lab Now Certified



Heat treating and metallurgical testing go hand-in-hand. This is because one cannot see at a macro level if the desired metallurgical changes have taken place. After heat treating, there is often a requirement for metallurgical examination as an acceptance test. Examples of this are surface contamination testing, tests for carbide networks, visible retained austenite in steels, and micro-hardness testing of case-hardened parts. For aerospace work, and without Nadcap accreditation for this service, Solar has to maintain an approved supplier and subcontract the lab service to meet all of our customers' requirements. There are certainly pros and cons to outsourcing this work, but for Solar, a significant disadvantage of outsourcing is that the heat treat process often takes less time than procuring the testing service and receiving the results. This was realized by Solar Atmospheres' management as an opportunity for improvement.

In response to that opportunity, we recently made a significant investment to remodel our laboratory and purchase new state-of-the-art equipment. We also invested heavily in the training of qualified personnel and in detailed laboratory procedures. We were, however, still missing one thing: Nadcap accreditation for this service. That is now a thing of the past! We recently passed our initial Nadcap audit for metallography and micro-hardness testing and have official accreditation. Nadcap accreditation for metallography and micro-hardness testing means Solar Atmospheres will be able to provide streamlined heat treating and metallurgical testing services which will add additional value to our customers' operations.

If you would like to learn more about our Nadcap accredited laboratory capabilities, please contact Mike Moyer at mikem@solaratm.com or at 215-721-1502 X1207.

Table of Contents

Tradeshows

Come talk to our heat treating professionals in person!

D2P Akron

Sept. 17-18, 2014
Akron, OH
Booth 117

Titanium USA

Sept. 21-24, 2014
Chicago, IL
Booth 216/218

D2P Marlborough

Oct. 1-2, 2014
Marlborough, MA
Booth 345

D2P Long Beach

Oct. 15-16, 2014
Long Beach, CA
Booth 245

California Plant Chosen for Government Project

Solar Atmospheres of California has been selected as a team member of the DESP III government contract. Design Engineering Support Program (DESP) III is a 5-year contract vehicle available for use within the Air Force Materiel Command, DoD, and other government agencies. The contract ceiling is set at $1.9 billion.

DESP III - Dynamics Research Team

Solar's role will be to provide vacuum brazing services to team members for the Air Force and other agencies. The goal is to bring processes up to date using modern equipment and methods.

The scope of the contract covers technology insertion, reliability and maintainability, deployment improvements, environmental and safety compliance, improvement in depot manufacturing and/or repair processes and development of process models.

Objectives include reducing life cycle costs, increasing systems operational life, improve system performance and sustainment, and provide engineering services to departments and agencies in support of systems and infrastructure.

Find out more about our California plant by ***clicking here***.

New Medical Heat Treat Process Developed

Solar's Metallurgical Advanced Research Team (SMART) has developed a new heat treatment process for 17-7 precipitation hardenable (PH) stainless steel. This new process reduces the risk of discoloration while improving the mechanical properties. Medical companies taking advantage of the new process can benefit both from a lower cost of heat treatment as well as minimize the risk of part discoloration. To read more about this new three-step vacuum heat treat process with promise for the medical industry, please ***click here***.

Fabtech

Nov. 11-13, 2014
Atlanta, GA
Booth B1012
Promo code for FREE admission: ***FBGUEST***

D2P Raleigh

Nov. 19-20, 2014
Raleigh, NC
Booth 115

PowerGen

Dec. 9-11, 2014
Orlando, FL
Booth 3474

info@solaratm.com

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Hermitage President Asked to Publish in SME Aerospace & Defense Yearbook

Hermitage, Pennsylvania, plant president, Robert Hill was recently asked by SME to author an article for their Aerospace and Defense Yearbook. This comprehensive annual publication discusses manufacturing processes critical to the defense and aerospace industries and Solar was asked to contribute their expert opinion on the future of heat treating in these nationally-critical industries. Mr. Hill, who is currently serving a one-year term as the President of the Metal Treating Institute, the largest network of commercial heat treaters, has been widely published in the past and is considered by many to be an expert in the heat treatment of titanium and titanium alloys. To preview his article that will be published later this year by SME, ***click here***.

Plant Improvements in Western Pennsylvania

New hydraulic lift

Over $500,000 in significant improvements were made over the past several months in the Hermitage, Pennsylvania, plant to help better serve current and new customers. The improvements included a significant upgrade to the concrete floors in high-traffic production areas and the addition of two hydraulic lifts to assist in the loading and unloading of the world's largest, commercially operated vacuum heat treating furnace - a 36' long, 150,000 lbs. capacity vacuum furnace used for the heat treatment of long titanium aerospace parts. The lifts, which are used to raise and lower Solar personnel and fixturing, were installed for safety, convenience, and efficiency. Previous methods for loading and unloading the furnace used less stable, portable scaffolding. The new fixed-position hydraulic lift system is safer, quicker, and requires less twisting, bending and turning on the part of Solar operators.

In addition, unsafe and unsightly cracked concrete floors were removed and replaced with new floors in an effort to modernize the plant. The crumbling floors, located in the portion of the plant that was already built when the facility was initially purchased by Solar, were replaced in June. Once the old concrete was removed, it was discovered that inadequate

foundations had previously been used accounting for much of the cracking. New, adequate foundations were installed and new concrete poured. All floors are now upgraded, smooth and safe. Both safety and workflow have improved significantly as a result.

Bucks County Community College Students Tour Eastern Pennsylvania Facility

Seventeen college students and their instructors toured the Souderton vacuum heat treating plant on August 8th. Solar continually supports the efforts to educate and engage young people interested in manufacturing, engineering, and metallurgy. This tour is just one of many examples of Solar's commitment to educate and engage.

Corporate President, Roger Jones, along with Regional Sales Manager, Tim Steber, who has taught manufacturing courses at local colleges, welcomed the group from Buck's County Community College's Metals Fabrication Advanced Program to the Souderton facility where they received a brief presentation on the company and then toured the facility. The students were able to see vacuum heat treat furnaces at work and a variety of parts being prepared for or immediately following heat treatment.

According to Corporate President, Roger Jones, "We enjoy hosting groups like this. While there is no immediate payback, this is the type of civic-minded activity we encourage. Tim (Steber) has had a profound impact on a large number of students in the past with his teaching and other of our employees have contributed to the industry and community in similar ways. We're glad to add a touch of realism to the academic setting and we were glad to host this contingent from BCCC."

Solar Atmospheres of Western Pennsylvania - Summer Internship

Left Mike Simons, and Brandon Peterson

Solar Atmospheres is continually investing in training both of current employees and potential future employees in the form of paid internships. In the summer of 2014, Solar employed over six paid interns. Three interns from our Hermitage, PA, plant wrote essays about their experience. We enjoyed them so much we want to share them with you.

Click here to read **Mike Simons'** essay.
Click here to read **Brandon Peterson's** essay.
Click here to read **Wendell Carper's** essay.