

#accuracy

#flexibility

#efficiency

LaseGCP

Gantry Collision Prevention

Enhancing the safety and efficiency in ports



LaseGCP

Gantry Collision Prevention



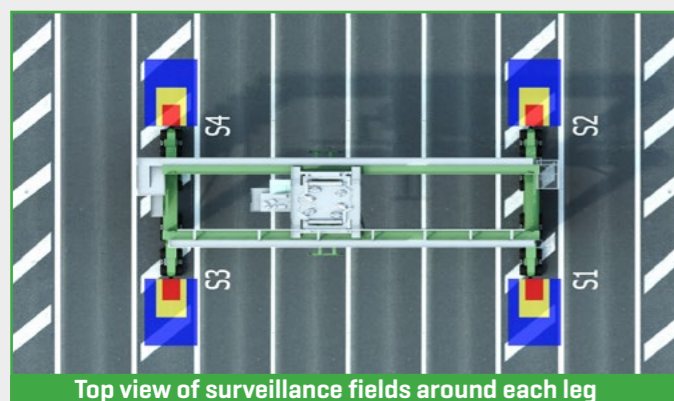
The LaseGCP - Gantry Collision Prevention system is a driver assistance system that helps crane operators to avoid collisions and increase system availability. The system can be used with two or four 2D laser scanners mounted at the gantry heading in both driving directions. The scan planes are projected horizontally over the ground.

Reliable collision prevention in crane gantry travel

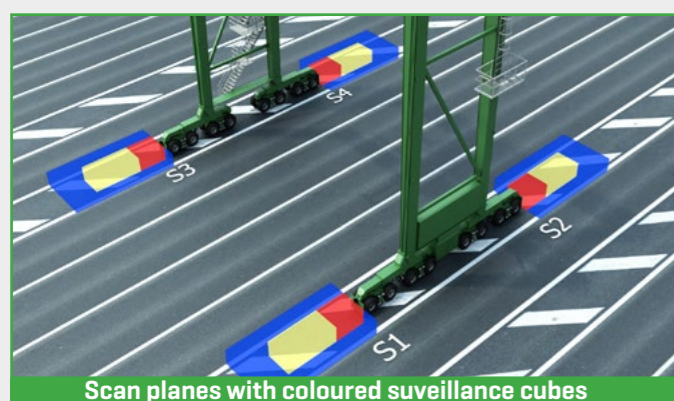
The laser measurement system consists of two or four 2D laser scanners from the **LASE 2000D** Series. Mounted at the gantry in a height of approx. 1 - 1,5 m, the scan planes are projected parallelly to the ground. The data from the laser scanner are send to a central controller device for data evaluation and the detection of dangerous situations. Thus in the control system dynamic surveillance fields are generated - analogue to the crane speed.

This means that the scan fields are small at low speeds and will increase with the gantry speed. The fields cover the width of the gantry [incl. stairs which might be on the side of the crane]. The system works with three detection fields. The biggest and most external one is for the building of candidates - the "candidates field".

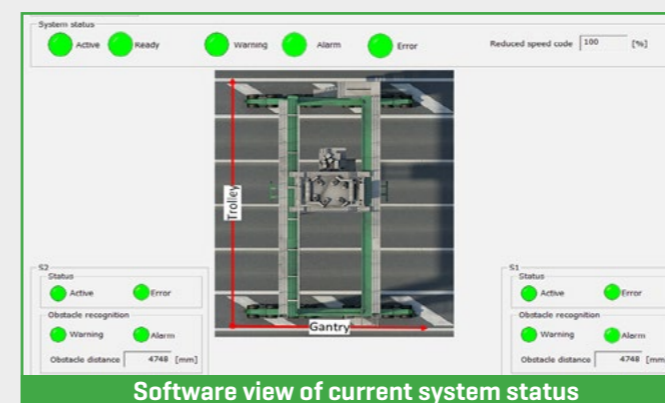
These candidates are serious objects with a certain size and lifetime that should be protected when approaching the warning or the alarm field. These method avoids false alarms by randomly occurring objects, like for example under conditions with snow-fall or bird-fly. When the object approaches the smaller "warning field", then the system reacts and sends a warning signal to the crane driver and starts reducing the gantry speed. When the next field, the "alarm field", will be injured, then an immediate emergency stop will be initialised.



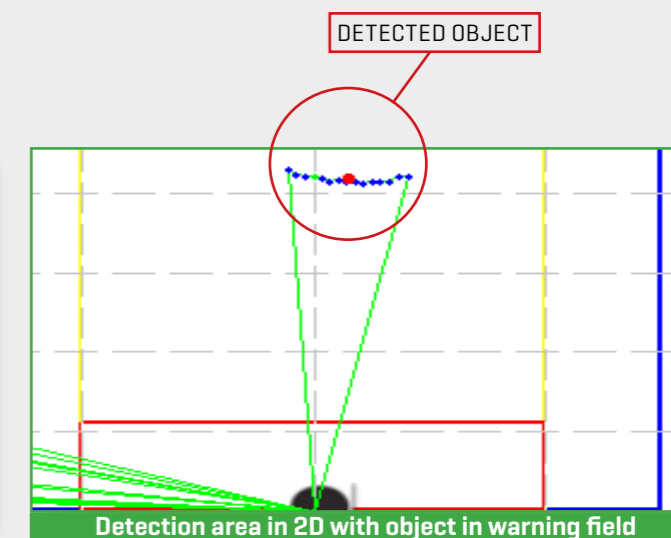
Top view of surveillance fields around each leg



Scan planes with coloured surveillance cubes



Software view of current system status



Detection area in 2D with object in warning field

CUSTOMER BENEFITS AND FEATURES:

- ✔ Prevention of dangerous situations and thereby increasing the level of safety
- ✔ Cost savings by collision prevention and avoiding repair costs
- ✔ Increased system availability due to decreased crane downtimes
- ✔ Modular system construction - two or four sensors can be used
- ✔ High reliability against environmental influences - no false alarms
- ✔ Trustable product with high acceptance by crane drivers
- ✔ Crane driver can concentrate on the operation



Note:

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