Track Geometry Measurement System OPTIrail

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Measuring Systems for Quality Assurance
Track Geometry Measurement System OPTIrail

- Rail Cross Profile Measurement with OPTImess 2D sheet of light sensor
  - Usable for different rail types
  - Different allignment methods
  - Online calculation of rail wear, groove depth on grooved rails and trackwidth

- Corrugation and Ripple Measurement with OPTImess M single dot laser

- Measurement of traverse gradient / superelevation

- Measurement of pitch attitude

- GPS-Data

- Measurement density <100mm at 10km/h (30 sample/s)

- Resolution <0.2mm
Track Geometry Measurement System OPTIrail

Mainsystem

Subsystem Rail Cross Profile

Subsystem Corrugation/ Ripple

Touch TFT
Track Geometry Measurement System OPTIrail

Subsystem
Rail Cross Profile

30 Profile Scans per Second
Track Geometry Measurement System OPTIrail

Subsystems:
- Corrugation / Ripple
- Pitch Attitude
- Transverse Gradient
- Corrugation Ripple Left/Right
- Encoder Odometer
- GPS Data

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Track Geometry Measurement System OPTI\textit{rail}

OPTImess sheet of light sensor

- **Range:** 200mm
- **Line length:** 200mm
- **Resolution:** <0,2mm
- **Samplerate:** 30Hz
- **Automatic laser power control**
- **Digital output CAN or Ethernet**
Track Geometry Measurement System OPTIrail
Corrugation module with OPTImess single dot laser

- Use of a short, three-point asymmetrical chord.
- Wave length 30mm to 1000mm
- Accuracy 0.02mm