

APPENDIX 2

Overview Current parameters

Overzicht in te winnen parameters [NL]

Overview Current Parameters [ENG]

Current requested minimum speed

Speeds: Different depending on parameter and product group.

Lokalisatie (algemeen)

Localisation

general for all parameters; localization 99% < 100 cm; deviation max 1% on sampling deviation of 1 km

Spoormetingen

Track measurements

120km/h

Indication of accuracy

spoorgeometrie (inclus spoorwijdte)
spoorgeometrie korte golf
spoorstaafdwersprofiel
spoorstaaflangsprofiel (golfslijtage)
spoorstaaf oppervlaktebeelden
baanbeelden

track geometry (including track gauge)
short wave track geometry
rail cross profile
rail longitudinal profile (corrugation)
rail surface images
track images (video)

based on EN-13848-2 --> resolution <0.1 mm
1-5m tops. Measuring range: - 30 to +30mm, resolution: < 0.01 mm, measurement uncertainty: <0.02 + (wavelength in mm *0.0001) mm, sampling distance between 0.05 and 0.10 m.
resolution <0,04 mm
resolution <0,001 mm
resolution (day) 1600x800, (night) 800x540
resolution (day) 1600x800, (night) 800x540

Bovenleiding
rijdraadligging
rijdraaddikte & dunne plekken
pantograafcontact (zijdelings inkomen/harde pun
bovenleidingsbeeld

Overhead line
contact wire location
contact wire thickness & thin(weak) spots
pantograph contact (lateral entry/hard points)
overhead line images

120km/h

contact wire height: measurement uncertainty≤ 25 mm, resolution <1 mm. Contact wire lateral shift: measurement uncertainty ≤ 20 mm, resolution<1 mm
measurement range 6,0 to 13,3 mm, resolution ≤ 0,20 mm, measurement uncertainty ≤ 0,20 mm, thin spots: no errors based on the algorithm allowed.
measurement range 0 - 700 N, resolution <1N
resolution (day) 1600x800, (night) 800x540

spoorstaafdefecten
ultrasoon
eddy current
automatische beeldherkenning studs en headche
ultrasoonhandmetingen

rail defects
ultrasonic measurements
eddy current
automatic image recognition studs and head checks
ultrasonic manual measurements

40km/h

Rail defects are based on NDT standards (including EN 16729-1)
If a defect is present, the chance that it will be found is > 95%
n/a
Unknown
If a defect is present, the chance that it will be found is > 98%

wisselmetingen
continue meting wisselgeometrie
discretemeting wisselgeometrie
profielmetingen

switch measurements
continuous measurement of switch geometry
discrete measurement of switch geometry
profile measurements

40km/h

resolution <0.01 mm, measurement uncertainty 1 mm
resolution <0.01 mm, measurement uncertainty 1 mm/0.01 mm
resolution <0.01 mm, measurement uncertainty 0.3 mm

Videoschouw
spoorinspectie (videoschouw)

Video inspection
track inspection (video inspection)

40km/h

resolution 1920x1080P, 25 images/sec
A separate runway image and video inspection is currently being requested. This will probably be combined in the future

GSMR
Attended metingen
Unattended metingen

Attended measurements
Unattended measurements

160km/h

-
-

ATB
ATB signaal

ATB signal

160km/h

localization < 20m; resolution <0.1A

PVR/PVS
profiel vrije ruimte
permanente vastlegging spoorgeometrie

PVR/PVS
Clearance profile
permanent track geometry recording

120 km/h

point cloud, mobile mapping, accuracy XYZ = 25 cm
point cloud, mobile mapping, additional surveying measurements (accuracy XYZ = 1 cm)

Meetparameters optioneel in de toekomst
Grondradar Kabels+leidingen+ballastkwaliteit
Lidar/puntenwolk
ERTMS balise metingen
Absolute spoorgeometrie
Versnellingsmetingen voor rail defect detectie
Meetwiel
Radar

Optional Future Measurement parameters
Groundradar for cables/pipes/ballast quality
Lidar
ERTMS balise measurements
Absolute track geometry
Acceleration measurements for rail defect detection
Measurement wheel
Radar