
Platinum equipment for manufacturing of high quality glasses

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Abstract

Precious metals have vital roles in glass industry. HERAEUS is a leader in this technology.

As for a metal, the glass must be melted then transported before to be moulded, shaped. Melting glass and transport are done inside furnaces and feeders made out of refractory oxides parts subjected to corrosion by liquid glass. The glass composition is then modified and charged of refractory oxide particles; this leads to 2 main things:

- many discards on final glass articles.
- The refractories age very quickly, resulting to rebuild the furnaces very often.

Productivity efficiency and high quality oblige the glassmakers to install "corrosion barriers" over parts subjected to corrosion damages; despite the development of better ceramics.

Platinum devices remain today the best solutions against the corrosion by molten glasses.

The Platinum systems for the manufacturing of specialized technical glasses are made up of a large variety of components. Each Platinum component requires different choice of materials.

The increased severity of the running conditions has needed the perfecting of materials: The **Platinum DPH** material has proved it in hardly conditions due to its higher strength and temperature resistance.

More than ten years ago, the company Heraeus and the University of Applied Sciences Jena developed a new ODS-Platinum materials with the aim of overcoming disadvantages of other ODS-platinum materials. These are the **Platinum DPH materials**. They have excellent properties, including good weldability and ductility. These materials are being used very successfully in industry, especially in glass melting equipment for high temperatures.

The ductile **DPH materials** compensate thermal expansion which occurs in use without being damaged. Other parts like stirrers need high torsional rigidity, then **DPH-A material** (a new type of DPH) is the perfect candidate for this application.

A solution of each applications, Heraeus people are there to find the best material you need for your application.

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