News Release

October 2, 2023

To whom it may concern

Kohoku kogyo Co., Ltd.

1623 Takatsuki, Takatsuki-cho, Nagahama City, Shiga Prefecture

Kohoku kogyo Established micro-molding technology for quartz (SSG®).

Expectations are high for expansion into special industrial fields , such as laser processing machines and special industrial lighting.

Kohoku kogyo Co., Ltd. (Headquarters: Nagahama City, Shiga Prefecture, President and CEO: Futoshi Ishii) has announced that it will be able to produce micrometer-order quartz using SSG® (slurry cast silica glass), a manufacturing technology for high-purity quartz glass products. We have established the technology to realize glass shapes.

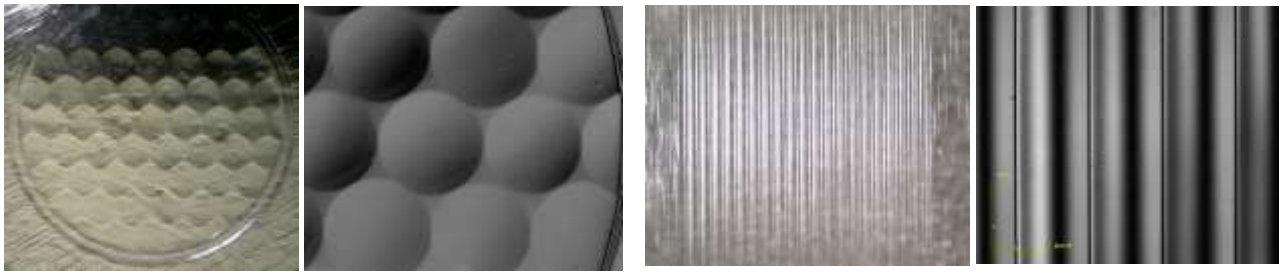
This makes it possible to manufacture lenses with shapes that are extremely difficult or impossible to manufacture using conventional manufacturing methods.

Additionally, since SSG® has a purity equivalent to that of synthetic quartz, expectations are high for expansion into special industrial fields , such as laser processing machines and special industrial lighting.

Synthetic quartz has superior corrosion resistance and heat resistance compared to general transparent glass, and is used in medical inspection equipment, semiconductor manufacturing equipment, industrial products, etc., but it is difficult to process compared to general glass products. Because it is difficult to mold fine and complex shapes, its uses have been limited. This time, by using a unique slurry casting method that allows for more flexible molding of complex shapes than conventional methods, we have taken advantage of synthetic quartz's "high purity" and "high stability" features, making it possible to create shapes that were previously impossible. It is thought that it can be applied to various application fields.

Kohoku kogyo will exibit prototypes of Φ2μm'shave a cellfly eye lens and 0.2mm pitch lens array made from this new technology at the "Photonix 2023" exhibition to be held at Makuhari Messe from October 4th to 6th

<Example of quartz parts manufactured using SSG®>



Stereo micrograph Laser micrograph Stereo micrograph Laser micrograph

Φ2μm'shave a cellfly eye lens

0.2mm pitch lens array

About SSG® (Slurry cast Silica Glass)

*SSG®: SSG is a registered trademark of Kohoku kogyo Co., Ltd.

SSG® is a high purity quartz glass product established by Kohoku kogyo. Mix quartz powder and additives to create liquid quartz (slurry), mold this in a mold at room temperature, and vitrify it by sintering. The resulting material has purity and physical properties equivalent to synthetic quartz. It has the advantage of an extremely high degree of freedom in shape, making it possible to create high-purity quartz glass products with complex shapes that are difficult to achieve using conventional cutting methods.

About Photonix 2023

Photonix 2023 is a comprehensive exhibition of high-performance materials, laser technology, and electronic displays organized by RX Japan, Japan's largest trade fair organizer, and will be held at Makuhari Messe from October 4th to 6th, 2023.

<Overview of Kohoku kogyo Co., Ltd.>

Kohoku kogyo Co., Ltd. was founded in 1959 as a manufacturer of lead terminals for aluminum electrolytic capacitors, and then expanded into the optical components and device business in 2000. Currently, 53% of our sales come from the lead terminal business and 47% from the optical components and devices business. In the optical components and devices business, we hold a 50% market share in the optical isolator market for submarine cables, making us a leading company in this field. Additionally, as our third growth business, we are moving forward with the commercialization of high-purity quartz glass using the slurry casting method.

<Contact information regarding this matter>
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