

The port of Vigo in northern Spain has selected TagMaster RFID for positioning of the harbour cranes and trucks

Summary

The Port of Vigo is a multifunction harbour that handles millions of cargo annually. By using the TagMaster RFID system for identification and positioning of container cranes and trucks, the port has gained a complete ID-control system for the port area. Crane operators acquire accurate and real-time information of the crane's location on the container yard.

Challenge

The prior GPS system had to be replaced due to the insufficient precision of only two meters; the operator faced problems linking containers with a precise position on the yard. To achieve an exact location of each container stored on the yard, the port of Vigo was in great need of a system providing 100% accuracy of the container cranes' positions.

Solution

The solution was to mount a TagMaster reader on one of the crane-legs for identification of ID-tags mounted on the ground, for X-positioning of the crane. To perform the Y-positioning of the crane, another reader was mounted on the moveable upper cabin, reading ID-tags mounted along the crane arm. The crane-mounted readers identify the ID-tags on the ground and on the crane arm, at a distance of 2-3 meters (6-9 feet), thus registering the container's location in an X and Y- coordinate system.

As the container arrives by boat, the crane operator manually enters the visible container number into the on-board computer, which indicates a coordinate for the storage space. The crane operator subsequently



moves the crane to that X-Y point. The TagMaster solution provides accurate positioning of container cranes, fully independent of a third party system.

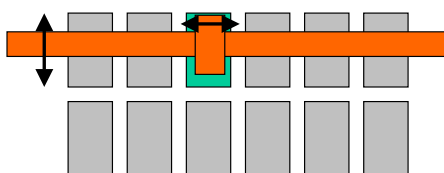
To increase the advantages, a third reader was mounted on the crane leg for identification of the trucks that deliver/take away the containers. Every truck driver gets an ID-tag linked with the container to be delivered or picked up. This way, the crane operator automatically gets information of which container to pick up or store on the yard. The system generates an unmanned exit lane for the trucks upon deposit of the tag.

Conclusion

As a result of implementing the TagMaster RFID system, the efficiency of the container fleet has drastically been improved. Advantages such as superior allocation planning of containers and the ability to keep maintenance records of each container stored, render increased efficiency in the maintenance programs. Knowing the location of specific containers also grants shortened handling times. The positioning system provides the port operator with reliable and accurate information of where a specific container is located on the yard.

Products used:

S1501 and S1504 readers
S1455 MarkTag HD



Container crane coordinate system