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Ipsen's TITAN: Your In-House Heat Treating Expert



Hard Work Wins

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Ipsen's TITAN: Your In-House Heat Treating Expert

So, here is what we already know.

The TITAN[®] furnace combines efficiency with versatility utilizing a flow-production process that integrates premium components, allowing for multipurpose processing capabilities. In this way, the TITAN has provided an innovative platform using Ipsen-quality workmanship to provide long-lasting equipment and precise processing capabilities to meet customers' needs.

Officially released in 2009, the TITAN vacuum furnace system's evolutionary innovation has set a standard of excellence for heat treating equipment.

Here is what we wanted to find out.

Just how versatile is the TITAN furnace? Are our customers' needs being met?

We turned to commercial heat treater Rockford Heat Treaters, Inc. (RHT) to discuss how they use their TITAN. Their furnace has a work zone size of 18" x 18" x 24" (450 mm x 450 mm x 600 mm) and a 2,000-pound hearth gross load weight capacity. Other specifications include a diffusion pump, for less oxidation and cleaner parts, and an internal nitrogen cooling system with gas injection nozzles located 360 degrees around the perimeter of the hot zone.



Figure 1 Parts to be loaded into RHT's TITAN

RHT was originally chosen as a beta tester for the TITAN furnace and the equipment wound up being a good fit.

And here is what we found.

"If it fits, we can treat it – name the process," says Tom Deutsch, Vice President, when asked about the type of processes they were able to run using their TITAN.

As a commercial heat treater, thermal processing needs change on a day-to-day (and sometimes even hour-to-hour) basis and, thus, versatility is of the utmost importance. Working with a lot of different materials means that process control and furnace maintenance are very important.

Maintenance is very easy for the TITAN and preventative maintenance is built into the software to keep processes running smoothly. System software is programmed to alert heat treaters when preventative maintenance measures



Figure 2 RHT's TITAN loaded for a new cycle

should be taken. These parameters that gauge furnace components (e.g., hot zone hours or oil level) can be programmed by a company's manager or metallurgist to alert personnel that a particular part of the furnace may require a check-up.

Software also can help you easily set up a new recipe, which benefits for faster times in between cycles by minimizing transfer errors and easing transition between different processes.

RHT shared that the high adaptability, coupled with the increase in part cleanliness, of the TITAN helped

to bring in customers and open doors to jobs they might not have otherwise been able to take. One example includes the nickel brazing jobs that they were able to accept due to the increased part cleanliness that comes with the TITAN furnace. The TITAN software also allows for easier data acquisition no matter the process or customer, which facilitates heat process documentation, and is capable of meeting various industry specifications such as Nadcap and AMS 2750E applicable requirements.

Additionally, the optimized energy efficiency of the TITAN allows the facility to run their TITAN continuously, not only increasing the number of jobs they are able to accept, but also improving job turnaround. A great way to see how the TITAN can save money is by accessing the [TITAN Cost Savings Calculator](#). This simulation tool shows both the positive environmental benefits and significant cost advantages of the TITAN furnace compared to conventional vacuum furnaces.



Figure 3 Ipsen's TITAN stands among the many Ipsen furnaces in RHT's facility

To sum up...

Available in a number of sizes and configurations, TITAN's versatility lies in its ability to run a variety of workloads through many different heat treatment processes back-to-back, while maintaining energy and cost efficiency that allows customers to run more cycles. Ipsen workmanship and premium components come together in a flow-production process that enables fast delivery, installation and start-up, so customers can take advantage of innovative and versatile TITAN technology as soon as a need arises.



About RHT

With over 40 years of servicing an array of customers, Rockford Heat Treaters, Inc. knows what it takes to give customers the quality and service that they need to be competitive in today's market. Being a family owned and operated, they ensure that the customer always comes first. They are continually moving forward to stay current with today's technology and the environment. They have recently begun an endeavor with new data acquisition software, to electronically gather all real-time operations of each piece of equipment. This will give them the ability to document every step of their customers' products.



About Ipsen

Ipsen is a top manufacturer of vacuum and atmosphere furnaces, leading the industry in thermal processing technology. In Ipsen's advanced thermal processing systems, steel and other materials are made more durable through different processes (anneal, harden, braze, sinter, temper and many more) in order to operate in demanding applications such as engines, gears and power generation.

Ipsen is a dependable, long-term partner, recognized for the quality of their products and reliability of their commitments. Choosing Ipsen means choosing a partner in success.