

# FURNACE CONVEYOR REBUILD



*Furnace entrance before the rebuild.*

**Problem:** Loose slats on a conveyor furnace would jamb the conveyor drive and cause damage to the furnace interior. Unscheduled downtime disrupted production schedules for the customer. In addition the slat chain channels were deformed due to inadequate structural support (*see the bow in the picture above*).

**Solution:** PTS redesigned the furnace slats with an improved attachment which was easier to install and maintain while providing a loose fit to allow the slats to expand and contract with the repetitive temperature cycles of the furnace. In addition, the number of attachment points was doubled to prevent a slat from coming off if one bolt failed.

The slats attach to a roller chain which is supported by structural steel channels. Over time and hard use, the channels became deformed by the loading and unloading at the entrance/exit ends of the furnace. The channels were replaced and additional structural support was designed to provide a more robust structural system. The drive sprockets were also aligned during the rebuild.

This project was based on reducing equipment downtime which often stranded production parts in the furnace. A formal cost justification was not required for this project since it was done on a maintenance budget versus a capital improvement project.

“We redesigned the slats and structural components to extend furnace reliability, and managed the installation during a maintenance outage.”