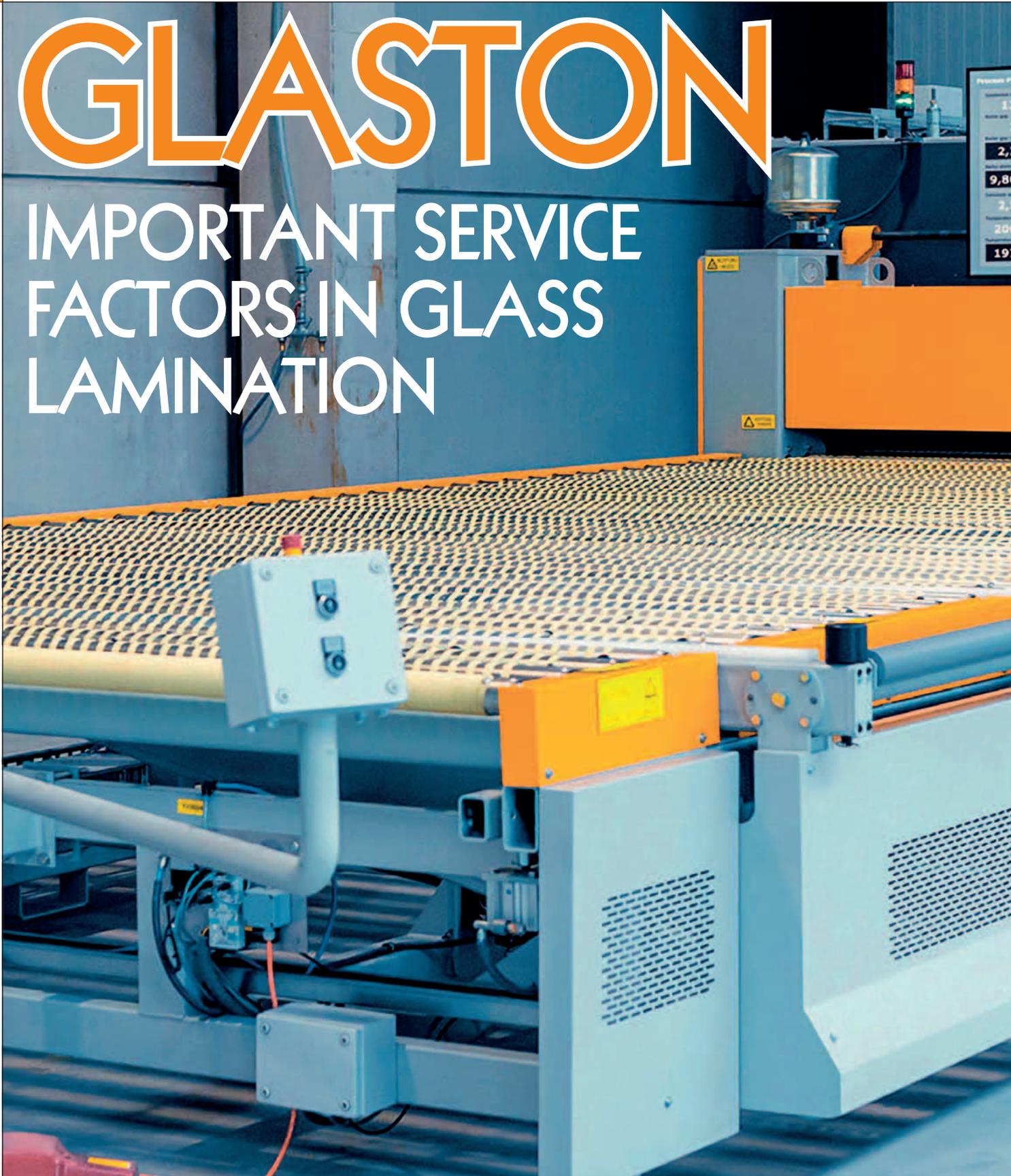




LAMINATING MACHINERY

# GLASTON

IMPORTANT SERVICE  
FACTORS IN GLASS  
LAMINATION





Did you know that the laminating line maintenance cost can vary greatly depending on your specific technology? For example, furnaces with infrared heating technology require much more maintenance and involve higher maintenance costs.

Regular maintenance can keep laminating lines running smoothly year after year. There are, however, other factors that can help save thousands in maintenance costs.

**HEATING ELEMENTS CAN CAUSE THE BIGGEST COST**

It goes without saying that old and outdated equipment tends to break down more frequently, forcing glassmakers to face the expense of urgent maintenance at inopportune times. But even newer equipment has pitfalls.



As long as maintenance is performed according to instructions, basic maintenance of conveyors, washing machine, lifters and other parts of the laminating line is actually a relatively small cost. Neglecting recommended maintenance can cause increased maintenance costs as well unexpected production breaks due to issues with the line. The largest cost is often that of having to replace burned-out heating elements frequently. In fact, this often turns into a rather massive annual cost, which should have been considered upfront. And of course, in addition to ac-

tual heater costs, downtime of the line, labour, as well as possible quality costs caused by broken heaters, must also be taken into consideration.

It's good that this mainly concerns laminating furnaces with infrared heating technology as the lifetime of infrared lamps is still rather short for this kind of application.

Alternatively, a convection furnace offers a much more robust and low-maintenance solution. Its heating elements can last even decades and are also much cheaper compared to infrared lamps. So, convection furnaces require

less maintenance and provide higher uptime in day-to-day operations.

### LAMINATING LINE SERVICEABILITY FACTOR

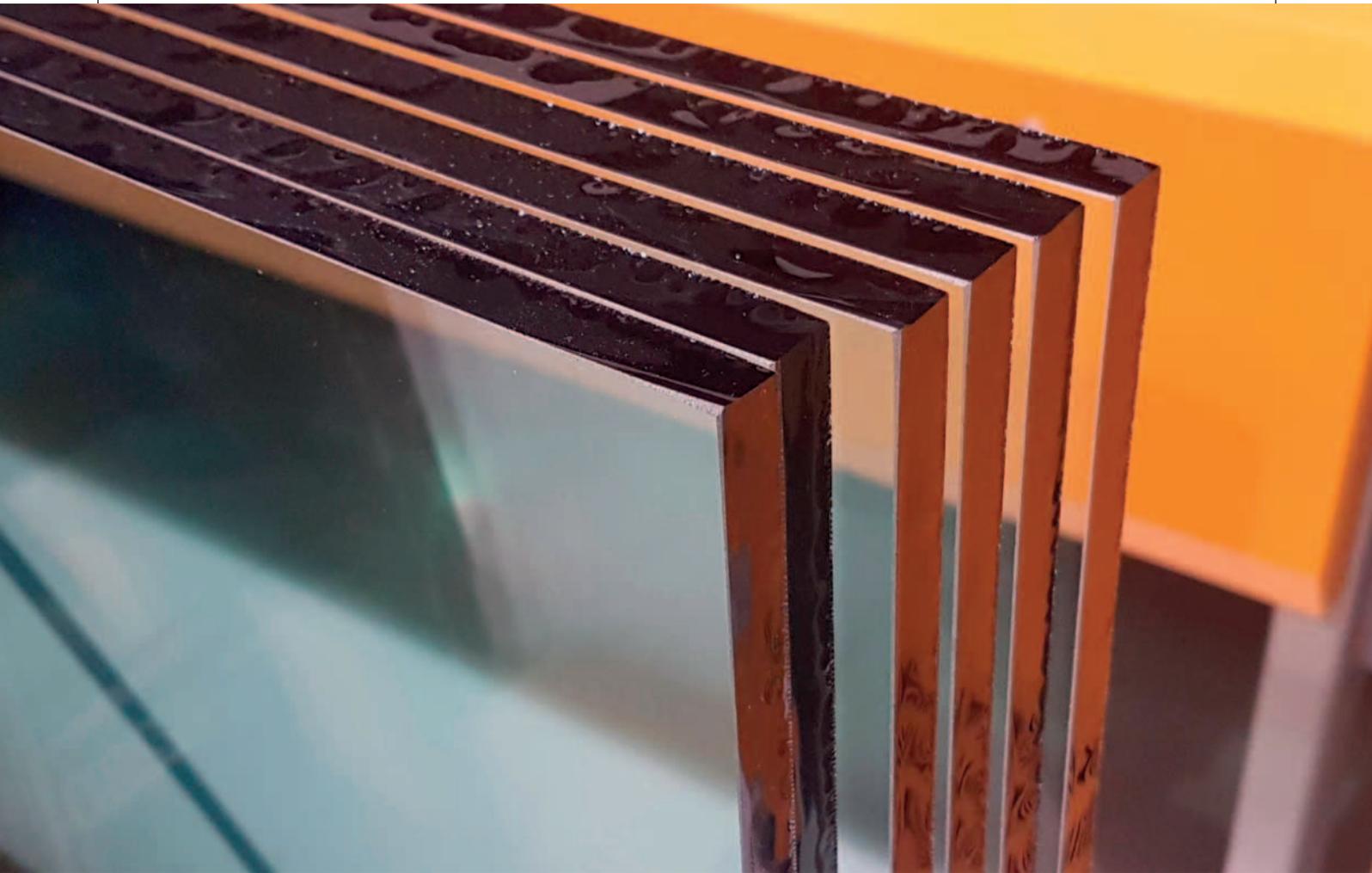
It's also important to consider the line's serviceability factor. Complex component configuration and furnace design call for more time-consuming – and cost-intensive – activities associated with future maintenance needs.

Ideally, the line should be designed to simplify the maintenance workflow for those responsible for downstream repair, and keep spare parts requirements to a minimum.

Those who want to check whether their current laminating line is operating efficiently in terms of maintenance, or those who are thinking of acquiring a line, should ask themselves or their potential suppliers the following questions:

- What are the most critical components that require maintenance?
- How easy is it to get the required spare parts?
- What is the lead time on spare parts?
- How simple is its serviceability?
- What is the expected uptime of the line?
- Do you have any service agreement available?





- What does your maintenance programmer look like?
- What is your experience with the service response time?

### TREATING YOUR EQUIPMENT WITH CARE

The laminating line in a glass processing facility is usually an extremely important part of business. It is also one of the major investments and must be around for a long time. While the supplier of the line plays a very important part in providing robust and reliable solutions, it also

comes down directly to how the line is treated throughout its lifetime.

The following practical tips can maintain laminating lines in an optimum way, as well as extending their longevity:

1. Perform a visual inspection on the line at regular intervals according to the manufacturer's instructions. Small, routine checks are usually enough to catch impending issues.
2. Pay attention to the quality of output products – malfunctions within the line can cause quality changes.

3. Implement maintenance as soon as the fault is reported. Waiting can cause more severe issues.
4. Train the team. Entire teams should have an understanding of the proper care of the line.
5. Consider investing in a service agreement. An effective service agreement will allow to pass all the cares over to the experienced professionals.

Those interested in knowing more about other specifics of the glass lamination business, can check out the Laminating Line Buyer's Guide.

Laminating line buyer's guide



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