## Monitoring glass furnace regenerator : a challenge to improve thermal efficiency and decrease CO2 emission

Michel Gaubil<sup>\*1</sup>, Stéphane Schaller<sup>\*†</sup>, Emile Lopez<sup>\*‡</sup>, and Zikang Low<sup>\*§</sup>

<sup>1</sup>SEFPRO – Saint Gobain Recherche Compiègne, Saint Gobain Recherche Provence – France

## Abstract

In sodalime glass furnace industry for container or flat glass manufacturing, end fired or crossed fired flame furnace are using from decades extensively thermal regenerators in order to recover all the energy store inside fumes; SEFPRO has a long experience, with cruciform solutions, to always improve energy efficiency with different product and shape. Thanks to this expertise, we develop monitoring system to get even more lower consumptions and CO2 emission. We will discover how this AI based solution is controlling clogging evolution and optimize furnace regenerator maintenance to get always the best performance that cruciform solutions bring.

Some estimation established with Regen software about furnace consumption related to clogging evolution will be shared. This SEFPROGURD monitoring system can be a partner in the way of Glass furnace malting process digitalization

Keywords: furnace thermal efficiency regenerator monitoring CO2 emission SEFPRO cloging

<sup>\*</sup>Speaker

<sup>&</sup>lt;sup>†</sup>Corresponding author: stephane.schaller@saint-gobain.com

<sup>&</sup>lt;sup>‡</sup>Corresponding author: emile.lopez@saint-gobain.com

<sup>&</sup>lt;sup>§</sup>Corresponding author: ZiKang.Low@saint-gobain.com