HOTLINEGLASS and SentryGlas® in win-win partnership

The company was founded in 2005 by Hamacher Maschinenbau in Aachen, Germany, where it is still based. Over decades HOTLINEGLASS has been designing systems alongside its specialized high-quality machines, which have become standard equipment in the glass-processing industry for special glass laminates within the automotive sector.

Hotlineglass produces PVB, EVA and, more recently, SentryGlas® ionoplast films covered with heating fields on Hamacher machines for manufacturers of automotive or architectural glass. With diameters ranging from 14 to 22 μm, the heating wires are laid within arcs or wave structures - remaining almost invisible, given that the finished heated glass panes retain a light transmission of over 95 percent.

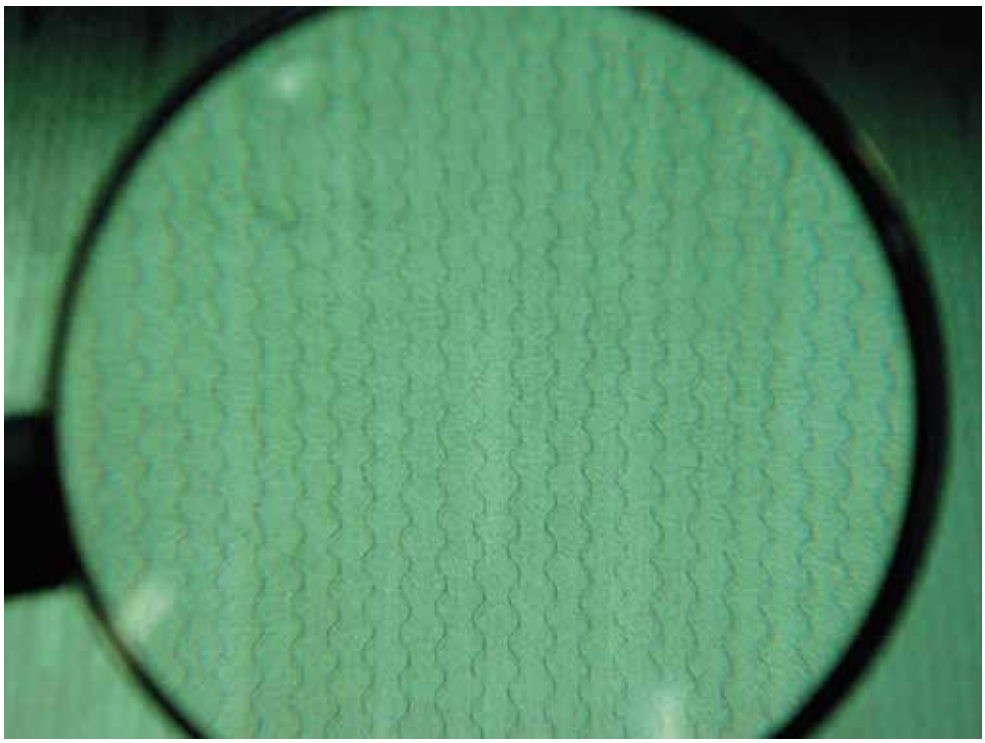
With its special know-how and Hamacher machines, Hotlineglass currently produces heatable glass “foils

As innovation leader for heatable automotive windshields and passenger car glass with internal wire antennas, HOTLINEGLASS GmbH will now be relying for its interlaying upon SentryGlas® Xtra™ ionoplast – all to ensure thinner and lighter glass going forward, as well as better edge stability and higher residual load capacity for special applications.

with heating wires" for glass factories worldwide, also applying special "wire antennas in windshields" in high quantities following the latest trend among car manufacturers.

Hotlineglass has hitherto used PVB films exclusively for these applications. "We contacted Hotlineglass last spring, asking their technicians to test SentryGlas® Xtra™ ionoplast films as an alternative," said Senior Technical Program Manager Ingo Stelzer of manufacturer Kuraray Europe GmbH. "Not only are they five times stronger and up to one hundred times stiffer than conventional glass interlayers but they also offer other advantages."

Kuraray is the world's only producer of SentryGlas® ionoplast films. For vehicle glazing, numerous test series and trial installations have produced flawless results among Hotlineglass customers within this difficult market, which is characterized by high quality demands – especially in special construction. These include, for example, windshields



for construction and agricultural machinery, industrial trucks, military applications with considerable requirements for explosion-proof (and bullet-proof) glass, vehicles for rail transport and watercraft (both yacht and ship building). It's here that SentryGlas® Xtra™ can bring its full range of product advantages to bear. Indeed some Hotlineglass and Hamacher customers have already experimented with SentryGlas® films, albeit without applying them on a large scale.

AUTOMOTIVE AND ARCHITECTURE APPLICATIONS

Applications needn't focus upon automotive and vehicle construction. For years, overhead glazing in such cold regions as Russia or Scandinavia has often been made with heatable glass in order to melt away larger snow loads and ice bumps. Now with the use of SentryGlas® Xtra™ the well-known advantages of structural films can be used for this type of glazing as well. The glazing can be dimensioned to thinner, lighter specifications while having a significantly higher residual load-bearing capacity in the event of glass breakage. At the same time it's afforded greater edge stability and better compatibility with joint sealants as compared to superstructures that use conventional films.

READY-TO-INSTALL HEATING FILMS

Hotlineglass produces antenna and heating foils in its three modern clean rooms, with a total area of over 1.000 square metres – from series production for the automotive market to small prototype applications. All laminated films are delivered ready for customer assembly and can be used for either automotive, railroad, aerospace, architectural or other specialized glass solutions.
Hotlineglass can cut film in any free CNC contour while close Hamacher-Maschinenbau cooperation and shared know-how often makes it possible to meet even the most demanding requests.
As for wire, Hotlineglass mainly uses tungsten in diameters that range from 14 to 22 μm, while thicker wires can also be produced. Hotlineglass offers copper wires as well – even up to 40 μm in thickness. Busbars are used in various designs, from six to twelve millimeters in width.

FUTURE PROSPECTS

In commenting upon further cooperation with Hotlineglass, which Kuraray describes as "young, innovative, flexible and reliable," Ingo Stelzer further affirms: "We also performed application trials in parallel at our technical centre in Troisdorf near Cologne, which yielded similar promising results as those of Hotlineglass. With that it was agreed that further customer orders with SentryGlas® Xtra™ ionoplast films would proceed with a view to demonstrating the advantages of this glass interlayer to Hamacher's machine customers. Now we're in an intensive exchange with the Deputy Managing Director of Hotlineglass, Sebastian Wicka - all to define and advance innovation while further developing perspectives and opportunities. Certainly this field still holds some serious potential!"