

LaseUCD

UNREMOVED CONE DETECTION

The LaseUCD application is a three-dimensional laser measurement system that detects whether container locks (twistlocks) are still connected to the container at the beginning of the pickup process by RTG, RMG or STS cranes. In case of detection of an unremoved twistlock, the application software sends an alarm signal to the PLC to stop the crane lifting movement. The system is specially designed for use in automated and remote-controlled container warehouses and prevents costly damage as well as accidents.

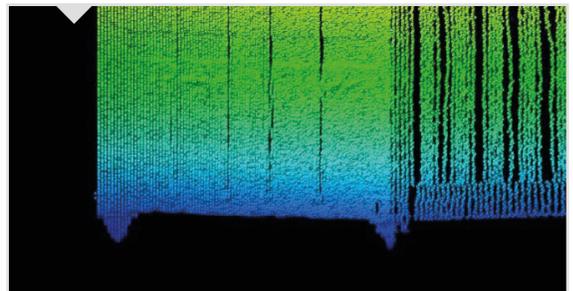
THE MEASUREMENT SYSTEM

The measuring system consists of two 2D laser scanners installed on the crossbeam of a crane system at the height of approx. five meters above the truck tracks. Both 2D laser scanners form a common, overlapping horizontal scanning plane in the direction of the truck lane. When a container is picked up from the truck chassis by the crane, it passes the scanning plane in which the container profile is scanned. The scan data is processed in the LaseUCD application software, from which a 3D point cloud of the container is generated. As soon as an obstacle protrudes below the container, this is an indicator that at least one locking cone is still present or has been forgotten to be removed. In this case, the application software sends an alarm signal to the crane PLC to immediately stop the crane lifting movement.

The LaseUCD system is specially designed for RMG and RTG cranes to increase safety and also to prevent damage to containers and the crane equipment. In addition, the system also detects open doors of containers during the same measurement process.



The scanners form a rectangular scanning plane that covers all corners of the container.



A 3D profile of the container is created, in which the system recognises unremoved cones.

THE FEATURES

- ✓ 3D measurement of containers for cones/twistlocks and open doors
- ✓ Independent from skew, tilt or trim angles of the container
- ✓ Useable for all container types (20, 40 and 45 ft)
- ✓ Usable for ARMG, RMG, ARTG and RTG crane types

THE BENEFITS

- ✓ Exact and reliable cone detection by state-of-the-art laser technology
- ✓ 100 % detection rate
- ✓ Supports fully automated container handling
- ✓ Immediate alarm signal to PLC stops crane hoist move

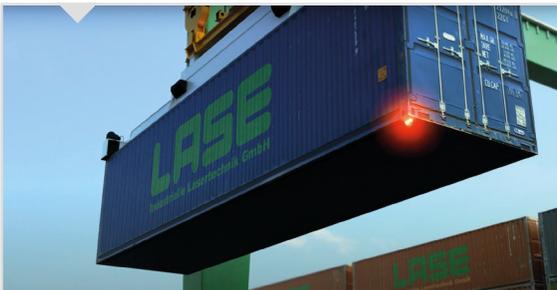
THE FUNCTION PRINCIPLE



The truck drives to the crane and positions itself under the scanning plane.



Unremoved cones are detected when the container is lifted.



In this case, an alarm signal is triggered.

WATCH
THE
PRODUCT
VIDEO



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 industrial sectors port, bulk material handling, steel and logistics. With our 1D, 2D, 3D and multi-layer sensors as well as in-house developed applications, our systems stand for more safety and efficiency. Our goal is to drive the automation of industry with easily retrofittable solutions. With 30 offices worldwide through subsidiaries and partners, we are always at your side.