

WORKSHOP

SUSTAINABLE FLOAT GLASS PROCESSING: BASF CHEMICALS IN GLASS CUTTING, GRINDING AND GRINDING WATER TREATMENT

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, especially regarding the edge strength. Beneath important factors like cutting force and speed, special focus will be on the influence of the cutting fluid on the cutting process. Further aspects will be sustainability and other environmental aspects of cutting fluids.

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 addition, the new generation of Boron-free coolants of Chemetall will be introduced.

In a more practical approach, the proper handling of synthetic coolants will be on focus. Amongst others parameters like cleaning efficiency, corrosion protection, and pH-value, will be discussed.

Part Three – Water treatment: Mr. Sais will refer past, present and future of the treatment of the water in the glass grinding processes. He will go through the solutions historically used to treat the water (decantation, centrifugation), analysing weak and strong points. Further points will be quality requirements for the water in the glass industry. Advantages of working in a closed circuit. Collection and distribution of the waters in the glass processing.

COURSE TIMETABLE 14TH OF JUNE 2023

- 9:00 : Introduction of the speakers and the participants
- 9:15 : Part One: Cutting
- 10:45 : Part Two: Grinding 1
- 12:00 : Lunch Break
- 12:45 : Part Two: Grinding 2
- 14:45 : Part Three: Water Treatment
- 16:30 : Discussion
- 17:00 : End

DURATION : 8 Hours

ABOUT THE AUTHOR(S)**MICHAEL EMONDS, CHEMETALL/BASF**

Dr. Michael Emonds was born in 1957 and studied chemistry at RWTH Aachen University. In 1991 he received his doctorate from RWTH in the field of biocompatible polymers. In 1992 he joined a company for the application of biological methods in the industry, where he was responsible for the analytical laboratory. From 1993 he worked for Aachener Chemische Werke (ACW), which was integrated into Chemetall GmbH in 2013 as Segment Glass and now is part of BASF. Dr. Emonds is responsible for the application and improvement of Chemetall products for the preprocessing of glass.

**JOSEP SAÏS, VITROSEP**

My Industrial Engineering background with Electronics specialization together with my experience in the manufacturing of machinery, 35 years now, was a good reason to approach the VITROSEP project since the very beginning in 1992. The quest for a reliable solution for the treatment of the glass grinding waters started with a lot of difficulties which I followed as an spectator and, sometimes, lending a hand. In 2005, I decided to dedicate 100% of my time to the separation of the glass particles from the water. My main contribution was to turn the manual VITROSEP process into a fully automatic solution. In 2014, I had the opportunity to buy the company and built an engineering, service, and manufacturing team.