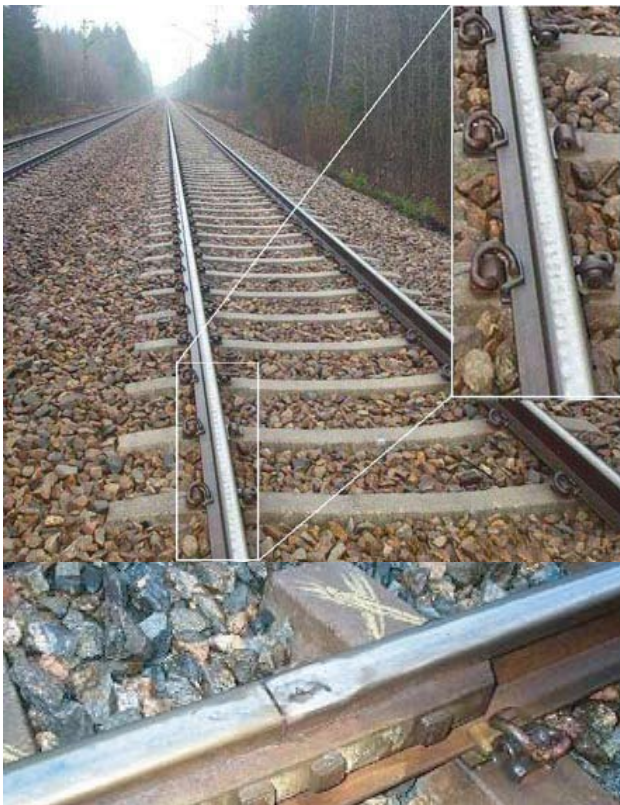




iWT³ Track Condition Monitoring



By using instrumented wheelsets Interfleet Technology are able to provide valuable information concerning track condition. Instrumented wheelsets are used to measure vertical and lateral forces between wheel and rail.

If an instrumented wheelset is used, which is able to provide measurements at high frequencies, the measurement system can be used for detecting irregularities in the track. Interfleet's advanced instrumented wheelsets, with a capability to perform wheel/rail force measurements in the range of kHz, are able to detect and evaluate such irregularities.

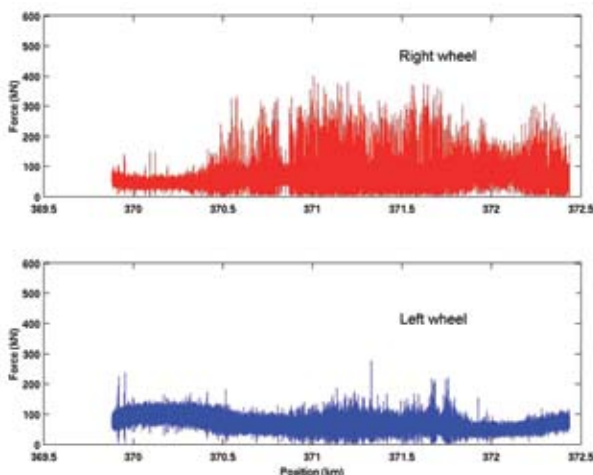
Why high frequency?

By measuring at high frequencies it is possible to locate both "one off" and periodical irregularities such as groves as small 15 mm. An additional benefit is that they can be used on an in service train travelling at normal line speeds. Collecting this data enables Interfleet to clearly identify, quantify and classify areas of degradation of the infrastructure, such as:

- Sections where track wear is high
- Sections where corrugation has developed
- Sections with poorly performed rail grinding
- Separated damages in the range of some centimeters
- Track locations where the risk of wheel damage is large.

How is this possible?

- By positioning all strain gauges so the mechanical filter between the contact point and the gauge is as stiff and light as possible (axle mounting is "prohibited").
- By positioning the strain gauges to achieve a complete separation of lateral and vertical forces.
- By positioning the strain gauges so the first eigenmodes of the wheel are compensated for.



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