

Surface and Edge Strengthening of Glass using Arc Lamp Heating

Disclosure Number

200902256

Technology Summary

The disclosed method significantly improves the strength of glass without compromise to the quality of visible wavelength transparency. High-density infrared heating locally modifies the surface and edges of glass through intense heating. This lessens the activity and stress-intensity of surface- and edge-located "flaws" resulting in higher strength and greater strain tolerance of the glass. There are several methods that improve the strength of glass; however, most of those methods use harsh chemicals or ion implantation methods to achieve that. With engineering control, this method is very safe to use, is amenable for treating large quantities of glass in a short period of time, and is therefore applicable for use throughout the glass-making industry.

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