

Market and Trends

Lasers and the Health Realm

It might be odd to find an article dedicated to beauty regimens in any manufacturing publication. However, society's hunt for perfection is taking on a growing sophistication. Besides balms and lotions, it's not at all uncommon to find laser treatments and imaging technologies becoming staples in the field of health, beauty, and plastic surgeries.

Laser and imaging technologies are becoming staples in the health and beauty field.

Perhaps the fastest growing trend includes the use of Q-switched lasers for tattoo removal. Although lasers have long been a tool for the remorsefully tattooed, affordability has been the main stumbling block. Until now, popular treatments included surgical skin grafting and harsh skin abrasion.

Typically speaking, the ruby laser or the Nd:YAG laser are used in the Q-switched mode for medical and beauty processes such as tattoo removal. The Q-switch mode is achieved by allowing an attenuator to interfere within a laser's optical resonator. Today's Q-switched laser operates by creating a higher output through

breaking up a continuous wave into pulses. Unlike modelocking, pulses in a Q-switched laser have higher energy, and occur at longer intervals.

Of course, the use of lasers in the medical and beauty field aren't limited only to tattoo removal. Vision repair, hair removal, and spider-vein removal are just a sample of the power lasers have brought to various industries.

As glass engineering experts, here at PEG we're always monitoring

the potential of lasers in various fields. "The medical industry is certainly heating up," says Mark Andrews of PEG. "For instance, we've been in the dental x-ray market for a long while and it's only growing." Indeed, PEG's capabilities include the formation of lasers of various sizes for a multitude of industries. And given the state of the medical field, there will be an ever growing demand for new lasers.



Letter from the President 2
What's New at PEG 3

Business Ventures
Quality Raw Materials at Surprising Costs ... 4

Letter from the President

Adding Value by Adding Capability



Welcome to the brand new look of *Reflections*. Throughout this newsletter you'll notice our articles feature trends within the industry as well as our current business ventures.

Focus: Outward Bound

With 2007 well underway, our focus is outward—both in terms of this publication and our capabilities. With advances in production due to our Prototype Lab and an ever growing supply of international raw materials, we're proud to say that we've all but exploded into various glass and quartz markets.

New Developments:

We have stretched our global alliances to the max. PEG has

developed national and international sourcing for quality raw materials such as quartz. We're able to provide topnotch raw materials on a wide spectrum of pricing. This means selection and affordability for you!

We've also created a new Prototype Lab. The lab is 100% dedicated to the engineering of your prototype. It's staffed with full-time professionals who can design, engineer, and manufacture the piece or components you need. By allocating space and resources to your prototypes, we're able to provide faster turnaround times and quality engineering.

New Markets:

The CRT Marketplace is among one of our many redefined targets. Our work over the last quarter has been in developing our sourcing and buying power, mastering our glass automation processes, and resizing raw material. This, combined with our new Prototype Lab has enabled us to reclaim our stake in cathode ray tubes.

Over the last few years our practice in the Laser Tube Marketplace has been a natural progression for PEG. However, the end of 2007 will see a huge jump in

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activity within this arena. With the need for high quality suppliers growing stronger and our constant improvements in technology, PEG is a perfect candidate.

As always, we welcome your comments and feedback! Visit www.pegglass.com or call us at **1-800-982-4734**.

Philip Rossi
President, PEG Glass

Announcements

The world may see its first X-ray free electron laser by 2009. The laser, being developed by Argonne, is called the Linac Coherent Light Source (LCLS) undulator system. The LCLS light pulses will be a billion times brighter than those of any other laser.

Dr. Arun Varshneya received the President's award July 2, 2007 at the XXI International Congress on Glass in Strasbourg, France. Dr. Varshneya's 130+ research articles published in various scientific journals continue to serve as the backbone for all microanalysis techniques for glasses using high-energy charged particles.

Forecasted demands on glass and minerals are at record highs. Flat glass demand is expected to exceed 39 million tons by 2010, while the demand for crystal is charted to surpass 1.1 billion in 2011. Experts cite architectural and automotive advancements, as well as new technology in medical imaging instruments as the main factors for growth.

What's New at PEG

New Dimensions and Testing— Our Prototype Lab Makes it Possible

Nothing can delay the completion of a project like unnecessarily long turnaround times. That's precisely one of the reasons why PEG has created a new Prototype Lab.

The new Prototype Lab encompasses an area of 200 square feet and attributes 100% of its resources to engineering, fabricating, and testing your samples. This means faster turnaround times, accurate and well-tested parts, and a one-stop source for your testing and fabricating needs.

After continually breaking manufacturing runs to fabricate prototype pieces, it became clear that PEG needed to internally restructure the facility to better handle prototype production. With changes already being made in the form of "cells" to reduce touch times, the Prototype Lab naturally evolved. During the process, specific choices were made to increase productivity.

PEG's Prototype Lab is fully staffed with highly trained professionals and engineers. As PEG uses state-of-the-art tools including auto lathes, non-contact measuring equipment and specialized machinery, the Prototype Lab stands to restructure the way test engineering is handled by doubling output.



Reclaiming Cathode Ray Tubes

With LCD screens reaching a 110% jump in global sales, it's hard to imagine an expanded need for cathode ray tubes. However, the demand is stronger than ever. With top name providers such as Sony leaping out of CRT sales, PEG has prepared to expand our presence.

There has been some pushback on LCD screens citing the fact that they, as well as plasma screens, can use up to triple the amount of energy of a cathode ray screen. While the average person is not likely to forego a Jetson-like abode to save an intangible amount of energy, other markets are still heavily relying on cathode ray tubes.

Because CRT screens offer greater clarity and the ability to view a condensed number of pixels in a

smaller space, select markets still value them above LCD or Plasma monitors. For instance, the US military uses CRT technology in their heads-up/heads-down displays, armored vehicle displays and air traffic control displays. Similarly, broadcasting industries, medical machinery, and professional photography and video industries, among others, still employ CRTs because of the better resolution they offer.

PEG is meeting this demand by providing made-to-order CRT envelopes for end products. We've adapted our capabilities to include a more precise prototype lab to test products and we have engineers on staff to specially design each piece to meet specific sizes and functionalities.

PEG

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Business Ventures

Quality Raw Materials at Surprising Costs

PEG has always worked with superior raw materials to create custom parts. We offer all of the major brands and are committed to providing quality and selection.

It's for this reason that PEG is growing their global sourcing. Over the last few years there's been a marked influx of raw materials from international sources being used domestically. At PEG, efforts were made to examine these pieces. After extensive research, the PEG team found that the international specimens had many qualities and characteristics similar to that of the highest grade materials that PEG often uses. The only difference—price.

Today PEG practices global sourcing through unique partners to bring you quality raw materials from national and international sources at astoundingly low prices. The result is best summed up by PEG's Domenic Ciancarelli: "Let PEG bring the world to you." In short, PEG's global sourcing eliminates all of the hardships that can come with doing business half a world away. Language barriers, time zone differences, and the search for reputable and competent suppliers are eliminated when you work with PEG. "We pass on the convenience, the quality materials, and of course—the low prices," confirms Ciancarelli.

To date, PEG has processed a number of successful jobs using the internationally sourced raw materials. Says Mark Andrews, "As long as it continues to provide an excellent value for our customers, we'll continue doing it."

