17th INTERNATIONAL SEMINAR
ON FURNACE DESIGN
OPERATION & PROCESS SIMULATION

GLASS DEFECTS WORKSHOP

June 17, 2025 from 14.00 – 18.00
Workshop fee: 150 EUR

This workshop introduces the topic of glass defect analyses offered by GS Laboratory.
It describes bubble and solid glass defect analysis procedures and discusses their classification based on their sources.
The course will explain how identifying defect composition can help glass manufacturers determine the source of the problem.
Additionally, the workshop will review several case studies and discuss how the information gained during the identification process can be applied to successfully isolate defect sources.

LECTURERS

Laboratory team of GLASS SERVICE, a.s.

SCHEDULE

14.00 – 15.45 · **SESSION ON BUBBLES**

Bubble Analysis Methods
- Mass Spectrometry, analysis procedure

Bubble Defect Sources - classification according to the mechanism of bubble generation
- Batch decomposition and batch reaction
- Nucleation and glass reboil
- Electrochemical and chemical reactions
- Glass contamination
- Mechanically formed bubbles
- Refractory bubbles

Discussion

15.45 – 16.15 · BREAK

16.15 – 18.00 · **SESSION ON SOLID DEFECTS**

Solid Defects Analysis Methods
- Scanning Electron Microscopy coupled with EDS, analysis procedure

Solid Defect Sources – classification of the defects according to their source
- Batch (raw materials, recycled cullet)
- Crystallization (devitrification)
- Refractory materials (bricks, patches, insulation materials, ceramic welding)
- Other materials used in the furnace (tin, molybdenum electrodes, platinum, etc.)

Discussion

18.00 · Final discussion per request

ORGANIZER

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