LaseCDI-GATE - Container Damage Inspection

*Product module **CEWS** Container Logistics*

The application LaseCDI-GATE - Container Damage Inspection is a solution applied for the automatic detection of damages while truck arrival at the front gate of the terminal.

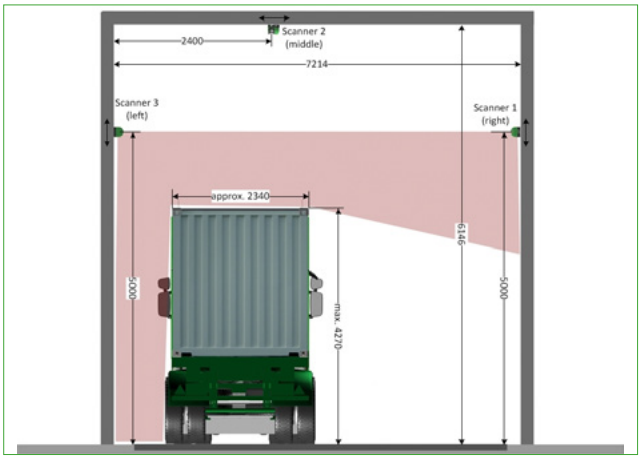
This combined 2D/3D measurement system generates side and roof profiles of the containers for an "active" detection of common structural damage types like dents, bulges, tears or holes in containers. The measurement system consists of three 2D laser scanners (LASE 2000D series) mounted on the frame of the gate and can also be applied to OCR Gate systems as well. This measurement system allows an inspection the container surfaces without any delays when passing through the gate.

Out of the scan data the LASE software application generates an intelligent 3D profile and determines whether the container is damaged or not. The deformation cases are predefined within the application software. The automatic recognition of the damage is achieved by comparing the actual container to an ideal one and combining the results. The detected damage category, extent and location are displayed to the operator immediately.

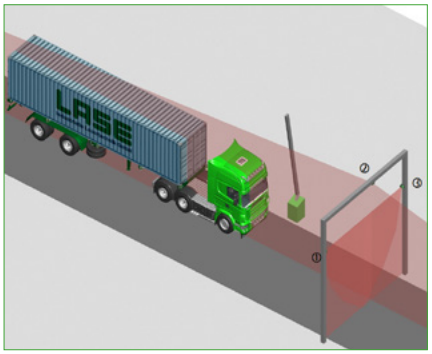
The LASE 2000D-11x laser scanners are the most suitable ones for this kind of surface inspection because of their excellent sensor criteria, accurate measurement results and fast scan performance.

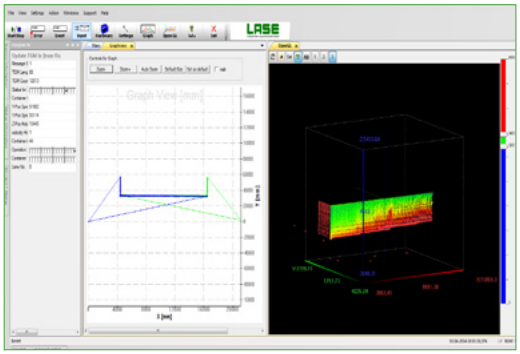
Customer Benefits & Features:

- 3D surface inspection
- Recognition of all structural damage types like dents, bulges, tears, holes and corner pockets
- Highly accurate
- Active damage inspection to support passive camera inspection (by OCR technology)
- Applicable during check-in at the Gate
- Ensures clear responsibilities and avoids claims
- Selective observation



Function principle





LaseCDI-STS - Container Damage Inspection

*Product module **CEWS** Container Logistics*

The application LaseCDI-STS - Container Damage Inspection on STS-Cranes is applied for the recognition of damages within the vertical movement during loading and unloading operation.

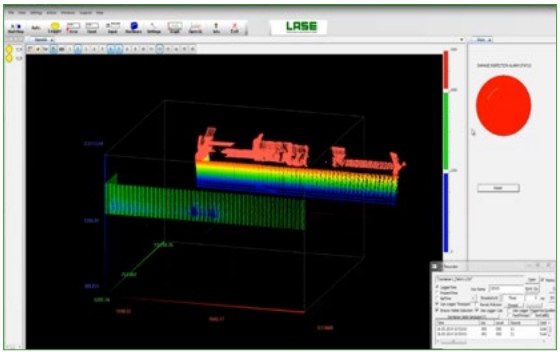
This combined 2D/3D measurement system generates side and roof profiles of the containers for an "active" detection of common structural damage types like dents, corner pockets/posts as well as holes.
The measurement system includes 2D laser scanners (LASE 2000D Series) and two 3D components (LASE 3000D Series) to accomodate different mounting positions determined by the site and nature of operation. During the vertical movement of the container a horizontal scan plane is emitted and measures a 2D profile of the container sides. After being dropped on the ground a further 3D-profile of the container roof will be scanned as well. In the application software the deformation cases are predefined.
By comparing an ideal container with the actual container, damages will be recognized automatically and displayed to the operator.

The new LASE 3000D-22x laser scanners are the most suitable laser for this kind of surface inspection because of their excellent sensor criteria, consisting of a very small spot size, a high angle resolution in the 2D-scan direction and a very fine swivel angle resolution.

Customer Benefits & Features:

- 3D surface inspection
- Recognition of all structural damage types like dents, bulges, tears, holes and corner pockets
- Highly accurate
- Active damage inspection to support passive camera inspection
- Applicable during vessel loading and unloading
- Ensures clear responsibilities and avoids claims

Function principle

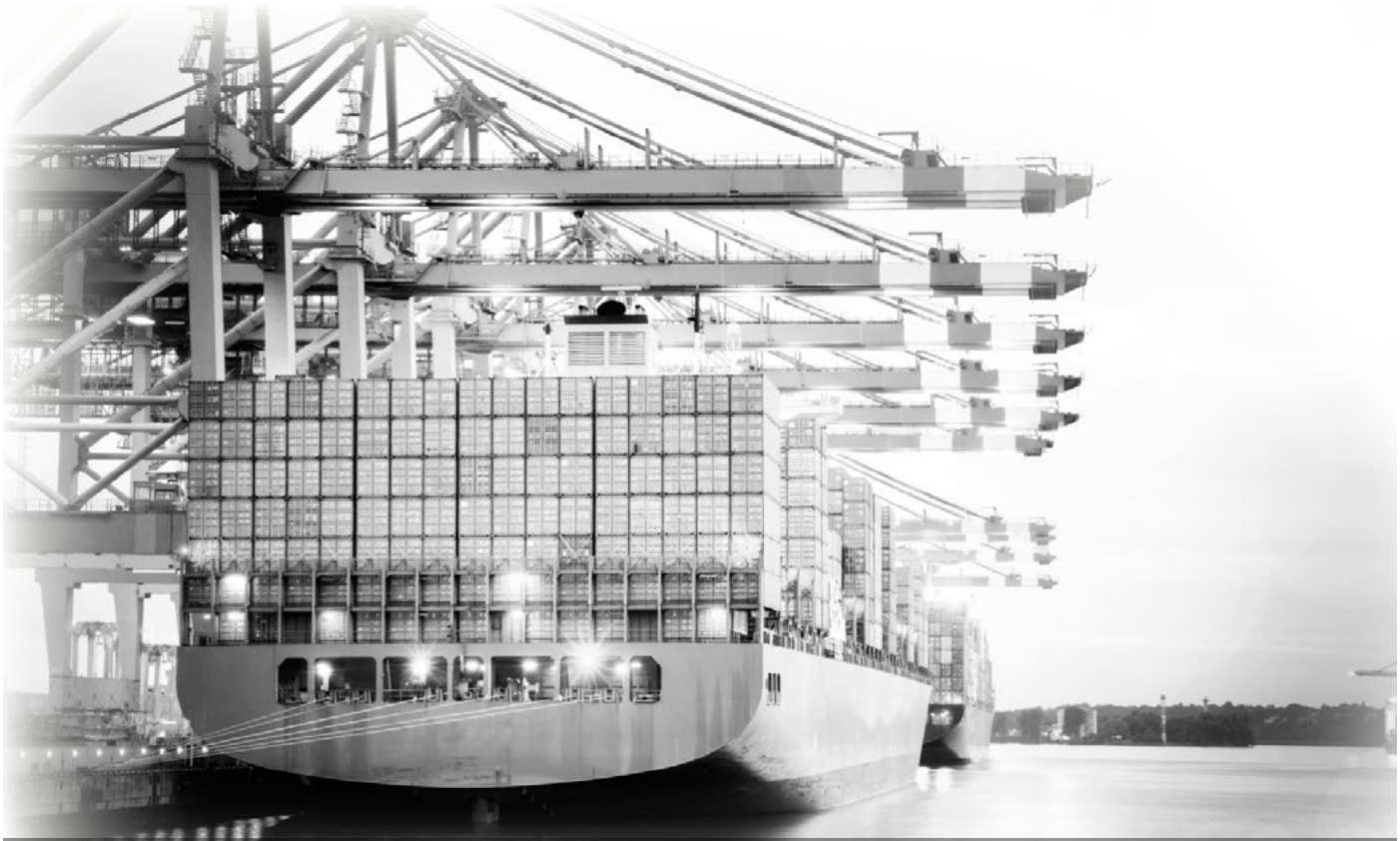


Laser technology for your automation solutions

LASE offers innovative and productive solutions by combining state-of-the-art laser hardware technology and sophisticated software applications. We deliver a broad range of precise and reliable 1D, 2D and 3D laser systems, which can be used for several measurement tasks.

We look to develop long-term relationships with our customers to drive projects forward and help improve safety and efficiency at a huge diversity of applications worldwide through working closely with them.

COMPETENCE, CREATIVITY AND PASSION lead us to be the ideal partner for your requirements. Convince yourselves of our broad portfolio of innovative products and solutions on our corporate website.



Product module CEWS Container Logistics

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