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موانئ دبي العالمية

Truck Positioning

Highly precise laser measurement system for accurate truck positioning

siemens.com/cranes

With SIMOCRANE TPS, users count on increased performance, productivity, flexibility and safety.

More safe and precise operations
Transport equipment, e.g. trucks carrying containers must be loaded and unloaded quick and simple. The prerequisite is that vehicles are well positioned under the crane. Many terminal operating companies solve this task using marshalling personnel who navigate the truck drivers using hand signs. Or they pass on the responsibility to truck drivers depending on visual judgement. This approach has a negative impact when it comes to positioning – especially when it involves safety of personnel and the time it takes to position.

Advanced crane features like sway control, trim, list & skew control, vehicle positioning, position control, profile scanning and collision prevention are integrated into SIMOCRANE Advanced Technology modules. Using the SIMOCRANE Truck Positioning System (TPS), positioning operations can be precisely and quickly executed.

When trucks arrive under the crane they are scanned and measured. The data for the remaining distance to the target position is transferred to the crane control and from there to a signal unit e.g. a traffic light. Using the traffic light, truck drivers are safely and precisely navigated to the target position.

Save resources with flexible and more safe operations

With SIMOCRANE Truck Positioning, positioning operations are precisely and quickly executed.

Benefits

The use of SIMOCRANE TPS will supply you with a state of the art measurement system which offers the following advantages:

- You will save time for positioning the trucks under the crane.
- You will save resources, because the system guides the driver to its target position.
- You will have a longer life span of the terminal equipment due to high precise position determination which leads to a lower risk of damages.
- You will make the crane fit for (semi-) automatic truck handling.
- Your operations will be more flexible due to supporting be-directional traffic and dual lane operations.
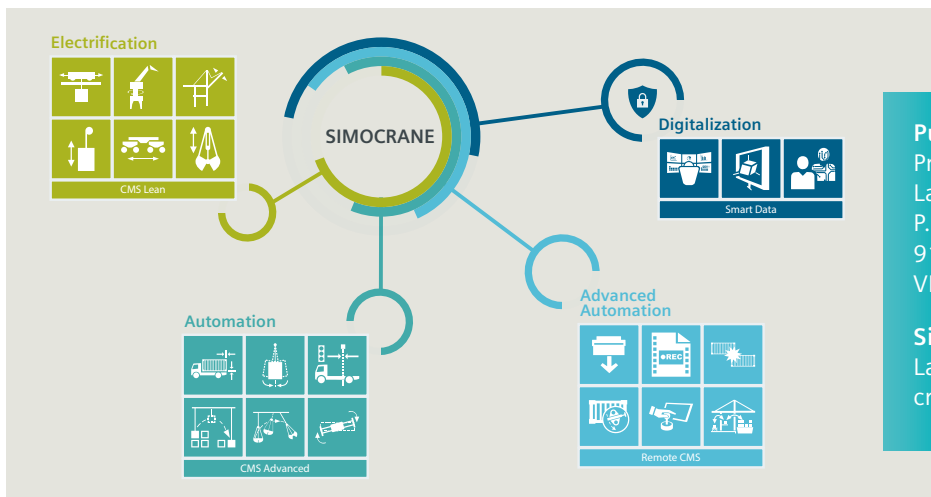
Application area

SIMOCRANE Truck Positioning is used in areas in which container semi-trailer and / or ISO closed freight container have to be positioned with a high degree of accuracy under a container crane.

Design hardware

The sensor controller is a SIMATIC IPC with pre-installed truck positioning software. The IPC is suitable for rail mounting and is generally installed in an air conditioned electrical room of a crane. The IPC is ready to be powered-up and for commissioning does not require any peripherals – such as keyboard, mouse or screen.

The system is equipped with interfaces to exchange data with 3D sensors. The data exchange with the crane control is realized by a standardized Industrial Ethernet connection.

A 3D sensor consists of a 2D laser scanner installed on a swivel platform. The swivel platform itself is controlled by a high-precision servo drive system.