

#GPD2018

ALL EYES ON GLASS.

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PROVEN ROLL STABILITY IN ADVANCES TEMPERING PROCESS

ABSTRACT

Tempering furnaces are creating severe thermal, mechanical and chemical environmental conditions in order to develop the necessary conditions prior to quenching. The constant evolution of glasses and quality standards, the search for always more performance in architectural, automotive and solar industry become a permanent challenge for the complete furnace engineering. Delivering high stability when handling the glass in the plastic stage of the treatment, drives the selection of all moving pieces capable to address end product quality. Long performance should be analysed based on stability of the furnace compounds over the expected periods of service. Evolution of rollers physical and chemical characteristics have been demonstrated through viscoelastic analysis and high temperature mechanical conditions to create the more stable conditions for driving the glass for maximum control of the tempering in different glass configuration. Association of mechanical driving systems and ceramic stability through the furnace service are conducting to the roll dynamic rigidity while absorbing required operational changes generated by today market demand. Weibull analysis, thermomechanical analysis, and viscoelasticity of the roll function have been investigated in real field conditions.

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