

## High Temperature Fiberoptics

### *The Problem*

Runout measurements of a high speed rotating shaft inside an electric furnace at 482°C.

### *The Solution*

In this case, model RC60 sensors were chosen to measure runout on the high speed shaft. A custom fiber optic tip was made  $\text{Ø } 0.25'' \times 6'' \text{ L}$  to provide solid support for the length of fiber optics exposed to the high temperature. Ceramic-based epoxy was used in the construction of the sensor tips. This gives solid sensor tips a capability of 482°C, which is the limiting temperature of the borosilicate glass fibers. **Specify Option T9** for 482°C tips.

NOTE. Fiber optic cables will become very brittle after exposures to temperatures above 340°C, and therefore, they should not be flexed during or after such exposure.

