

#accuracy

#reliability

#safety

LaseUCD

Unremoved Cone Detection

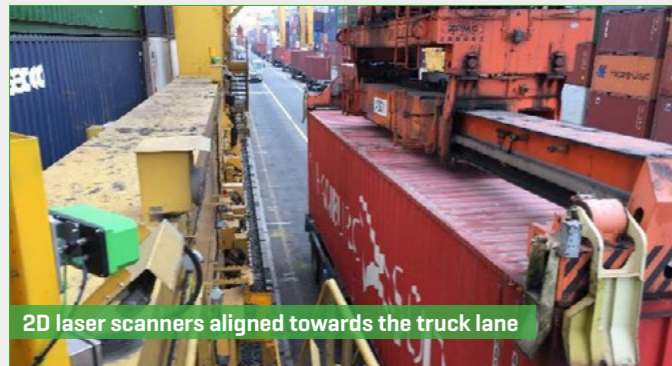
Enhancing the safety and efficiency in ports



LaseUCD

Unremoved Cone Detection

The application LaseUCD - Unremoved Cone Detection is a two-dimensional laser measurement system which detects whether container cones (twistlocks) are still connected to the container while being lifted up from a terminal truck chassis by RMG or RTG cranes. In case of the detection of an unremoved cone the application software sends an alarm signal to the PLC in order to stop the crane hoist move. The system is built especially for the use in automated and remote controlled container yards and prevents expensive damages and lethal accidents.



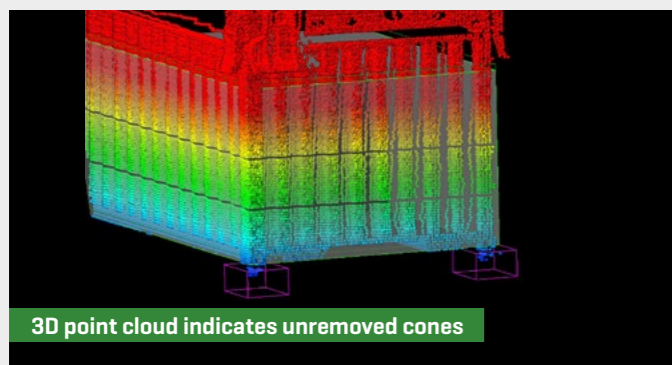
2D laser scanners aligned towards the truck lane

Accurate detection of unremoved container cones

This measurement system consists of two 2D laser scanners from the LASE 2000D series, which are installed at the sill beam of a yard crane in a height of approx. five meters above the truck lanes. Both 2D laser scanners build a horizontal scan plane in direction to the truck lane.

When a container is picked from the truck chassis by the crane it passes the scan plane where the profile of the container is scanned. The scan data are processed in the LaseUCD application software, which generates a 3D point cloud of the container. If an obstacle underneath the container protrudes from the container, it indicates that a cone is still connected. In this case the application software sends an alarm signal to the PLC in order to stop the crane hoist move.

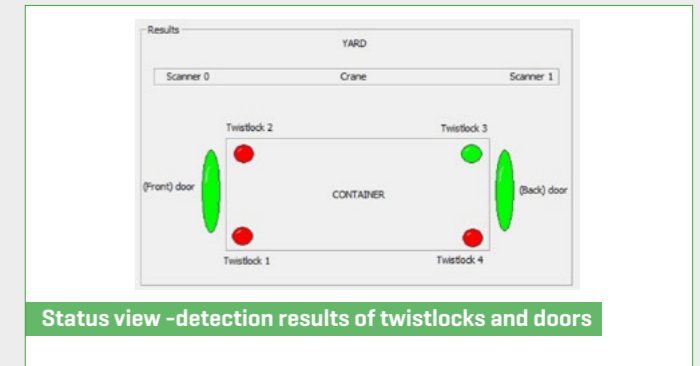
The LaseUCD system is designed for RMG and RTG cranes and to increase the safety as well as to avoid damages on the container(s) and the crane. Additionally the system also detects open doors of containers during the same measurement process.



3D point cloud indicates unremoved cones



Horizontal 2D scan planes detect lifted containers



Status view -detection results of twistlocks and doors

CUSTOMER BENEFITS AND FEATURES:

- ✓ 2D measurement of containers for cones/twistlocks and open doors
- ✓ Exact and reliable cone detection by state-of-the-art laser technology
- ✓ Independent from skew, tilt or trim angles of the container
- ✓ Useable for all container types (20, 40 and 45ft)
- ✓ Supports fully automated container handling
- ✓ Immediate alarm signal to PLC stops crane hoist move
- ✓ Usable for ARMG, RMG, ARTG and RTG crane types



Note:

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