

PCF[®]

Power-Coating[™]-Feeder[®]

The New Feeder-Generation

EGLASS Platinum Technology

füller

GLASTECHNOLOGIE



Johnson Matthey

PCF[®] technology is
the new feeder-generation
in which Power-Coating[™]
replaces the indirect heating of
the ceramics.



Homogeneity of glass

Platinum is the key to the chemical and thermal homogeneity of glass. Its stability in high temperature environments and its resistance to glass corrosion makes platinum the ideal engineering material for manufacturing quality glass.



With the PCF[®] system, the platinum coating is electrically heated. The heated coating is in direct contact with the glass and allows instant transfer of heat to it. Computer-aided regulation of the heating current – with instant temperature feedback – enables the glass temperature to be accurately, efficiently and immediately controlled.

The protective platinum layer maintains the chemical homogeneity by preventing corrosion products entering the glass, while at the same time maintaining the carefully designed internal dimensions of the feeder system.

**relies on optimal
chemical and
thermal conditions:
Platinum has proven
to be a perfect
partner for molten
glass.**

System-control

Movement and temperature are the critical parameters which must be precisely controlled to obtain the highest quality glass.

The exact control of mechanical movements is facilitated by the use of electronically controlled servo-motor systems. This guarantees highest glass-quality through technical precision.

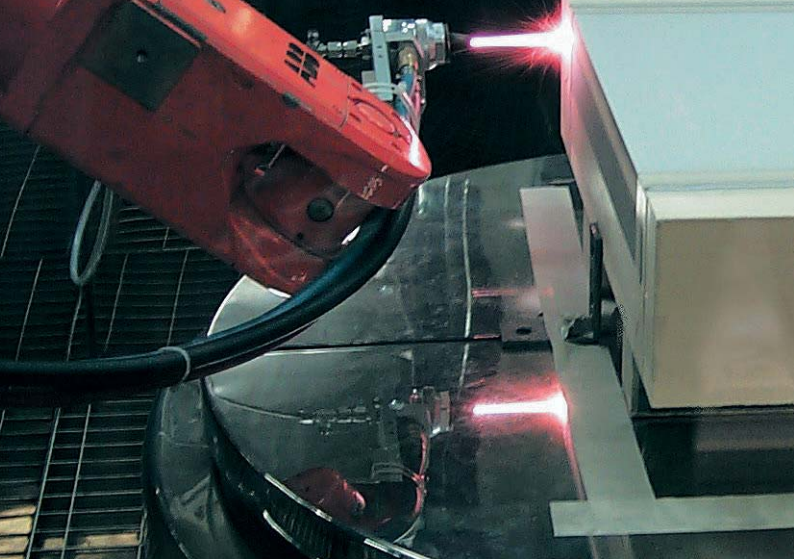
does not leave the gob-shape and the gob-weight to chance: PCF[®] means precision through a computer-aided control system.

The electrical heating of the platinum coating provides the basis for an immediate and precise computer-aided regulation of glass temperature, and facilitates

- controlled cooling,
- maintaining constant glass temperature and
- controlled heating.

The optimal production parameters may thus be achieved directly and immediately and temperature fluctuations may be reacted to most efficiently.





Precious resources

**make engineers
inventive: PCF[®]
uses and conserves
platinum.**

PCF[®] technology combines the advantages of cost-intensive, but highly efficient, Direct Heated platinum feeder systems with reduced platinum requirement of ACT[™] platinum coated feeder chambers. As a result, costs are significantly reduced.

The ACT[™] platinum coating combines the strength of the ceramics and the corrosion resistance of the platinum. The platinum coating is fully bonded to, and supported by, the ceramic substrate. This composite system provides a high structural integrity even at high temperatures - while simultaneously utilising the corrosion resistance and direct heating ability of the platinum. The structural support of the ceramics eliminates the need for rhodium as a strengthening alloy additive.

As a result, the service life of the feeder is extended and the platinum requirement is reduced by more than 50 percent.

Progress

PCF[®] technology is based on firmly established, proven concepts, combined to produce a highly innovative yet sound solution. PCF[®] technology is the interplay of the most advanced technologies:

- the electrical designs and systems as well as the power flange technology made by **Eglass Platinum Technology GmbH**
- the standard feeder head, feeder mechanics, heating circuits, electronics, sheers and auxiliary equipment made by **Füller Glastechnologie** and
- the ACT[™] coating of the stub channel and T-shaped feeder chamber by **Johnson Matthey**.

A well-established system is now ready for the next feeder-generation, in which Power-Coating[™] replaces the indirect heating of the ceramics.

lies in the combination of well-established ideas: PCF[®] is supreme technology created by leading suppliers.



PCF[®] Key Benefits

glass-quality and homogeneity

- Drawing glass from beneath the surface of the molten glass prevents bubbles being drawn into the glass.
- The platinum-coated feeder chamber prevents corrosion and guarantees the chemical homogeneity of the glass.
- Direct heating of the platinum coating ensures a homogenous and constant temperature of the glass.
- The stirring-plunger technology ensures perfect chemical and thermal homogeneity immediately prior to forming.

precise and responsive control

- Direct heating, immediate temperature feedback and the computer-aided control of the power make immediate temperature control possible.

economy and conservation of precious resources

- Direct heating of the platinum coating allows optimal insulation on the outside of the ceramics allowing reduced energy consumption.
- Elimination of wear and corrosion provides a dramatic extension of life-span in comparison to ceramic feeders.
- The amount of platinum and rhodium required is significantly reduced in comparison to fabricated platinum feeders.

PCF[®]_Contact

Glasstec Düsseldorf A fully operational **Power-Coating™-Feeder®**
Germany may be seen on the Eglass-Stand (15A15).
28.10-01.11.2002

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