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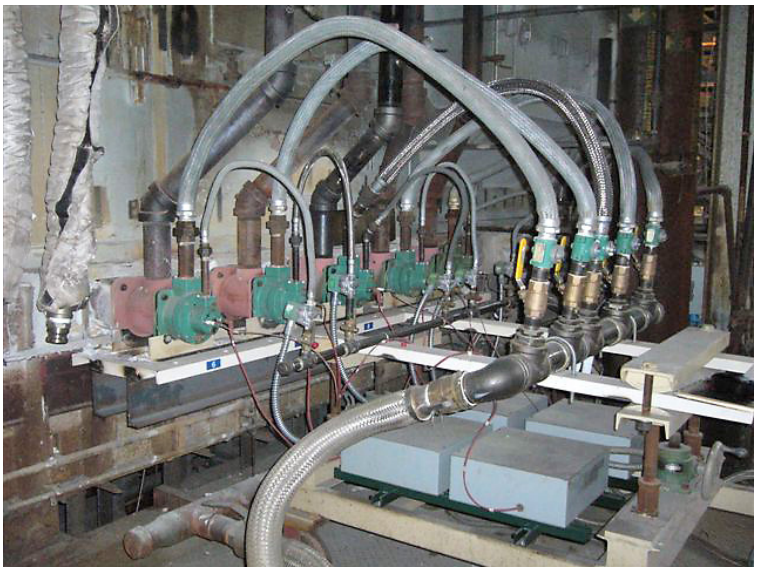
Applicationbrief

Eclipse Product: SER version 3 AutoRecupe Burners (“Float Fire”)

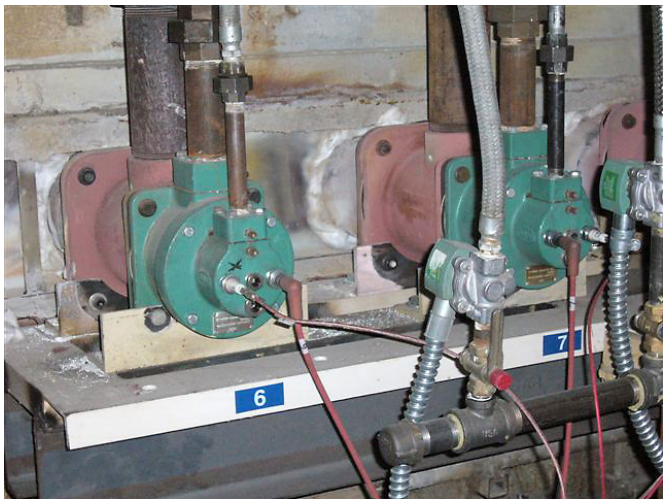
Submitted by: Bill Hobson, Eclipse Inc.

Application: Edge Heating of Tin Bath in Float Glass Application

Description: One of the world’s leading producers of premium flat glass was experiencing production problems. They were having difficulties keeping the float edge temperatures up in their tin bath. They were in serious danger of having to stop production. To fix their problem in the conventional manner, would have meant shutting the tin bath down and going into the furnace to replace the defective electrodes (candles). This would have shut down the entire production line. So, they sought a different approach.



Overall view of edge heating system installed on tin bath.



Close up view showing burners and piping arrangement.

They had worked with Eclipse several years ago on a test project using gas fired equipment. In addition, they had heard of the success at another company’s float furnace using gas fired radiant tube burners for side heat. (See Eclipse AB-154 for details.)

After reviewing the situation, Eclipse designed and built a custom gas fired edge heating system using five 6” SER AutoRecupe indirect fired self-recuperative burners with ceramic inner and metallic outer tubes. The system also includes a combustion air blower, valve train, control panel and miscellaneous piping components.

The installation proved to be very successful, and all the calculated efficiencies and heat outputs were realized. This allowed the outboard edge of the glass float to stay in a fluid state, and production to be maintained. Then, as more electrical elements required replacement, it was decided to add more Eclipse “Float Fire” burners.

To date, there is a bank of 10 burners on each side of the float. This has provided not only enough heat to maintain edge heating, but it also provided enough heat for the float to stay in solution during a recent power outage. The plant back-up power could not energize all of the electrical heating elements, but the “Float Fire” Burner system was able to operate on auxiliary power and keep heat in the furnace.

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