



GREENWOOD SIS (Surface Imaging System)

SIS – HIGH-RESOLUTION SURFACE IMAGES FOR CRACK DETECTION ANALYSIS

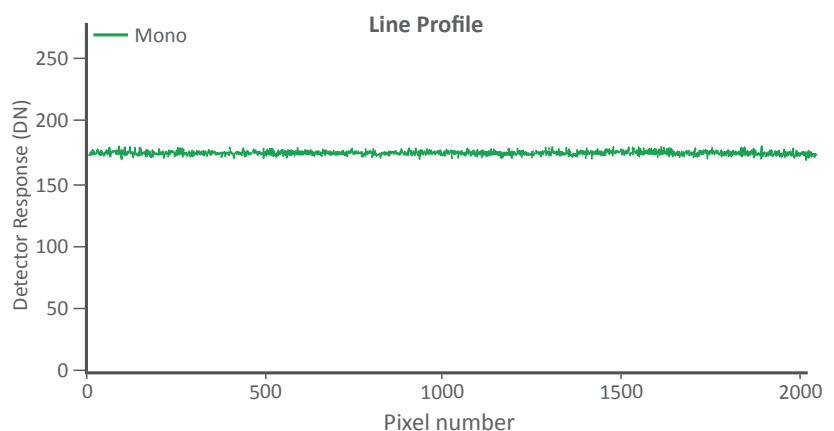
The Surface Imaging System (SIS) is a high-resolution pavement imaging system based on linescan camera technology. SIS records the road pavement as one continuous uninterrupted image that can be exported in image blocks with a user selected length.

While recording at traffic speeds the road is illuminated by a high-power efficient LED based light system. The light is in the red wavelengths and is many times stronger than sunlight, which eliminates unwanted image disturbances such as shadow casts from road side objects and bridges. The light is calibrated before delivery to give a completely homogeneous illumination profile for the absolute best quality images possible.

SIS can be configured for user needs with up to 4.5m measuring width and pixel resolutions down to 1mm. Images are tagged with travelled distance from a DMI and GPS coordinates if available on the vehicle, for precise co-location with data from other measurement systems.

Due no laser sensor being used the SIS is eye-safe.

Camera line profile after factory calibration of the LED based light system.



Features

- Continuous undistorted image of the road surface, exported to user defined image sizes.
- Based on best image sensors on the market.
- Eye safe light system.
- Homogeneous illumination with less than +5 DN variation over entire image width, i.e. no lines/areas with brighter or darker illumination.
- Independent of sunlight illumination, hence, no shadow casts from road signs, bridges, etc.
- Include Greenwood Engineering's own LED based lamps for strong image illumination, several times stronger than sunlight.
- Driving speed as high as undisturbed traffic.

Typical Configuration

- 4 meter measuring width.
- 1 x 1 mm pixel resolution.
- 2 linescan cameras (images automatically stitched to one image covering the measuring width).
- Camera casing with climatisation.
- 64 individually adjustable lamps.



Greenwood's SIS shows the details on the road surface with an unprecedented high image quality. They serve as the best possible foundation for analysis of surface defects, for example with Greenwood's new AI based crack detection algorithm, which scores >94% accuracy on out-sample test set with more than 150 000 images of roads (1.3m x 1m).



GREENWOOD ENGINEERING

For more information, please contact: Karsten Jensen, Sales Director
Mail: kj@greenwood.dk • Phone: +45 60 55 98 99