



Case Study Meyer Werft Papenburg  
Modern shipbuilder chooses Leica Geosystems

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*Precisely positioning 800 tonnes of steel: laying the keel of a block for the Celebrity Silhouette.*

**MEYER WERFT GmbH from Papenburg in Northern Germany is more than just a shipbuilder – 2600 employees create floating masterpieces beyond your wildest dreams in the shipyard's fabrication halls. Modern cruise liners demand the highest commitment to quality. For this reason the surveying team at Meyer Werft use instruments only from Leica Geosystems.**

Boston or Bosphorus, Montevideo or Mallorca, Guadeloupe or Gothenburg – cruise ships are underway across all the world's seas and oceans. However, many a sea mile travelled owes a lot to a small town in Northern Germany. Papenburg in Emsland usually finds itself at the focus of interest only when a new ship runs down the slipway at Meyer Werft and moves with impressive precision along the river Ems into the North Sea.

#### **Harsh working conditions**

These enormous ship fabrication halls are the temporary homes of ferries and gas tankers as well as cruise liners. New ships are put together from over 60 individual sections called blocks, which can weigh up to 800 tonnes each. The quality of the connection interfaces plays an important role in the construction of the ship and in the assembly of the blocks themselves. Consistent measurements are crucial – correcting mistakes is virtually impossible.

Ralph Zimmermann is a qualified surveying engineer with over 20 years' experience in this field. He heads the surveying section at Meyer Werft. "Our surveying instruments are used every day under harsh conditions in both indoor and outdoor environments. In addition to the quality of the instruments, we also recognise the value of good service and a long-term relationship. It is important that our partners are still there

for us tomorrow," says Zimmermann. "In Leica Geosystems and Hexagon Metrology, we have found partners who have never once disappointed us."

#### **Surveyors are always involved in the action**

The surveying team at Meyer Werft is on hand to provide its services at every stage in the production of a new ship. Alignment of the plasma torch cutting machines is just one of the first tasks. Accuracy is also the name of game when laying keels and fabricating the blocks. On top of this come a host of other special jobs, such as determining the overall length of a ship. Ralph Zimmermann: "More and more parts are being prefabricated and then attached to the ship in once piece. For us this means we have to carry out fairly accurate 3D surveys – such as taking the measurements of a sun shade composed of multiple concave shapes or a 260-m-long waterslide with curves and loops."

The contents of the instrument locker at Meyer Werft include a Leica TDRA6000 laser station and two Leica HDS6200 high-definition surveying (HDS) laser scanners. Both instruments are permanently in use. Ralph Zimmermann: "The HDS scanners and laser station together form a strong combination. Before we begin to scan and capture point clouds, we determine the exact position of the targets using the Leica TDRA6000 and create a mesh. Most



*Harsh conditions in the engine room - an everyday job for an HDS scanner from Leica Geosystems.*

of the targets remain as fixed reference points, some are only temporary. We can then move the scanner from area to area and set it going immediately, because we always know where we are in the surveyed space. The process is pretty much like land surveying."

#### **Quality as a competitive advantage**

Zimmermann also wishes to ensure that the high standard of Meyer ships will continue to be achieved in the future and actively promotes the training of young surveying engineers. Meyer Werft sees consistent quality as a key competitive advantage. For this reason Ralph Zimmermann has been upgrading surveying equipment and practices at the shipyard piece by piece – and always with Leica Geosystems and Hexagon Metrology firmly on board.

*Andreas Petrosino*

*The AIDA Sol in the ship fabrication hall. Overall length: 252 m.*





Whether building the fastest car, the biggest plane, or the most precise tooling, you need exact measurements to improve quality and productivity. So when it has to be right, professionals trust Leica Geosystems Metrology to help collect, analyze, and present 3-dimensional (3D) data for industrial measurement.

Leica Geosystems Metrology is best known for its broad array of control and industrial measurement products including laser trackers, Local Positioning Technology (LPT) based systems, hand-held scanners, 3D software and high-precision total stations. Those who use Leica Metrology products every day trust them for their dependability, the value they deliver, and the world-class service & support that's second to none.

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