Transition to CO2 neutral glass furnaces: technological options and challenges

Annejans Faber*[1]

[1]CelSian Glass Solar (CelSian) – Zwaanstraat 1, 5651 CA Eindhoven, Netherlands

Abstract

The worldwide transition to durable energy resources will have major consequences for the glass manufacturing industry. The objective of this paper is to highlight the technological opportunities for CO2 neutral melting of glass, including: flexible hybrid (green gas-electric) melters, full electric melters and application of low carbon combustion processes by power-to-gas conversion. The current status, advantages and challenges of these various technological solutions will be discussed. Moreover, the required knowledge development in view of designing new CO2 neutral glass melter concepts will be outlined.

Keywords: glass melting furnaces CO2 neutral

*Speaker