

## Enhance glass furnace heat-up with thermal imaging solutions

*A new application communication from LAND® demonstrates how thermal imaging manages the heat-up process in glass furnaces to achieve the optimum temperature while ensuring long term performance and maintenance are achieved.*

Efficient and controlled heat-up in glass furnaces is critical to ensuring the longevity of the furnace and maintaining structural integrity while enhancing operational safety. This application note highlights the complete process of achieving full spectrum furnace monitoring through the use of thermal imaging cameras such as LAND's NIR-b-2K-Glass and the MWIR-b-640, which work together to provide full spectrum thermal coverage, from early ramp up to steady state operation.

There are numerous benefits to using thermal imaging cameras, including detecting wear or damage to refractories during charging, such as hot spots or cracks, which allows for planned maintenance and reduces the risk of unplanned shutdowns, which can be costly. Improved energy efficiency through optimal heat management, along with the prevention of crown overheating and structural damage, can also be achieved.

Designed for lower temperatures, the MWIR-b-640 is ideal for monitoring the efficiency of the furnace heat-up phase. At the same time, the NIR-b-2K-Glass measures the temperature of both the melting glass and the furnace structure at 1000+°C temperatures and optimises charging to avoid piles that are difficult to melt.

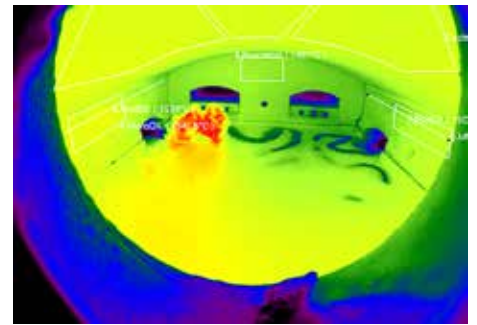
The NIR-b-2K-Glass helps to achieve efficient heat transfer to the batch while avoiding overheating or skewed temperature profiles. The camera observes the flame and temperature profile, which allows the operator to fine tune the flame length and direction and balance burner power levels. This results in even melting across the batch while protecting the refractory lining from localised overheating.

This system offers flexibility for operators, deploying a NIR-b-2K-Glass camera allows for seamless switching from the MWIR-b-640 camera, as both systems share identical mechanical assemblies. This offers comprehensive monitoring beyond heat-up, improving product quality, and reducing potential downtime. Operators can alternate between the two types of cameras as needed, without requiring significant modifications or additional training.

Philippe Kerbois, global industry manager LAND, said: "Our thermal imagers ensure you stay in control during the heat-up process, as well as the post heat-up process, safeguarding the furnace and optimising the production for a more stable and fast production with higher quality glass".

By using thermal imaging cameras from LAND®, glass manufacturers can maintain full visibility and control during heat-up in the furnace, which can lead to faster revenue generation, reduced disruptions, and a more efficient production ramp up.

*For more information and to download the full application note go to:*



<https://www.ametek-land.com>

*LAND®, a business of AMETEK Inc, is a world leader in industrial infrared temperature measurement. For over 75 years, its advanced technologies have helped industries, from steelmaking to EV battery production, enhance product quality, improve efficiency and reduce environmental impact in the most demanding environments.*