

Putting performance and sustainability first at **MAPPI**

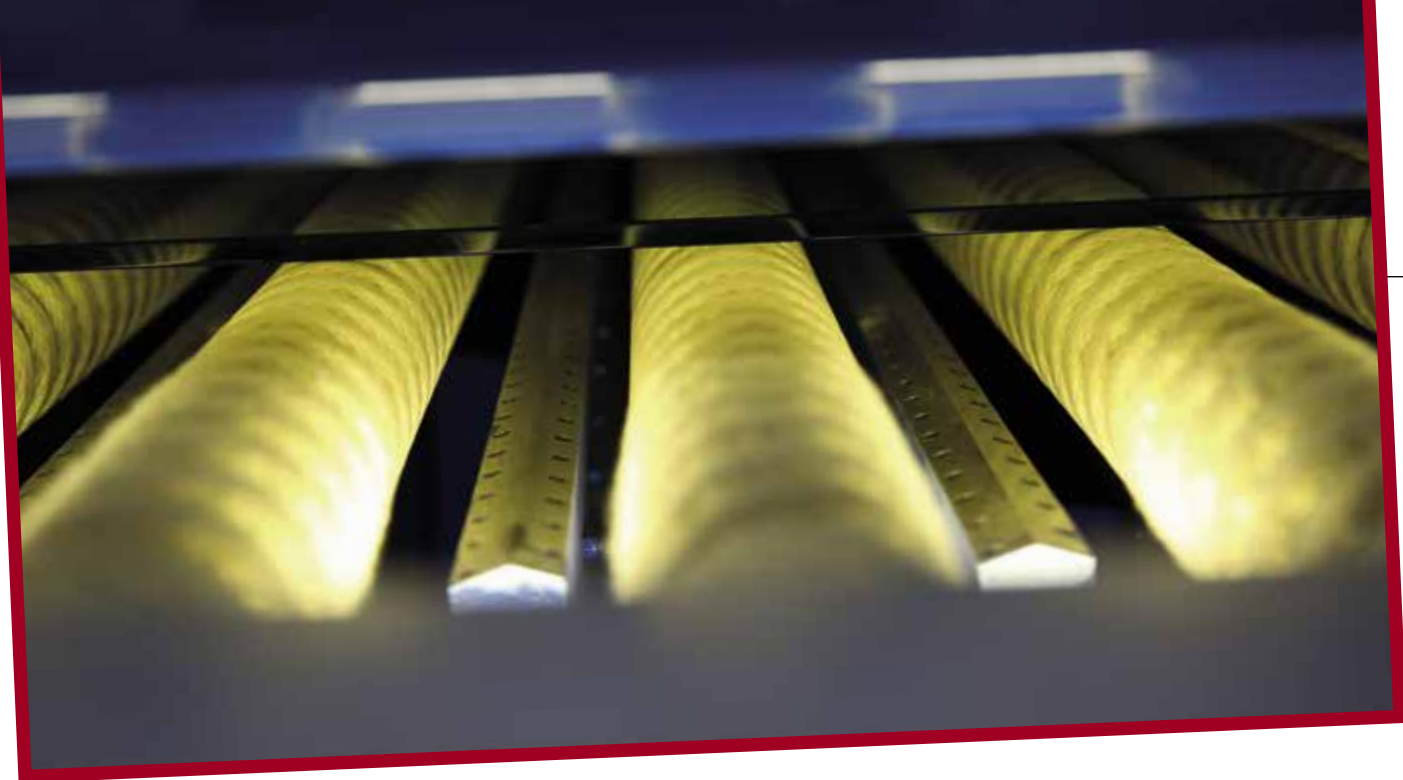
Is it possible to reconcile environmental protection and a more sustainable future as we experience constant growth in production -both in terms of quality and quantity- whilst bettering in every way the lives of those working in the industry? For MAPPI the answer yes, as long as certain important conditions are met.

In order to achieve these goals, the industry would first need the right commitment, planning, creativity, innovation and, above all, clear objectives. Thanks to far-sighted companies which never stop innovating, significant steps are already being made to realize that future. Among these, one which stands out consistently in the sector, as it has done for years now, is the Italian company Mappi - by now a historic leader in the field of glass tempering furnaces.

FURNACE FEATURES

Thanks to a series of patents and exclusive innovations, Mappi's tempering furnaces have simultaneously managed for many years to be solid allies to





both the environment and to the glassmaker.

Yet whether or not everyone would agree on that score, many would acknowledge it as a reality experienced by anyone who's chosen a new generation Mappi furnace. Here's why:

- It consumes less energy. Thanks to the coordinated use of multiple software solutions (such as Mhs, ESS, GHBS, etc.) the furnace heats to the correct temperature only at the location where glass is to be tempered. Not only. The furnace is perfectly isolated thanks to excellent

insulating materials and a state-of-the-art construction - so much so that you can even touch it with your hands while it's in operation. Here energy saving can be as high as 40%.

- It minimizes installed power, given that lower power consumption also means lower installed power, which results in significant savings on fixed energy costs.
- It guarantees high production, since set-up times for each workload are almost at zero. Equally important is that the time required to cold start the tempering furnace is minimized to just an hour. That translates to many more production hours saved each year which, when multiplied over the lifespan of the Mappi furnace itself (estimated at 20 years at least) - best expresses its superb production efficiency.

The furnace interfaces with the management systems so that, thanks to full compatibility with the most advanced 4.0 management systems, planning work or procuring statistics reports or quality

certifications all become simple and efficient in "Just-in-time" mode.

PUTTING SAFETY FIRST

We wish at this stage to add a further consideration to the many innovations we've summarized here so briefly:

During the hardening process Mappi furnaces use no SO₂, indicating again how respect for the environment and productivity are able to go hand-in-hand.

Being dangerous and corrosive, the use of SO₂ deteriorates the glass handling rollers and requires that the machine be stopped for maintenance every 15 days. Last but not least, it represents a health hazard to workers given that Sulphur Dioxide is very irritating to the throat and eyes and can result in serious health problems if inhaled.

COST SAVINGS

Mappi's innovations involve both the 'tempering furnace' product and the 'glass tempering' process, which jointly translate into truly considerable economic advantages and which, above all, accom-

pany the furnace throughout its long life (ere we're talking hundreds of thousands of Euros - data in hand).

All this, and much more besides, affords us the opportunity to make excellent, high quality glass which is also very resistant and exceedingly efficient - thus demonstrating once again that technology and the environment can indeed move in the same direction while leaving the world in better shape. Such has always been a target towards which Mappi has worked.



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