

As key areas of ULVAC operations, North America and the emerging Latin America territories comprise a diverse set of markets that align with ULVAC's broad spectrum of vacuum-based technologies. These markets include next-generation memory and logic devices, TFB, PV applications, biomedical applications, MEMS devices, LED, EC glass, automotive, refrigeration/air conditioning, and many others. Within each of these markets there is a manufacturing sequence that ranges from R&D, to pilot production, to HVM (High Volume Manufacturing) in most cases. UTECH's mission is to evaluate the needs of these markets, and introduce the customers to the advantages of ULVAC products, both imported and domestically manufactured.



Wayne Anderson
President & CEO ULVAC Technologies, Inc.



ULVAC Technologies, Inc. (UTECH)

Head Office: Methuen, Massachusetts USA

Expanding Market Acceptance of ULVAC Products and Technologies to Meet R&D, Pilot Production and High Volume Manufacturing Needs

Production / Customer Support Network (North America)



Expansion of Sales Rep Network



UTECH employee/ X-mas Cruise at Boston harbor

An Introduction to ULVAC Technologies

When you think about it, if you consider the number of ULVAC manufacturing divisions, multiplied by the products of each, we are left with a wide matrix of product offerings and the challenge becomes, how do we support such a spectrum? The answer is that we are fortunate to have a workforce with many, long-term employees that possess a wide-range of product knowledge. At one point in time, UTECH employed 130 people. After the unfortunate events of 9/11/01, we were faced with a significant business downturn and as a result, reduced the size of our workforce by > 50%. However, today as a 55 employee company, we find ourselves leaner but more versatile and efficient than ever. Much like the 2013 World Series Champion Boston Red Sox, our success is built on a diverse, dedicated workforce willing to “play” multiple positions within the company as needs arise. I am proud to say that our teamwork has been and will continue to be vital to our success!

In our interview with the President Wayne Anderson, this issue of “Visiting ULVAC” will provide you with insight into the UTECH history, markets served, business philosophy and a brief look into the future.

A Brief History Lesson

ULVAC Technologies, Inc. (UTECH) was established on March 31, 1992 in Andover, Massachusetts in response to ULVAC, Japan’s desire to globalize and create a Western Operations. However, ULVAC’s roots in the United States pre-date this event in (2) locations: 1) At ULVAC North America Corporation based in Kennebunk, Maine which served as a distribution center for ULVAC products and a low volume/custom equipment manufacturer and 2) as part of a joint venture with BTU Engineering, Inc. in Billerica, Massachusetts; whereby diffusion furnace products/technologies (BTU) were exchanged with selective tungsten deposition systems (ULVAC ERA-1000). These (2) entities were dissolved upon the establishment of UTECH.

Prior to the establishment of UTECH in the 1980’s, ULVAC acquired today’s ENVIRO-based ashing technology from Emergent Technologies based in Connecticut. This company was owned by our old friend Dick Bersin. After the acquisition, process and product development continued in Japan for several years under the direction of Dick. These efforts ultimately lead to the introduction of the UNA-model ashing system, which was installed primarily, in Japan. This product was eventually transferred to UTECH and became the basis for our local manufacturing operation. Local manufacturing of the UNA transitioned from the initial “knock-down kit” approach, to 100% domestic sourced parts; whereby the product name was changed to “Phoenix”. The product name has since been changed to “ENVIRO”, to leverage its environmentally friendly solvent-free processing capability.

Market acceptance of our new product began to take hold in the mid-1990’s, which created the need for UTECH to move to a facility that was more conducive to semiconductor equipment manufacturing. As a result, in 1997, UTECH engaged a construction firm to design and build a new 42,000 ft² semiconductor-grade facility that is our home today in Methuen, Massachusetts. Our facility offers a Class-10/100 demonstration laboratory to support ashing and etching technologies along with Class-1000/10,000 clean manufacturing space.

Over the years, our certified business operations at UTECH have



Process Lab or Manufacturing

grown to be quite widespread and offer a challenging work environment for our (55) member team, including a:

- 1) Center for sales and service for Import Products including systems and components into the North American and Latin American markets.
- 2) Center for the ENVIRO ashing product line including R&D, manufacturing, sales and service.
- 3) Center for ULVAC’s etch technology penetration into the North American market.

UTECH as an Antenna Technology

The United States has always been one of the world’s centers for leading edge research and development of new technologies and innovative products. Boston, Massachusetts is well known for its Universities, Colleges, and Medical Centers. UTECH’s Headquarters was strategically located within close proximity to access these institutions. One of UTECH’s missions is to be an antenna for discovering new technologies and innovative applications that are being developed here in Massachusetts as well as across the United States and Canada.

Some recent areas of successful business development include non-volatile memory technologies, electro-chromatic glass, and solid state thin film battery applications. The key to successfully developing these businesses include: (1) keeping close communications with the responsible ULVAC Equipment Division in Japan; (2) focusing on applications that play into ULVAC’s strengths and technical advantages; and (3) investigating applications and technologies that are in line with the technology focus of ULVAC. By focusing on the right applications and armed with ULVAC’s Global Engineering and Manufacturing strength, UTECH has been able to successfully develop businesses that will extend into the future.

Many of UTECH’s customers are Universities, R&D centers, and venture companies because the United States continues to develop new technologies, applications, and products. As an antenna for these areas of business, UTECH has successfully landed customers that eventually will grow from R&D to full scale manufacturing. UTECH first attracts and then cultivates these types of customers. With ULVAC’s engineering ability to transfer processes from R&D systems to manufacturing systems, the customer knows that they can depend on ULVAC to take them from R&D to volume manufacturing and to “scale” with the customer’s requirements. Should the customer decide to build manufacturing facilities in regions outside of the United States, ULVAC’s global network will support those customers even if they expand into places such as China, Taiwan, Southeast Asia or even India.

Strategies to Strengthen UTECH and Stimulate Growth

President Anderson explained that UTECH has adopted (3) fundamental policies to strengthen and grow our business. Let's explore each policy one-by-one:

- 1) Sales and Marketing Policy:** We must continue to find new customers while continuing to provide excellent support to our existing customers. This will be achieved through the broadening and strengthening of our sales and marketing organization utilizing a combination of direct and representative resources. In addition, we will continue to expand our marketing efforts including A) the introduction of a new, more informative, easily navigated web-site B) increased trade show exhibitions and C) expansion of product advertisement efforts. Each marketing activity will be monitored for success level in an effort to ensure continuous improvement. Our hope is that by effectively implementing our sales and marketing strategies, we will strengthen ourselves through diversifying sources of revenues (i.e. industries where UTECH is active), profits and customer base to avoid the "all eggs in one basket" effect which can prove dangerous when markets pull-back.
- 2) UTECH Operations Policy:** We must continue to take the necessary steps to strengthen our bottom line condition. The most significant step includes the expansion of our domestic manufacturing portfolio beyond our ENVIRO ashing family of products to now include the NE-550EXa Etcher, the NLD-570 Etcher, the CS-S Compact Sputter System, Automatic Leak Test Systems and others that are a good "fit" within our markets. By manufacturing more products locally, we expect to be able to offer more competitive pricing while yielding substantially increased gross margins over comparable import products. To maximize this effect, it is important for us to maintain strong supplier relationships with those offering the highest quality and most favorable pricing. In addition, we have recently upgraded our Customer Service organization to improve responsiveness and to introduce a more aggressive approach to the pursuit of service contracts, spare parts

business and customer training programs. The resulting business has mutual benefits to both our customer in the form of better tool performance/productivity and to UTECH in the form of strengthened financial results.

- 3) Technology Focus Policy:** We must continue to serve as an "antenna" for ULVAC for technology trends as the US continues to be a center of R&D as well as a breeding ground for technology venture companies. Many of our customers are developing products for markets that are still in a very early (infancy) stage that may proliferate to world-wide, high volume manufacturing needs, as market demands increase. We see growth in areas related to energy and environment including LED/OLED, power device, solar, fuel cell, and solid state batteries. In the semiconductor market, emerging memory and logic technologies should serve as an area of growth and new business potential. And similarly, we expect new markets to emerge within the automobile industry. In summary, the involvement and success of ULVAC that can be demonstrated at the R&D stage puts us in a favorable position for new business when higher volume manufacturing needs arise.

A Look Forward

We continue to see the trend of slow but steady economic recovery in the United States. This trend has resulted in a gradual "return to buying" for many Americans. Positive economic indicators such as sales of new homes, automobiles, electronic devices, home appliances, etc. are all on the increase. Fortunately, vacuum based technologies are quite prevalent in the supply chain of these markets through the fabrication of memory and logic devices, MEMS devices, power devices, TFB's, automobile components and others. The economic recovery coupled with the trend of returning manufacturing to the US will likely yield increases in business opportunities for ULVAC products, technologies and services. We expect that our continued aggressive, focused business development and marketing campaigns will allow us to capitalize on these new opportunities and continue to fuel the growth of UTECH in the future.

Shared vision

I Expect UTECH Serve Function as an Antenna for Advanced Technologies



Hisaharu Obinata
President and CEO
ULVAC, Inc.

In 1975, I participated in the establishment of the ULVAC North America Corporation (UNAC) as its first representative stationed in the United States at only 25 years of age. I am still proud of my participation in founding UNAC.

Fortunately, immediately after it was established, we received a large order from IBM for the world's first computer-controlled vapor deposition system. We also received orders for the world's most advanced devices one after another, such as a roll coater for film formation as a device ordered by the Bank of Canada to prevent use of counterfeit bills and an inline sputtering system for magnetic disk production from Komag Inc. (As of 2007)

We had hard times during certain periods such as the Buy American movement triggered by trade friction as well as simultaneous terrorist attacks on September 11, 2001. However, we overcame those hard times and are now continuing to provide advanced systems such as cutting edge semiconductor production systems and TFB production systems.

The United States is a place that is constantly creating advanced technologies and at the same time is the world's largest market. I expect UTECH serve function as an antenna for advanced technologies and play role as the significant in the ULVAC group.