News Release

December 16, 2025

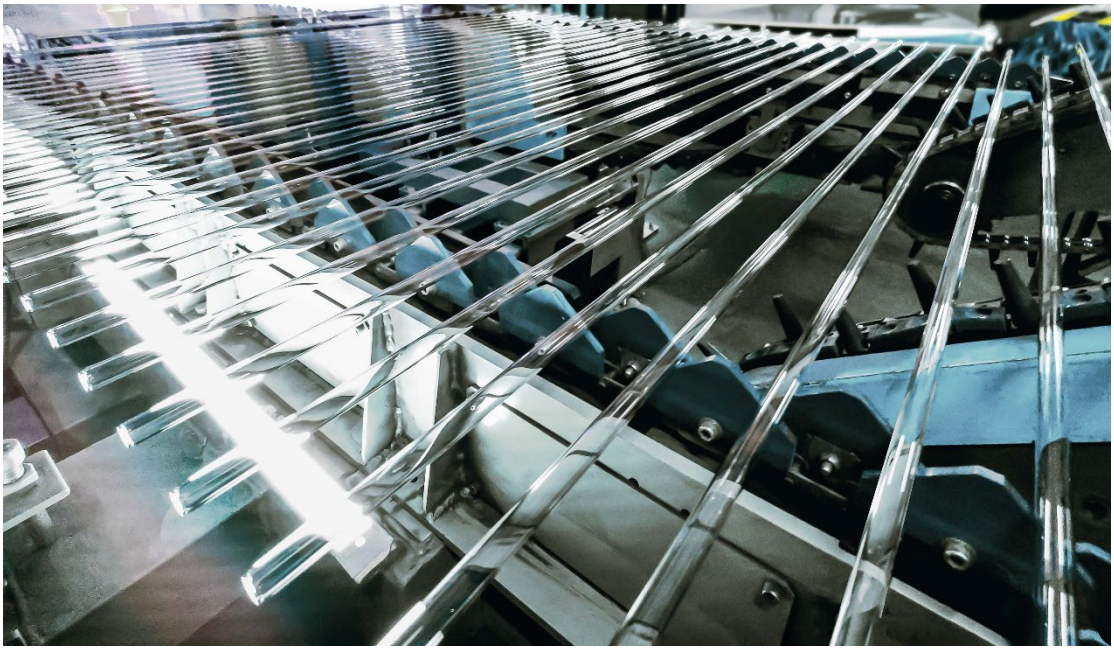
Nippon Electric Glass Co., Ltd.

Nippon Electric Glass Begins the World's First Mass Production of Pharmaceutical Glass Tubing Using an All-Electric Melting Furnace

Nippon Electric Glass Co., Ltd. (Head Office: Otsu, Shiga, Japan; President: Akira Kishimoto; "NEG") will begin the world's first mass production of pharmaceutical glass tubing using an all-electric melting furnace from December 2025 at Nippon Electric Glass (Malaysia) Sdn. Bhd. (Selangor, Malaysia), a group company.

By utilizing NEG's innovative all-electric melting furnace technology together with renewable energy, it is possible to reduce CO_2 emissions in the production of pharmaceutical glass tubing by up to 90%*1. Through this initiative, NEG will advance technological innovation in glass manufacturing and contribute to the promotion of carbon neutrality in the pharmaceutical industry.

*1 Estimated on the assumption that production is carried out at Nippon Electric Glass (Malaysia) Sdn. Bhd. using an all-electric melting furnace with renewable energy.



NEG is a major supplier of pharmaceutical glass tubing made from borosilicate glass*2, which has high chemical durability, and supplies glass products to the global pharmaceutical industry. NEG's pharmaceutical glass tubing is an environmentally friendly product that does not contain arsenic or other substances that have an environmental impact. It is widely used for vials and ampoules, as well as in syringes*3 and cartridges, where demand is expanding, mainly for biopharmaceuticals*4 such as GLP-1*5 formulations.

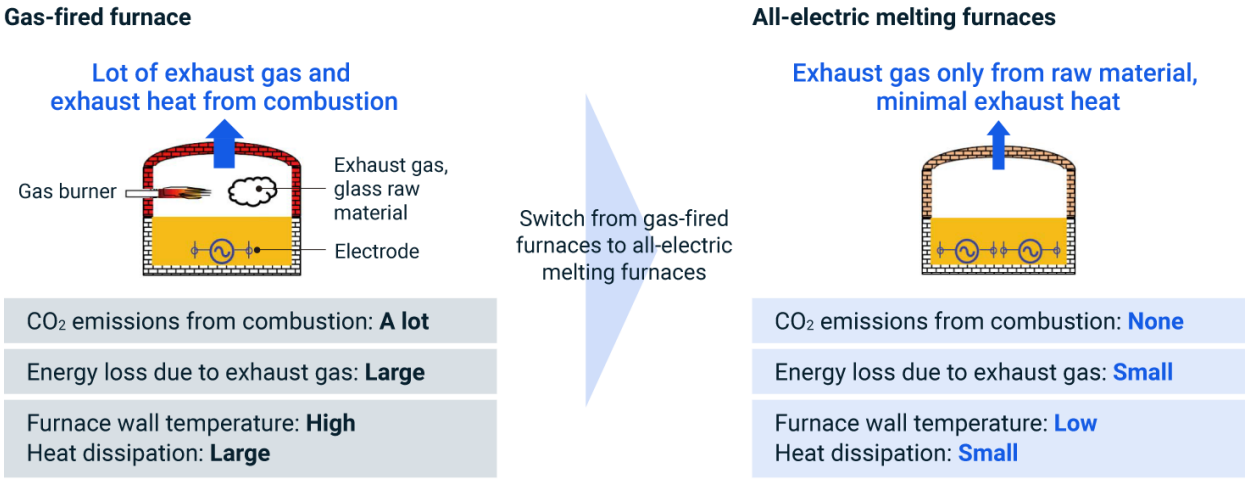
The GLP-1 formulation market is growing at approximately 33%*6 per year, and demand for syringes and cartridges is also increasing rapidly. Growth is expected not only in Europe and the United States but also in emerging markets such as India and China. By building a high-grade and environmentally friendly production system utilizing an all-electric melting furnace, NEG will respond to the needs of the global medical field and lead to further business expansion.

■ Comments from Masanori Wada, Vice President of Consumer Glass Products Group

"The launch of the world's first mass production of pharmaceutical glass tubing using an all-electric melting furnace is a major milestone for us. We believe that we can make a significant contribution to the promotion of carbon neutrality in the pharmaceutical industry by supplying high-grade, environmentally friendly products."

■ What is an all-electric melting furnace?

Currently, glass melting is mainly heated by combustion using fossil fuels, and CO_2 emissions during melting are an issue. NEG's all-electric melting furnace utilizes its proprietary NEG Electric Melting Technology (NEMT™), in which electrodes are inserted into molten glass and the glass is heated and melted directly by passing electric current through it. This system offers excellent energy efficiency and reduces exhaust heat from combustion gas, contributing greatly to reducing environmental impact.



*2 Borosilicate glass is a special glass with excellent heat resistance, chemical resistance, and transparency, and is widely used as a standard material for pharmaceutical containers.

*3 Syringe formulations are drugs that are pre-filled inside a syringe in sterile condition and are widely used for vaccines and antibody drugs. Since suction operation is unnecessary, they reduce the risk of drug mix-ups or foreign matter contamination and contribute to medical safety. Cartridge formulations are produced by filling the drug into a cartridge and attaching it to a dedicated pen-type injector. They can be easily measured and are suitable for self-injection and are said to have advantages in terms of cost.

*4 Biopharmaceuticals are pharmaceuticals produced using biological mechanisms, and representative examples include antibodies and vaccines. They are expected to have high therapeutic effects on diseases that were difficult to treat with conventional chemically synthesized drugs.

*5 GLP-1 is a hormone secreted from the small intestine. It stimulates insulin secretion when blood glucose levels are high and suppresses appetite. It is attracting attention as a therapeutic drug for diabetes and obesity.

*6 Quoted from https://www.prophecymarketinsights.com/ja/market_insight/glp-1-analogues-market-5540



Pharmaceutical glass tubing



Syringe

[Company Profile]
Nippon Electric Glass Co., Ltd. is a world-class specialty glass manufacturer headquartered in Otsu City, Shiga Prefecture. Special glass that creates novel functionality is transformed into a variety of products, such as sheets, tubes, fibers, and powder, and is used in a wide range of fields, including semiconductors, displays, automobiles, electronic devices, medical care, and energy. The special glass developed using the technology and track record that we have honed over our 70-year history is highly regarded in a wide range of fields, from everyday life to cutting-edge industry.

Company name: Nippon Electric Glass Co., Ltd.
Representative: Akira Kishimoto, President
Head office location: 7-1 Seiran 2-chome, Otsu, Shiga 520-8639, Japan
Founded: December 1, 1949
Business details: Production and sale of special glass products; manufacture and sale of glassmaking machinery
URL: https://www.neg.co.jp/en/

Nippon Electric Glass Co., Ltd. 7-1 Seiran 2-chome, Otsu, Shiga 520-8639, Japan
<Contact regarding products>
Contact Form