

LaseYC-MF-1

MULTI-FUNCTIONAL MEASUREMENT SYSTEM FOR YARD CRANES

LaseYC-MF-1 is a multi-functional laser measurement system based on multilayer laser scanner technology. The measurement system covers the following functionalities:

- » LaseGCP-3D - Gantry Collision Prevention
- » LaseTMD - Truck Movement Detection
- » LaseTLP - Truck Lifting Prevention
- » LaseTPS - Truck Positioning System*¹
- » LaseCP - Cabin Position
- » LaseASTO - Area Surveillance Truck Operation*²

THE MEASUREMENT SYSTEM

The system is based on two multilayer laser scanners installed at the gantry to both sides and heading to the truck lane. The sensors are connected to a LASE Control Unit (LCU) with the application software. Observing the area in front of the gantry and the truck lane makes it possible to cover all the above-mentioned functions.

THE CORE FUNCTIONS

LaseGCP-3D - Gantry Collision Prevention

The sensors observe the area in front of the gantry and detect whether objects are in the driving path. The system includes crane-to-crane collision prevention.

LaseTLP - Truck Lifting Prevention

During the lifting of the container, the measurement system tracks the container and the structure of the chassis. When the chassis and container go upwards, the measurement system detects a lifting of the chassis and sends an alarm signal to the crane PLC.

LaseCP - Cabin Position

During the container drop process to the chassis, the measurement system checks whether the truck's cabin is outside the operation area of the spreader resp. the container. LaseCP includes empty-space detection for dropping the container.

LaseTMD - Truck Movement Detection

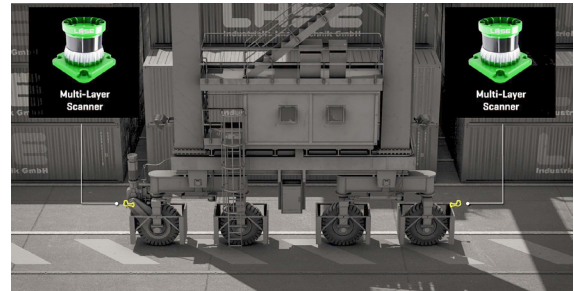
During the loading and unloading process, the measurement system detects when the truck is moving.

LaseTPS - Truck Positioning System

The measurement system measures the position of the chassis and the container on the chassis. It gives feedback to the truck driver via a digital display about his relative position in the crane's centre.

LaseASTO - Area Surveillance Truck Operation

During the chassis loading process, the measurement system observes whether there are people around the truck to raise an alarm when this is the case. Hoist motion will then be stopped.



Sensor positions on the gantry.



Sensor positions on the gantry, real scene.

*¹ +/-50mm for container position measurement, less accuracy for chassis position measurement depending on the position of the pin position on the chassis. One additional scanner can be used to enhance the accuracy.

*² There is limited ASTO function due to the limited view on the truck/chassis side on the side facing the yard in case a container is on the chassis.

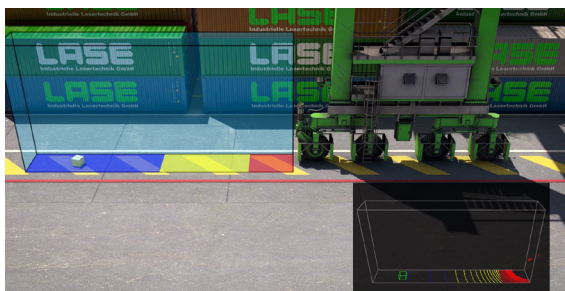
THE FEATURES

- ✓ LaseGCP-3D - Gantry Collision Prevention
- ✓ LaseTLP - Truck Lifting Prevention
- ✓ LaseCP - Cabin Position
- ✓ LaseTMD - Truck Movement Detection
- ✓ LaseTPS - Truck Positioning System
- ✓ LaseASTO - Area Surveillance Truck Operation

THE BENEFITS

- ✓ High functionality with a reduced amount of sensors
- ✓ Reasonable solution
- ✓ Modular usage of the functions
- ✓ Safety
- ✓ Easy installation
- ✓ Support Manual, Remote and Automatic Operation
- ✓ The customers can choose, which functions they would like to use!

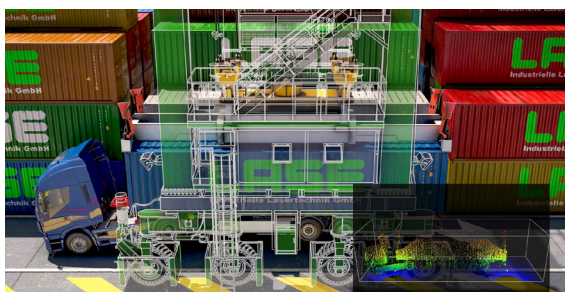
THE FUNCTION PRINCIPLE



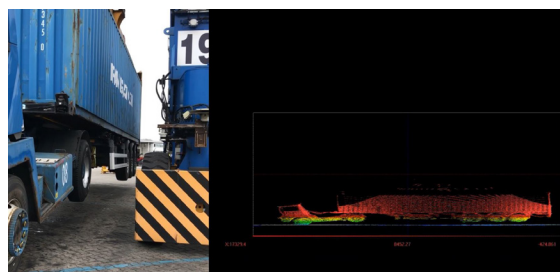
The sensors observing the area in front of the crane.



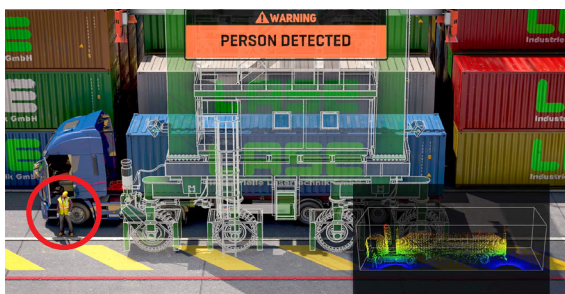
Sensor positions on the gantry.



The system prevents a truck from being lifted by twistlocks.

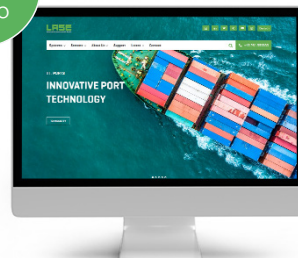


Real scene and raw data point cloud.



The system can detect, locate and continuously track the position of people in the truck lane areas.

WATCH
THE
PRODUCT
VIDEO



SCAN ME



Scan the QR code with your mobile phone. Discover the product video and more innovative solutions from LASE!

GLOBAL PLAYER FOR LASER MEASUREMENT SYSTEMS

For more than 30 years, LASE Industrielle Lasertechnik GmbH has been the global contact for high-precision and robust laser measurement technology for the port sector. With our 1D, 2D, 3D and multilayer sensors as well with our high sophisticated application software, our systems stand for more accurate, safe and efficient container handling. Our goal is to drive the automation of the port industry forward. With 30 offices worldwide through subsidiaries and business partners, we are always at your side.