

Laser Tracking: intelligent solutions for simplifying ship speed measurements

Marimatech, Hinnerup, Denmark

The purpose of using lasers in a Berthing Aid System is to measure the speed of approaching ships in order to insure safe berthing. In ports with a large tidal range, problems arise at low tide because the ships are lower than the lasers. Previous models of lasers would simply 'shoot' over the side of a small ship at low tide.

In the past the solution to this problem was using an automatic or manual elevator that moved the laser up and down according to the tide. Both elevators were expensive and problematic in terms of maintenance.

Now a new system, the LT300 has been developed to solve the tidal problem. This unit is a laser placed in a housing, which has the ability to rotate. This enables the laser to 'scan' vertically for the side of the ship (see Figure 1).

The laser tracker is turned on when the ship is approaching and it will start to 'scan' up and down until it hits the side of the ship. It will then move down until it finds the water surface and then move back up into a fixed position. It will now track the ship from this fixed position and measure its distance.

The new model of laser tracker was developed by Marimatech who are leading the way in terms of innovative ideas as no other companies has yet to offer a similar product.

So far the laser tracker has been installed in China, Korea and Denmark, but in the future Marimatech expects the LT300 to be installed and replace the old elevator model wherever tidal difference is high.

Boom in laser docking systems

Over the latest year Marimatech has experienced a dramatic increase in interest for laser docking systems. During the last 10 months Marimatech has sold laser docking systems for 36 jetties world wide.

The trend is global, stretching from the USA, where most of the new LNG projects will be equipped with a laser docking system, to China, where we see a boom in the sales of these systems.

We believe there are a number of reasons for this trend.

- An increased focus on safety in the oil and gas industry
- Laser docking systems are being sold to industries other than just the oil and gas industry which in the past were the traditional users
- Port organisations in China are investing in new technology such as laser docking systems

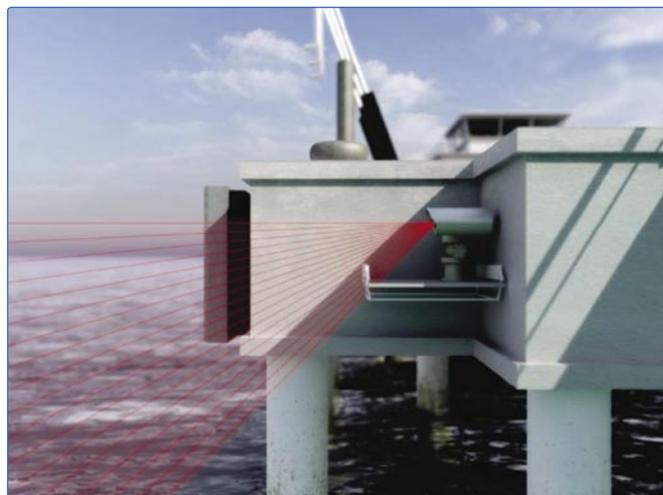


Figure 1. LT300 laser can scan vertically, searching for the side of the ship.



Figure 2. Laser tracker installation in Korea.

ABOUT THE COMPANY

Marimatech is a private owned Danish company formed in 1988, located in Denmark. Their main activities are R&D, services, consultancy, manufacturing and sales within the maritime industry worldwide.

Innovation, technology and quality are important elements at Marimatech. The innovative use of the latest technologies – balancing state-of-the-art techniques and solid, well-proven quality – result in unique products and solutions for our customers.

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