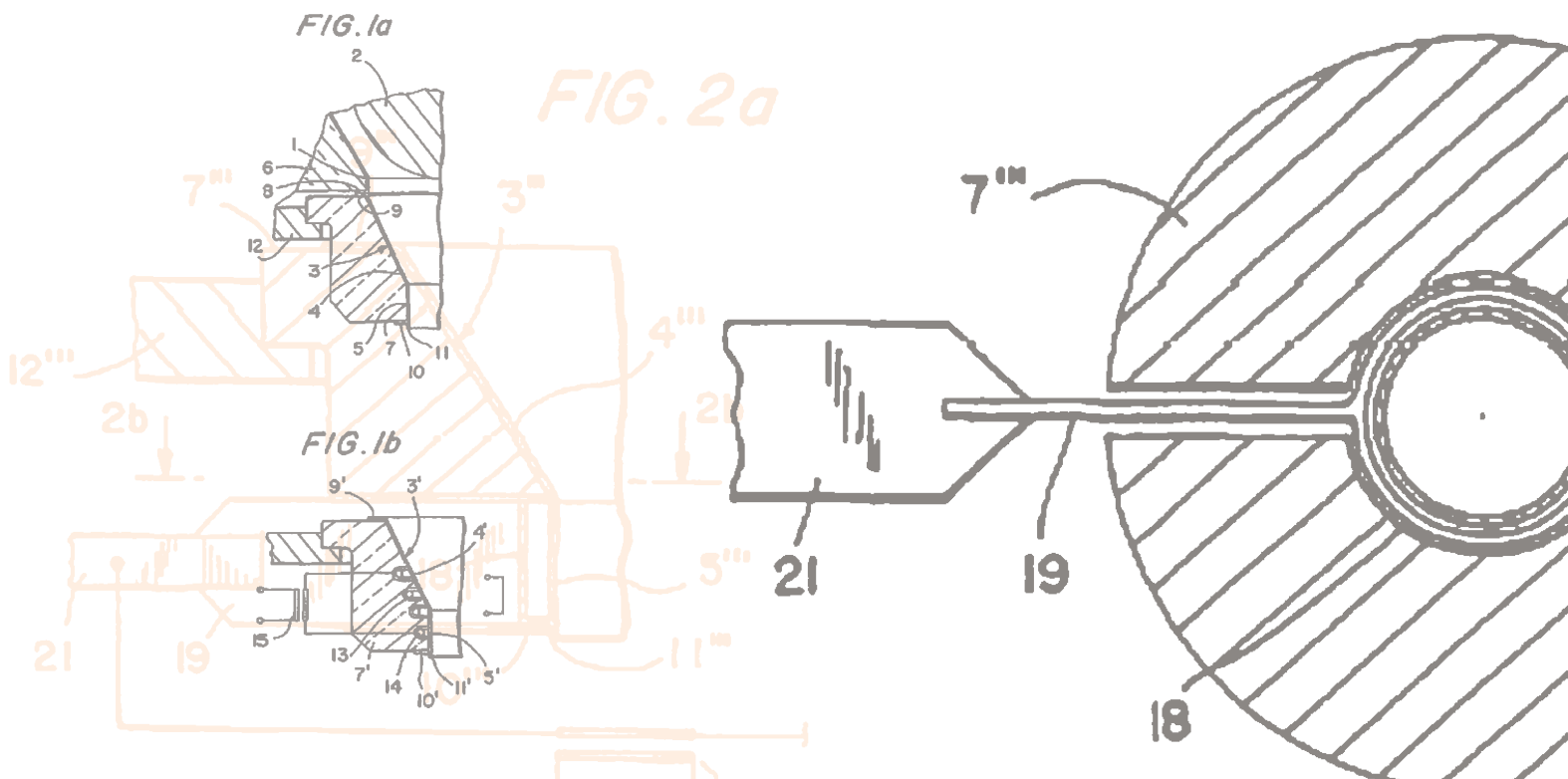


Combining Competencies for Process Excellence
Comprehensive Platinum based solutions for the special glass industries

Heated Orifice Ring

Patented Innovation



EP 1 362 011 B1 / US 7 013 677 B2



Sometimes genius is triggered by simplicity: this patent is a nice example of how simple designs can have a major beneficial impact on process performance. However, the way to get there is rather complex.

Glass-melt Delivery

Our patented orifice ring is a device for heating glass-melt. It comprises a delivery nozzle for glass-melt that is heated directly and by means of electricity. The nozzle contains at least one PGM material, mounted in a ceramic component in an interlocked manner and attached to the ceramic component with axial flanged rings at each end.

The delivery nozzle is comprised of a conical funnel-shaped component and a cylindrical end piece. The cylindrical end piece of this nozzle has a take-off bar connected through a flanged ring to a cylindrical heating ring of PGM material.

Simple but smart

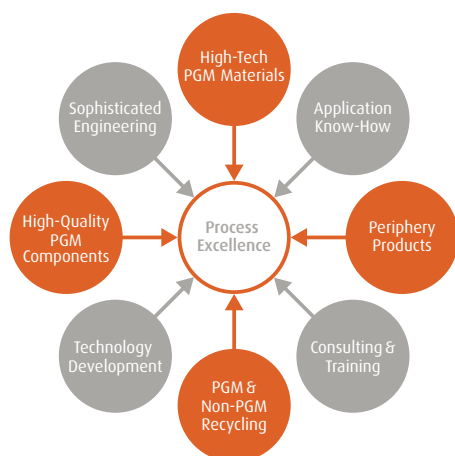
The cylindrical heating ring is arranged coaxially in a ceramic component at a distance around the cylindrical end piece, and it is attached to a lower flanged ring adjacent to the take-off bar.

PGM current feed metal sheets are also attached to the cylindrical heating ring. Ideally, the PGM metal sheets are arranged in a radial alignment on opposite sides, positioned axially in relation to the surface, and passed through slits in the ceramic component.

Gaining Control

The invention is available in two other modalities, rendering is adaptable to different glass production systems and glass-melts.

Furthermore, the construction provides for controllable, effective heating of the delivery nozzle and therefore of glass flux, particularly in the critical area of portioning and shaping.



Technology Development

We consider innovation to be the most important engine for progress. It will finally translate into Process Excellence for our customers and support them to manufacture products with tailor-made features for their target industries. Umicore is continuously striving for proprietary technologies that enable us to be a leader in our field and support our customers in the best possible way.

For inquiries and additional information please contact

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