

## Wheel load/wheel flat/bridge strike detection



**TRACKALERT** is Strainstall's system (patent pending) for monitoring a number of effects that can cause damage to the rail infrastructure.

The system involves instrumentation of a rail under bridge, turning it into a weigh-bridge that monitors dynamic loading from rail vehicles. A combination of special strain sensors and accelerometers with real time data processing enables the following features to be measured:

- Axle loads (from which a cumulative tonnage record is compiled)
- Axle overload problems
- Wheel set "flat spots"

A special data acquisition and processing unit records the raw data, characterises the trains, reports axle loads for each train, activates **real time alarms** if overloaded axles or wheel flats are detected.

**Optional enhancements** to the system include:

- Rail vehicle identification by digital photography or "tagging" system
- Additional sensors mounted on the bridge to monitor for road vehicle impact (on appropriate bridges)

One of the main advantages of **TRACKALERT** is that all of the equipment is mounted to the underside of an existing bridge. This avoids the need for disruptive and costly rail possession work for installation, calibration, commissioning or maintenance.

Strainstall's team of experienced engineers operate from offices in Cowes, Bath and Aberdeen (UK) and Tønsberg (Norway).



Strainstall

**TRACKALERT** measures effects which can damage the rail infrastructure.

Axle load and wheel impact data is measured and processed in real time.

The system provides real time alarms of overload incidents.

It also provides management information for the infrastructure maintainers.

Equipment is not fitted trackside, enabling cost effective installation and maintenance.

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