

# Feeder forehearth principle and operation Introductory training

duration 2 half days date November 12 - 13 location Online or Eindhoven, The Netherlands

As the fined glass melt exits the furnace through the throat, it enters the conditioning area. For many glass products such as containers, glassware, or glass wool, thermal conditioning is achieved in the forehearth. The goal of the forehearth is to deliver a homogeneous glass at the right temperature to the outlet. Forehearths can also be used to produce colored glass by mixing frits directly into the melt. The glass delivery must be well-controlled in stable operation, before and after a job change. This course gives an overview of the different parameters that can be used to control a feeder in an optimal way.

## **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 10 and 25 to maximize your learning experience. Participants always receive the presentations and a training certificate.

#### Level of seniority

This course is meant for novice to advanced beginners who would like to improve their understanding and apply the knowledge in practical cases.

#### Investment

Training costs  $\in$  1.095,- per participant. This is the equivalent of 2 tons of glass. Price excludes tax and duties. The 6th participant from the same company can join for free.

## Contents

- Thermal transfer and temperature homogeneity
- Gas and electrical boosting
- Pressure and safety
- Devitrification at the cold spots
- Mixing and coloring
- Equipment and measurement devices
- Control and automation

## After the training

- You know which levers you can activate to deliver a homogeneous glass at the right temperature
- You optimize job changes
- You monitor the feeder behavior with all measurements at your disposal
- You identify and take the right measures in case of quality issues related to the forehearth.

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.