

Temperature Control



Make glass forming a science instead of an art

The StewartFloat[®] Temperature Control System is a fully integrated solution that continously and automatically maintains a cross ribbon temperature profile with less than a 2°C differential resulting in increased yields, improved quality, and process stability while reducing electricity costs.

The Solution

The StewartFloat[®] Temperature Control System ensures a robust cross ribbon temperature profile with less than a 2°C differential. Installed cold due to necessary tin bath modifications, it integrates seamlessly with the tin bath furnace. Once commissioned, the system provides automatic, repeatable temperature control, reducing manufacturing costs.

Process Technology Advancements

Western float glass manufacturers require top quality glass, which is largely determined by the forming process in the tin bath furnace. Achieving excellent glass quality depends on precise control of ribbon temperature and viscosity. Since each tin bath is uniquely designed and operated, there is a wide variation in product quality across the market. Stewart Engineers provides tailored solutions to address specific needs and offers ongoing support to maintain consistent, high-quality production.

Increased Profit \$M Yield Improvement % Yield Improvement % Or Increased Profit, \$M 12 10 Baseline -Western 1980's Zone Heat Layout Tin Flows Bottom Profile Bottom Thermal Temperature Profile Engineering Control - 2010's Glass Evolution Standard 1st and 2nd Generation On-Line Coatings Specialty Soda Lime Ultra Thin Soda-Lime - Ultra Thin High Yeild Ultra Thick Soda-Lime - Non-Soda Lime Extra Clea 3rd Gen On-Line Coatings

Features

- Identify defects earlier
- Decrease Lehr losses
- Lower energy consumption
- Reduce calibration error
- Creates temperature stability needed for pyrolitic coatings
- Increased yields





Figure 1: Integrated in the Tin Bath





