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Laser Alignment Applications in the Ship industry

For the building of new ships and repairs

There are many applications for laser measurement at a shipyard, such as when building new ships, repairing damaged ones and for regular maintenance.

Alignment between propeller shaft and gearbox

Alignment of the propeller shaft and the gearbox is carried out with shaft alignment equipment, with measuring units mounted on either side of the coupling. If the ship is in water, the Horizontal program must be used, because it does not use the electronic inclinometers, which are used in the EasyTurn™ program (the inclinometers are affected by the ship's movements in the water). The result of the measurement shows how to shim and adjust the gearbox to get the drive line straight.

Alignment of bearing journals in relation to stern tube

The alignment of bearing journals in relation to the stern tube (or gearbox) is carried out using Linebore equipment, where the laser transmitter is mounted on the axial surface at one end of the stern tube (or the gearbox flange) and the detector unit is placed in the bearing position. Measurement values are recorded in two positions for each bearing position (the detector unit is rotated through 180°), the measurement program calculates and then displays the position in the vertical and horizontal directions.

Measuring the flatness of a slewing ring bearing

When measuring the flatness of a slewing ring bearing for a crane, the D22 (or D23) laser transmitter is used. The transmitter is secured to the flange with its magnets. The detector unit is placed at the marked points all around the flange, and the measurement values are recorded at each point. Three zero (reference) points with 120° pitch are calculated by the system. The results can be displayed as a 3D graph or in figures. You can move the zero points to find values that entail the least tooling work.

Other applications

Maybe you have other measurement and alignment problems to be solved. It is very likely that we already have run into them! Don't hesitate to contact us for a discussion about a solution.