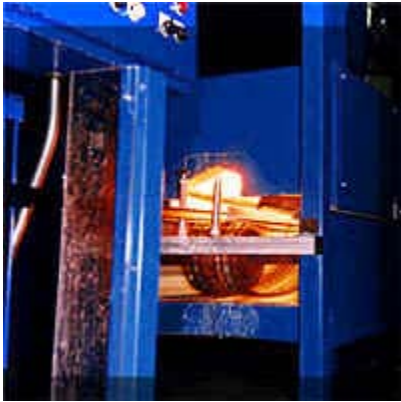


High Speed Infrared Curing Water Based Coating on Extruded Rubber Seals

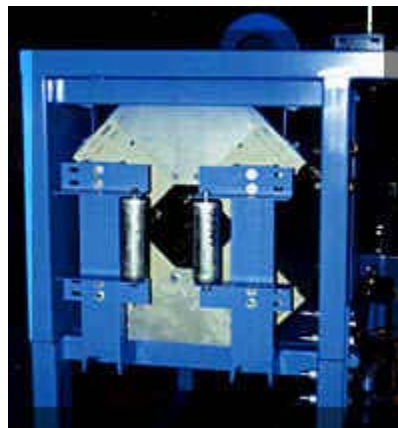


Fostoria Industries has designed and provided several infrared systems for manufacturers of extruded rubber seals for the automotive industry. The seals are used on doors, trunks, and hatch backs/ lift gates. The manufacturers apply a water base “low friction” coating onto the surface of seals to help reduce annoying rubbing noises and squeaks. The coating also helps prevent ice from accumulating, which may cause doors to freeze.

Fostoria’s lab testing capability allowed different oven configurations, power densities, and designs to be experimented with. Combining this with our extensive infrared background, Fostoria’s engineers were able to develop systems with several unique features:



- Oven power densities that can handle line speeds from 30 to 80 feet per minute.
- Systems that incorporate instant on and off T-3 quartz lamps. T-3 lamps require little heat-up time, respond to process changes extremely fast and can be de-energized instantly if needed.
- Cure cycles as short as 30 second that can easily be realized.
- Oven designs that allow the product to be completely surrounded with infrared heat.
- If the application requires it, the infrared can be directed only onto the coated areas. By only heating the coated areas, operating costs are reduced.
- Access to the work environment can be easily gained by “opening” the top of the infrared system. This can be done



manually or automatically with pneumatic cylinders.

- The systems were designed with multiple heat zones that utilize SCR power controllers. The infrared output of each zone is infinitely variable from 0 to 100%, which allows the operator to match the heat output of the oven to needs of the product.



Cure temperatures of 250 to 300 degrees Fahrenheit can be reached much faster than with a standard convection oven.