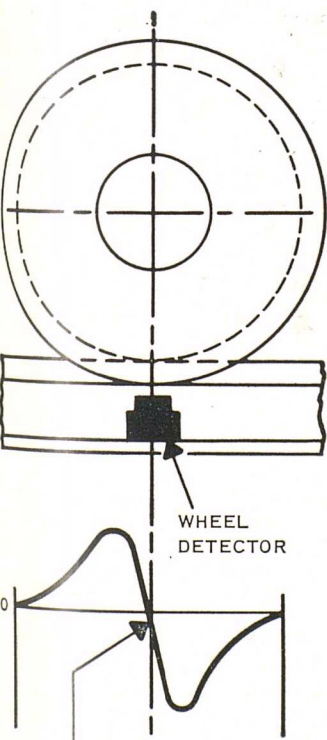




HOW— THE GRS WHEEL THERMO-SCANNER Detects Every Wheel - Every Overheated Journal



ELECTRONIC GATE
OPENS .003 SEC. AT
CENTER OF WHEEL
(SAME AT ALL SPEEDS)

There are no missed wheels with the GRS Wheel Thermo-Scanner, because of the unique, ultra-fast method of "time-gating"—or viewing the wheel precisely at the most effective time.

As a train passes, infrared radiations in the desired wave length range are focused on a quantum detector, a photon-responsive heat sensor which reacts in 15 millionths of a second—300 times faster than slow, bolometer type sensors.

A single, fast-response wheel detector, clamped to the rail, creates a magnetic flux around the rail head. The gate is triggered the instant the center of each wheel passes the center of the wheel-detector flux path. The gate stays open .003 second, regardless of train speed. During this gating time, the quantum detector is viewing the wheel hub—the closest available point in direct contact with the journal—and converts the temperature rise to an analog voltage for recording purposes.

In effect, each wheel snaps its own heat picture with ultra-high speed. Like a fast camera, this ultra-fast gating eliminates the undesirable effects of train movement.

The GRS Wheel Thermo-Scanner has been proved in service. Write for Folder 179 for more information.

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