
Operation of a Hybrid Glass Furnace Melter with a High Degree of Electric Usage

Johann Brunie*¹

¹La Maison Française du Verre – La Maison Française du Verre – France

Abstract

With the realities of global warming and plans for CO₂ reduction, this paper by glass manufacturer La Maison Française du Verre and support by Glass Service a.s, will discuss the operation of a hybrid melter with a high degree of electric boosting, resulting in significantly reduced CO₂ emissions. The combustion space above the glass melt is oxygen/natural gas fired along with electric boosting. This furnace illustrates what could be a design for the future of melting. The combination of the top firing and electric melting has been successful in optimising the energy efficiency and reducing the carbonised emissions. After a short presentation of the different steps validated for the decarbonation of the furnace, an overview of the studies to achieve the last rebuilt of the furnace will be described. Finally, energy efficiency will be compared to a standard furnace of a similar footprint.

Keywords: hybrid furnace, electric boosting, CO₂ reduction, furnace design

*Speaker