





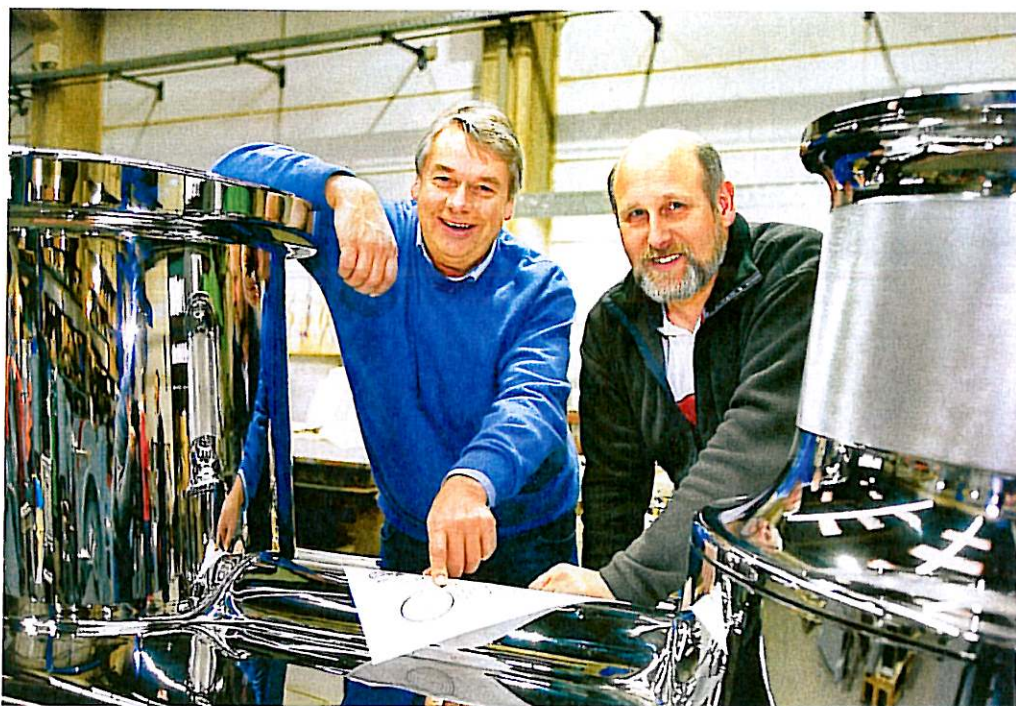


## Teak studded with gems

Sculptures in their own right: Steen's head-turning, polished windlasses. Precision-manufactured in Germany, they are proudly exhibited on deck plinths on top superyachts.

**Text** Martin Hager **Photos** Morten Strauch

The fine art of welding: perfect stainless steel workmanship is founded on the Steen workforce's many years of experience. It shows in the details. The North German hardware experts' latest deliveries include a 2-metre-long, 3.5-tonne mooring bollard (left), which is due to accommodate thick-as-your-arm mooring lines on board a gigayacht currently nearing completion. Jens Bußler (to left in photo) and Jörg Wunderlich have headed up this business since early 2002.





Hardware





Ready to go: this brightly polished mooring bollard is jacked up in the manufacturing facility waiting to be delivered to the yacht builder. Steen has been manufacturing these space- and weight-saving warping capstan / bollard combinations since 2005 and always custom-made. The specification for this XXL unit details a holding force capability of 60 tonnes and a pull force of 8 tonnes on the integrated capstan drum. The bollard has a 20-millimetre thick wall, and a teak insert can adorn the bollard head, if the owner requires.

**H**ard to believe. We almost drove past Steen's manufacturing building in Elmshorn's well-laid-out industrial park. No wonder, the façade is pretty nondescript. And this is where the world's best deck superyacht machinery is manufactured? The bright lights and glamour of the superyacht sector seem so far away. Yet the company simply has other priorities.

"What matters to us is that our customers are satisfied and that we provide premium quality," is how Steen Managing Director Jens Bußler succinctly describes the company's credo. What matters is what leaves the factory gate.

A glance at the decks of the world's largest superyachts reveals that some 80 percent feature Steen equipment. "There are only a small handful of companies able to provide quality to that standard," Alexander Höfling, lead buyer for Lürssen's yacht division, confirms. The 55-headcount business has full order books, despite the crisis. "Obviously the competition is hotting up, we are noticing that as well. Yet during the last three years we were seriously overstretched, which meant we were able to tide things over well during the lean spell. We regard working at full capacity as we do currently as a major positive,"

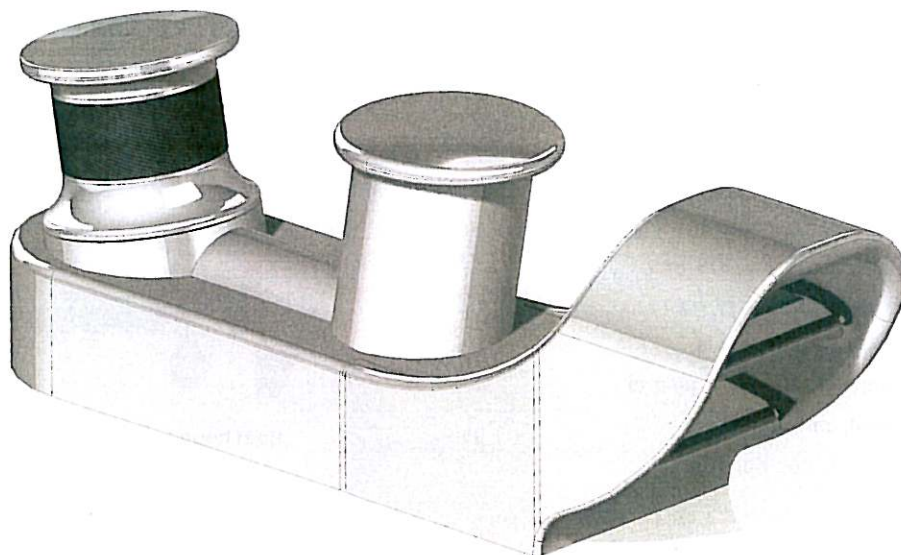
Bußler says. Business gets done on a word-of-mouth recommendation basis. Steen made a name for itself manufacturing sturdy, robust anchor and warping capstans, and added so-called mooring bitts and boat booms to the product portfolio a few years ago. "We do not manufacture off-the-peg products, only custom hardware to customer specification," says the second Managing Director, Jörg Wunderlich. Very much in line with the firm's philosophy – first listen, then implement.

One of the stainless steel experts' latest custom products is a giga-size mooring bitt. This smart combination of bitt and warping capstan is highly polished and ready to be delivered. It is almost 2 metres long, weighs 3.5 tonnes and has a holding force capability of 60 tonnes. Pull force on the integrated capstan drum is 8 tonnes. "The largest unit that we have manufactured to date", says Jens Bußler proudly. "The same model, if not quite as visually appealing, will be fitted to the German Navy's new F125 frigates." The yacht version features a decorative teak inlay on the bitt head, in line with owner requirements.

Steen developed its first mooring bitt in 2005 for a German superyacht builder. The idea was derived from a

All hand-crafted: state-of-the-art welding techniques are used and the employees are conversant with all types of metal. Before the mooring bollard is shipped to the customer, it has to be polished.

Fingerprints are an absolute no-no. Steen recently installed a combined mooring capstan / bollard / fairlead (right) on the swimming platform of a superyacht.





## Hardware

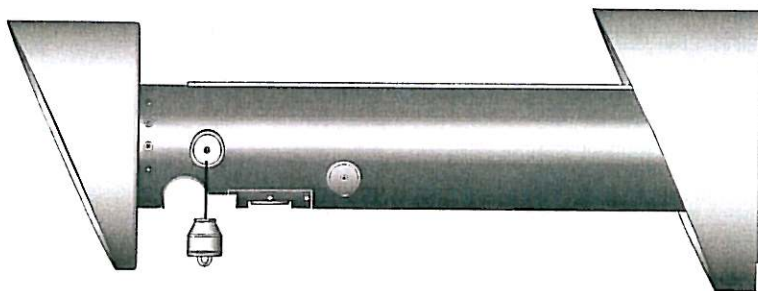


Machinery manufacturing diversity: the Elmshorn-based company's core business remains anchor and warping capstans for yachts and naval vessels (top left). A Steen steam engine dating from 1914 was returned to the factory via a roundabout route and is currently undergoing a general overhaul, performed by apprentices (top right).

customer request. Save space and weight, that was the brief. The obvious solution was therefore to combine the bitt and the warping capstan, which are usually positioned next to each other on board a yacht, into one unit. Jens Bußler reveals the highlight of this patented hardware combination. "The deckhand can draw the yacht near and make her fast at the same time, without the mooring line having to be handled a second time." Two operations are reduced to one, another bonus for superyacht crews, which are constantly getting smaller. Whether and how many

mooring bitts are employed on deck depends on the mooring plan. Some of the superyachts, which Steen has worked on, feature up to ten of these bi-functional heavyweights. The machinery manufacturers are flexible as far as design is concerned. "We make practically everything possible", Bußler says. Functionality is priority no. 1. Recent deliveries of custom machinery include a mooring bollard combined with a fairlead, which accommodates thick-as-your-arm mooring lines on the swimming platform of an 80-metre-plus yacht. A real eyecatcher.

The engineers determine how these high-performance capstan drums are powered on a project-by-project basis and based on which power source can best be provided. "We usually select electric drives, hydraulics only in exceptional cases. Electric drives are quieter and there is electric power everywhere on board", design engineer Andreas Berenz explains. If reduced deck heights require engines to have smaller structural dimensions, mooring bitts are hydraulically operated. A completely new field of activity resulted from working on two gigayacht projects. To go with the anchor capstans and mooring bitts, Steen was commissioned to design and build so-called boat booms. "These are sliding beams positioned in the bow section that can be extended



Boat boom: the sliding beams extend hydraulically up to five metres from the ship's sides and function as buffer systems, to which superyacht tenders up to 12 metres in length can be attached.



Grinders with grip:  
Steen windlasses lined  
up in the workshop, under-  
going final checks. Note  
the contrasting finishes.  
The polished stainless steel  
is given a last inspection  
before careful packaging.





Mooring bitts in use: the deckhand can adjust the length of the line without having to remove it from the winch.

hydraulically up to 5 metres from the ship's sides, used to launch tenders of up to twelve metres LOA," Jens Bußler explains. The buffer system protects both the hull and the tender from wash impact and even works at low speeds. As in the case of their core products, anchor capstans and mooring bitts, the machinery manufacturers also supply boat booms as complete modules or shipbuilding components. "This enables the builder to dispense with making complex adjustments. The complete units, which can be approved by classification organisations upon request, are very easy to install," the MD relates. Steen's manufacturing facility is worth visiting. There are definitely no signs of stress here. Lathe and milling machine operators and welders are all masters of their craft, because most of them have worked for the company for several decades. The degree of vertical integration remains high, as the winch experts

## STEEN'S LONGEST REFERENCES

**Dubai** at 162 metres LOA, is still ranked No. 2 in the current Top 200 Superyachts list. The Platinum-built Andrew Winch design features two Steen anchor capstans.

**Al Said** was launched in 2008 by Lürssen, and at 155 metres is still-ranked No. 3 in this popular LOA league. The owner, the Sultan of Oman, also relies on large Steen capstans to hold her firmly in place.

**Al Salamah** at 139.28 metres, is also one of the world's largest yachts (ranked No. 7). Lürssen and HDW delivered this Terence Disdale design in 1999 to the Saudi royal family. Steen supplied the anchor capstans.

**Rising Sun** also anchors using stainless steel equipment from Germany. Software tycoon Larry Ellison took delivery of this 138-metre Jon Bannenberg design (ranked No. 8) in 2005 from Lürssen. Recently sold.



PHOTOS: CLAUD SCHÄPE, THILO BÜCKES, PETER SEYFFERTH

manufacture practically everything in-house. Gearing components for anchor capstans are produced at the rear of the building, where a heavy-duty machine precision-mills a massive chucked stainless steel wheel cog by cog. The bulk of the steel processing machinery is manually operated, in contrast to global trends, and requires all the experience the Steen crew can muster. Know-how is the key to success and ensures optimum quality. In order to preserve this wealth of experience for posterity the company attaches increasing importance to training. "We have a training manager, looking after our eight ap-

prentices full-time," Jens Bußler relates. The team of apprentices' latest pride and joy is a Steen steam engine dating from 1914 that spent many decades in a run-down state going to waste in a barn, before it was returned to the factory quite by chance. "The machine's complicated refit is a superb opportunity for the apprentices to get to know the company's history and learn the basics of mechanical engineering", says Bußler. Meanwhile this vintage gem is up and running again and demonstrates that Steen machinery is built to last forever. Christian Steen – he established Maschinenfabrik K. Christian Steen GmbH & Co. in 1893 – would have been proud.