



WORKSHOP

OPTIMIZING CUTTING AND GRINDING

SUMMARY

Part One – Cutting: The first step in processing float glass is the cutting step. The choice of the right cutting parameters is decisive and influences the quality and the lifetime of the processed glass. The workshop will provide the participants with all information necessary to understand the cutting process and to create a perfect cutting result. Beneath other things Mr. Pokoern will report the effect of cutting wheel, cutting wheel angle, cutting wheel finish, cutting pressure and speed. Additionally, Mr. Emonds will report details regarding the influence of the cutting fluid on the cutting process.

Part Two – Grinding: Part Two will start with a general overview of the grinding process using diamond tools, it will enlighten different test methods for quantifying the edge quality and it will present practice test data regarding e.g. the influence of different coolants on the edge finish of ground as well as drilled glass. In a more practical approach the proper handling of synthetic coolants will be on focus. Amongst others parameters like cleaning efficiency, corrosion protection, pH-value, and water recycling will be discussed.

KEY POINTS

- Theory and practice of glass cutting Nanofabrication
- Theory and practice of glass processing using diamond tools
- Cutting wheel
- Cutting fluid
- Coolant chemistry
- Edge strength via vertical bend test
- Effect of surface finish and different coolants

TIMETABLE

09.00 Introduction of the speakers and the participants

09.15 Part One: Cutting

12.00 Lunch Break

12.45 Cutting Fluids

13.45 Part Two: Grinding

16.30 Discussion

17.00 End

Duration: 8 hours



ORGANISERS

Peter Pokoern, Bohle AG

Peter Pokoern, a product manager for automatic glass cutting technology at Bohle, joined the company in 1985. For many years, he was engaged in application engineering in all aspects of processing glass, e.g. optimal manual glass cutting, thick glass cutting and UV bonding. In 2001 he became the Marketing and Product Manager especially for automatic glass cutting and ever since concentrates on this aspect of processing glass.



Michael Emonds, Aachener Chemische Werke

Michael Emonds studied chemistry at RWTH – Aachen. He made his PhD in (bio)polymer chemistry and teached students at the university before he changed into industry. Since 1993, he is active in glass industry and works for Aachener Chemische Werke – Wuerselen as R/D scientist. He is also responsible for applications engineering consulting in the areas of cutting fluids, coolants, detergents and interleavants/corrosion inhibitors and carries out seminars and training