

Electric melting of glass

Introductory training

duration
4 half days

date
April 15 – 18 :
September 16 - 19 :

location
Eindhoven, The Netherlands and/or online
Toledo, USA and/or online

Electricity will play a major role in the ongoing energy transition to reduce CO₂ emissions. Although electrical melting of glass is an old technology, many aspects have to be considered to create an efficient system that is suitable for each specific glass production. This course focuses on electric melting in general, from the electrical grid down to the electrodes and finally into the melter. The objective of the course is to provide you with a pragmatic level of understanding of the whole melting system.

Contents

- Glass composition (soda-lime, borosilicate, crystal) and atomic structure
- From structure to Young's modulus and thermal expansion coefficient
- The key role of glass surface condition
- Thermal shock resistance
- Relaxing stress: annealing
- Tailoring stress: heat strengthening and tempering
- Special glasses and chemical tempering

Training methods

We offer a blended learning approach by mixing e-learning, lectures, open discussions, exercises, and case studies in teams or individually. The number of participants per course is between 8 and 20 to maximize your learning experience. Participants always receive the presentations and a training certificate.

Level of seniority

This training is meant for advanced beginners to skilled professionals willing to deepen their knowledge.

Investment

Training costs € 2.190,- per participant. This is the equivalent of 4 tons of glass. Price excludes tax and duties. The 6th participant from the same company can join for free.

After the training

- You will be able to follow all the electrons from the power plant through multiple transformers into your glass melter. (... and even correct the ones that go the wrong way)
- You will understand the many advantages of electrical boosting
- You have a clear overview of what needs to be considered to increase the electric share in your energy mix
- You know how to choose the proper electrical system for your specific production, from the choice of the right transformer to the choice of the electrode density and control system
- You know what to focus on when maintaining your system.

Cancellation fees apply. 1 week before training 50%; no show, full price. In case of an unexpected event, we are happy to look for rescheduling or voucher options. Celsian reserves the right to cancel up to two weeks prior to the training, proposing new dates or refunds. Are you registering as a group? You are entitled to a 15% discount on all courses: for 5 registrations, the 6th participant can join for free.