

PRIAS

Power Rail Impact Analysis System

PRIAS is a patent pending technology that evaluates the health of your power rail system. PRIAS together with Conductix-Wampfler engineers can assist in finding and diagnosing power rail problems before they impact your operation.



PRIAS will find:

- **Areas of Excessive Vehicle Demand**

PRIAS uses current transducers and a GPS to locate areas where collector shoes are drawing excessive current.

- **Collector Shoe Impact Points**

PRIAS uses accelerometers and a GPS to locate points where collector shoes are impacting flaws in the rail system.

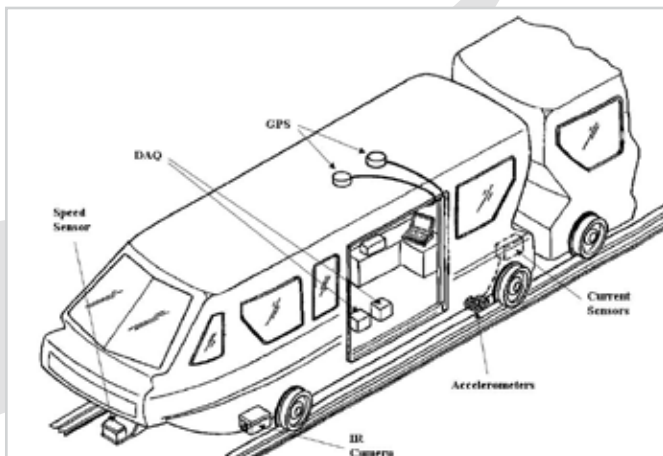
- **Hot Spots**

PRIAS uses thermal image technology to identify loose or failing splices, cable connections, or rail sections.



Collector arms with accelerometers attached

The basic system is diagrammed below:



How a PRIAS Analysis is Conducted:

- Conductix-Wampfler engineers temporarily mount sensors, IR camera, GPS, and related equipment to a system vehicle.
- The test vehicle is operated in the normal system program. The test vehicle should be run at normal system speed on a fully loaded guide way. Data collection is completed in 2-4 loops of the system.
- After the data is collected, Conductix-Wampfler engineers analyze the data using PRIAS software. The analysis processes the data to identify locations of high impact of the collectors, high vehicle demand, and Hot-spots. These locations are married to GPS locations or linear chainage to assist in identifying areas of interest on the guide way.
- Conductix-Wampfler engineers load the data onto a GPS enabled PDA and assist system operator technicians with locating the problem areas.
- Conductix-Wampfler engineers can make recommendations and comments on the cause of the problem and steps needed to correct the issues.



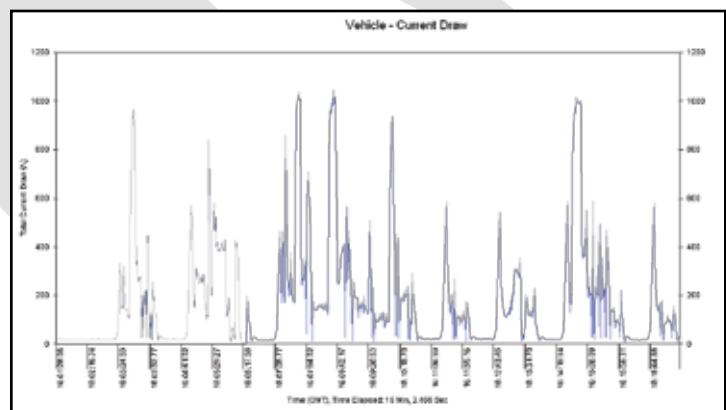
Total Vehicle Current Demand Map:

The map on the left shows total current demand as the vehicle travels its route. The colors correspond to the range of current demand, as shown on the map key. Different range values can be used for different situations. The ranges used in the example are:

- Level 4 = 602 to 803 amps
- Level 3 = 402 to 602 amps
- Level 2 = 201 to 402 amps
- Level 1 = 0 to 201 amps

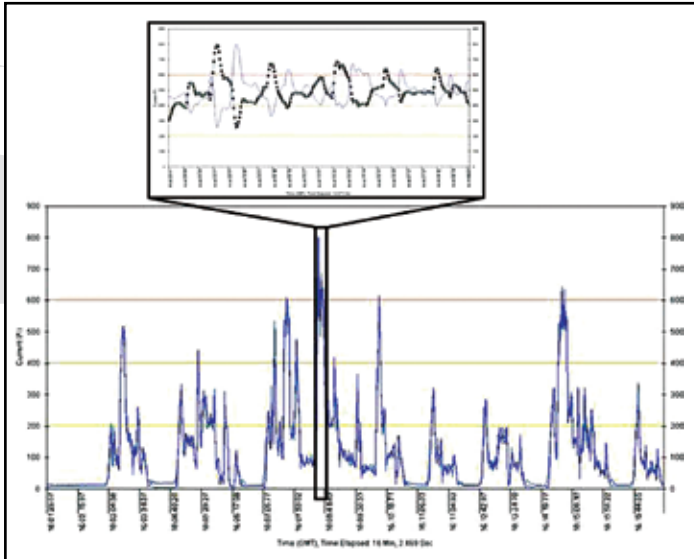
Graph of Total Vehicle Current Demand

The graph on the right shows total vehicle current demand over the vehicle travel route.



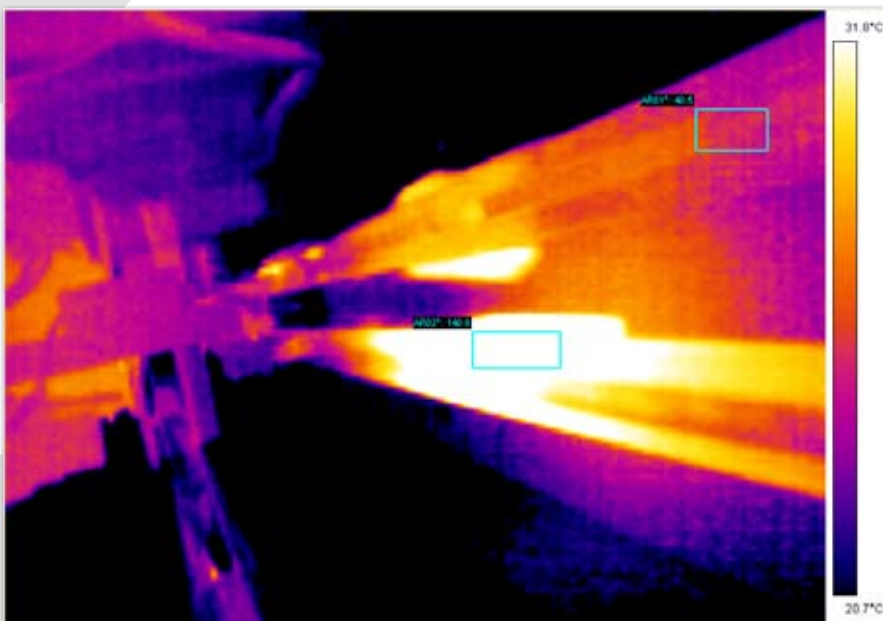
Graph of Total Vehicle Current Demand

The graph on the left shows how PRIAS can zero in on specific rail areas, even individual shoes, to further analyze current demand.



Map of Collector Shoe Impact Points

- The map on the right shows the points where the collector shoes are hitting an imperfection in the conductor rail system. It could be a loose splice, ill-fitting expansion section, or some other misalignment situation.
- The impact map is uploaded into a hand-held PDA equipped with a GPS, which allows the user to find and inspect the impact points.
- The color of the impact dots indicates the severity of the impact, as shown on the map key. The impact range values can be modified depending on the situation.



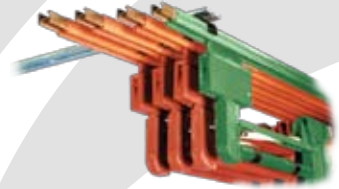
The IR camera is used to capture a continuous thermal video of the power rail system. Video is captured at vehicle speeds up to 80mph and is married to GPS or linear chainage.

Contact **Conductix-Wampfler** today - and see how **PRIAS** can improve the performance of your conductor rail system!

Mobile Electrification Solutions to Keep Vital Business Moving

Safe-Lec 2 Conductor Bar Systems

Demand the new standard in crane electrification. Our Safe-Lec 2 conductor bar is the only IP2 Certified v-contact bar manufactured in the U.S.A. Featuring bolted joint splices, bar guided collectors and a range of insulated bar from 60 to 400 amperes. Safe-Lec 2 is available in galvanized steel, copper, and aluminum/stainless steel. Powering cranes safely and efficiently, Safe-Lec 2 is the perfect bar for overhead crane electrification.



Cable and Hose Reels

Conductix-Wampfler offers a wide range of standard and customer designs to meet your application needs. Reels are used in automated machinery, boom trucks, extendible conveyors, and hundreds of specialty engineered products. Whether you need a small reel for your plant or a specialty reel, Conductix-Wampfler has the reel for you. Conductix-Wampfler also offers a full line of hose and torque reels, and motorized reels.

Cable Festoon Systems

Conductix-Wampfler offers complete systems and components for stretched wire rope, C-track, square bar, and standard I-beam systems up to 175lbs. per carrier. Heavy-duty festoon systems are also available up to 1000lbs per carrier. Festoon systems are a clean and efficient method of managing power and control cable for mobile equipment. Ask about our pre-assembled kits and pre-wiring.



Pendant Stations

Conductix-Wampfler complete line pendant stations are ergonomically designed for single hand operation with easy force pushbuttons for reduced operator fatigue. Available from two buttons up to twelve buttons, Conductix-Wampfler pendants feature a high-impact resistant two-piece enclosure to simplify field wiring. Conductix-Wampfler "pistol-grip" two-button pendant is less than 2" across and features an easy pressure switch. Conductix-Wampfler pendants are rated at NEMA 4, and the 80 series is rated at 4X.

Radio Controls

Conductix-Wampfler Radio Controls with advanced digital design and programmable operation modes are ideal for crane and hoist and other overhead material handling applications.

Available in:

Protean™: 4, 6, & 8 button single speed 1-3 motion control

C-Series: 8 button 1 & 2 speed transmitter for 3 & 4 motion control

D-Series: 12 button 1 & 2 speed transmitter for 5 motion control



10102 F Street Omaha, NE 68127
Tel: 800-521-4888 / 402-339-9300
Fax: 800-780-8329 / 402-339-9627
email: info@conductix.us www.conductix.com

CONDUCTIX
wampfler
① DELACHAUX GROUP