

## GLM Lasermeßtechnik GmbH – construction of cruise ship

### Construction of cruise ships

#### Cruise ships are floating cities with theme parks

Every single cruise ship is unique and is certainly always characterised by an exciting innovation. This, of course, makes the planning and development process more complex. The construction of cruise ships has also become so highly specialised that there are only a handful of shipyards in the world that are able to handle such large-scale projects. In addition, these shipyards are reliant on subcontractors who play a significant part in the value chain.

The cruise ships are built by the sectional construction method. First, individual sections are welded upside down and then sections are coupled together to form a block.

#### Quality management

Welding has an unfavourable effect on shape accuracy during production, so the geometric shape must be continuously monitored to avoid unnecessary rework when coupling the sections.

Furthermore, the shipyard's own quality control department has to check the quality of the components delivered by the suppliers on site. The components are usually located outdoors and the inspection often has to be carried out under adverse weather conditions.

#### 3D measuring systems from GLM

GLM has been developing [3D measuring systems](#) for shipbuilding since the beginning of 1990. The system consists of an industrial total station, which is controlled by our software and is characterised by its high measuring accuracy and resistance to difficult environmental conditions (high IP).

The advantages of our [3D measuring system](#) compared to the classic measuring method are:

- Lower costs for instrument control. Only one instrument is sent for calibration.
- No downtime. While your instrument is being calibrated, you receive a replacement instrument
- The system is mobile. It is operated by one person
- Subsequent editing of points and measurements is possible, as the measurement data is available in digital form as a point cloud. The digital form also enables the step to a paperless workshop. The system is also used for the adjustment of components.