The system can be installed into new and existing spreaders without modifying the spreaders. The fiberoptic sensor is inserted into a small hole drilled into the center of the twistlock. The hole is only 3mm in diameter so that it won’t affect the structure of the twistlock. Twistlocks are recertified after drilling. The sensors are totally insensitive to shock loads, vibrations, EMI, humidity and corrosion. The fiber optics sensors can measure loads up to the twistlock yield point. The twistlock yields before the sensor gets damaged! No periodic re-calibration is required during twistlock life. All major spreader makers endorse the system and provide their twistlocks drilled and re-certified. The data is processed on the spreader and sent via CAN bus through the existing spreader cable or by WIFI to the crane or machine. The VGM and Time Stamp can be sent to the TOS through existing data communication channels or by WIFI. LASSTEC systems feature communication interfaces which can be used for transmission to TOS upon specification. The container ID can be manually transmitted to the TOS. Conductix Wampfler assists terminals in establishing the data communication. A dedicated monitor in the cabin visualizes the container weights, and load eccentricities and any occurring operational alarms. Load cycles can be stored for a period of 10 years. The system meets accuracy and certification as per OIML R51 requirements.

LASSTEC – the container weighing system which complies with the new SOLAS regulation – marketed and supported by the worldwide network of Conductix-Wampfler.

The responsibility to provide the VGM (Verified Gross Mass) of a container lies with the shipper. However, the most practical location to weigh containers is in the ports and terminals.

There are several places in a terminal to weigh containers:

1. **Weigh Bridges**: These are very precise, but if trucks arrive with two 20 ft containers, they cannot be weighed individually. In addition, if the trucks leave the terminal with a container, then the tare weight of the truck cannot be taken.

2. **Ship To Shore cranes**: according to SOLAS regulation, weighing with STS cranes is too late in the process. The manifest and the stowing plan cannot be updated before the containers are being loaded onto the vessel.

3. **Weighing in the stacking yard**: Every container, whether it arrives by road or rail, passes through the stacking yard prior of being loaded onto a vessel. This is the most convenient and practical place to weigh. It needs no infrastructure changes in the terminal and it does not interrupt the work flow.

**The LASSTEC system is the first technology to measure the load “where it really happens”, namely directly on the spreader twistlocks.**

The same system can be installed on any existing and new spreader and in any application.
**Key Advantages**

- **Sensor load measuring range**
  - The sensor can measure up to the yield point of the twistlock and tell if a twistlock has to be replaced.

- **Certification**
  - OIML R51 | Directive 2014/32/EU

- **Supervision & calibration**
  - Conductix-Wampfler international service platform and network will assist customers for installation and will insure the supervision & calibration of the sensors and the system.

- **Adaptability**
  - The sensors and the system fit a wide range of twistlocks, spreaders and applications.

- **Operational safety**
  - Detect if a twistlock is stuck in a container corner after unlocking and when hoisting the spreader.

- **Load cycle history**
  - Register complete load cycle history of each twistlock and spreader.

- **Accuracy**
  - As per OIML R51: +/-200 kg up to 10 tons and +/- 300 kg up to 40 ton in static mode.

- **Operational costs**
  - Replace the twistlocks when their lives are consumed.

- **Cost of twistlocks**
  - Standard twistlocks can be used with holes drilled by the spreader makers.

**Use LASSTEC to...**

- Provide spreader and crane life cycle management.
- Monitor and record twistlock load cycles to optimize replacement intervals.
- Detect if a container is accidentally lifted with the spreader on one side only.
- Ensure all twistlocks are engaged and are carrying a load when lifting a container.
- Determine load eccentricity of containers in single-, twinlift spreader applications.
- Measure exact container weights in single and twinlift modes during the load cycle.
- Avoid contact overload situations.

**Features**

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