



GLASSINSIGHT

Improving Performance In Production

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PYROTEK ROLL SEALS IMPROVE TEMPERING FURNACE OPERATION AND PRODUCT QUALITY

A glass tempering company with multiple locations in the Western U.S., specializes in manufacturing 3/4 inch (19 mm) commercial and shower door glass and 1/4 inch (6.4 mm) residential glass. This customer was experiencing issues with maintaining controlled temperature in their tempering furnace. One of the problems involved worn roll seals around the perimeter of the furnace. Fiber blanket was being used to fill the gaps created by the worn roll seals. This was not a practical solution due to the constant attention and maintenance required. There was also an issue of loose fibers from the blanket in the air adhering to and contaminating the heated glass moving through the furnace.

A recent project at one of the plants, outlined here by Gary Franci, Sales Engineer, Pyrotek Glass Division, involved installation of new roll seals for the customer's tempering furnace. This project highlights Pyrotek's capability to collaboratively develop innovative solutions to customer needs utilizing its global resources.

Last December, the customer contacted Pyrotek to see if new roll seals could be supplied for their tempering furnace. A meeting was set up with the plant's maintenance manager. The damaged surface condition of the roll seals was evident, caused by having a person crawl in and out of the furnace.

A quote was supplied for the roll seals in January, 2010 and an order was received soon after. The order was for four roll seals each 5.5 inch (140 mm) wide, 45 inch (1143 mm) long and 18 inch (457 mm) high. This was sufficient material to cover 20 rolls top and bottom. Pyrotek has dedicated expertise in design and manufacture of these refractory products, including materials technology and characterization, specialist machining, secondary rigidizing and sealing.

The installation of two of the roll seals was completed in March 2010 with the final two roll seals installed as needed.

CUSTOMER BENEFITS

The customer was able to repair a section of their furnace that had heavy damage to the roll seals. This allowed them to maintain better temperature control in the furnace and also cut down on the amount of insulating fiber blanket they had to use. It also helped to reduce the occurrence of glass contamination from the blanket's loose fibers. There is also the availability of additional roll seal manufacturing from Pyrotek with a relatively short lead-time.

The cost of the custom roll seals was competitive with the seals supplied by the furnace manufacturer.

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