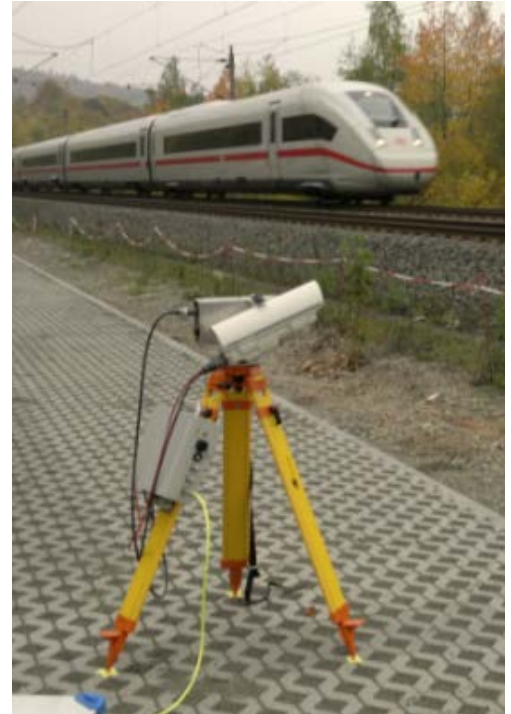


## Pantograph and overhead line measuring systems

### Mobile uplift camera system

The measurement system was developed to measure the contact wire uplift as a measurement train passes. Our mobile camera system is positioned on the route to take the measurements.

- No security guards or line obstructions required
- No on-site calibration required
- Unrestricted night-time operation possible (lighting)
- Fewer delay minutes due to problems associated with overhead lines
- Lower maintenance costs
- Prevention of malfunctions
- Safety of personnel since the danger zone is not entered
- Approval of contact line types and pantographs
- Minimisation of maintenance costs



#### Technical Details

- Fulfils accuracy requirement as per EN 50317 +/- 5 mm (2 $\sigma$ )
- Measured variable: uplift at the overhead line mast
- Auxiliary measured variable: train speed (if at least two cameras are set up)
- System can be extended to up to 400 m
- In use since 2010