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DIGITALISATION IN THE PRODUCTION PROCESS

The Lürssen Think Tank

Technical Whitepaper

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The construction of superyachts is highly complex, but by making information relating to the build more available and transparent, this complexity can be better managed. Philipp Krüger, director of production at Lürssen, explains how Lürssen does this through digitalisation in the production process, resulting in superyachts being built in a more efficient and cost-effective way.

DIGITALISATION IN THE PRODUCTION PROCESS

Digitalisation is an increasingly important topic in manufacturing around the world, with car manufacturers leading the way in this regard. In the full-custom superyacht industry, however, achieving digitalisation in the production process can be complicated: since each of our products is so unique, and every single piece of our yachts is bespoke, there are very few standardised processes, which makes digitalisation challenging.

To overcome this barrier and apply digitalisation in the production process of unique products, Lürssen has, for example, invested in a laser-marking device designed solely for our use and has set out to make every piece of the yacht intelligent by giving it its own data matrix code that links to all its relevant data. When the data matrix code is scanned, therefore, our system brings up detailed information about where the piece belongs, when it needs to be there, and the quality steps it needs to go through.

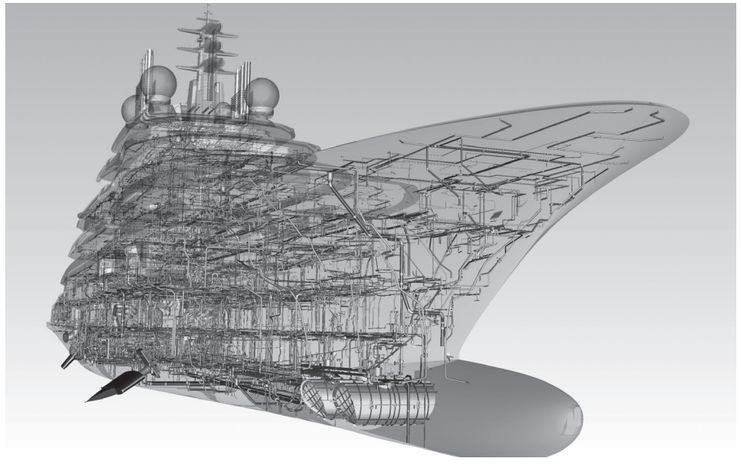
With this concept, our workforce no longer works from paperwork and drawings, but from workstations with touchscreen displays into which all information is fed and centralised. At these workstations, every time a piece of material and its data matrix code is scanned, the most up-to-date drawing is easily accessed and displayed.

The key impact of this is that any modifications are quick and simple to update on the system, meaning the client can continue to make decisions about the design of certain areas of their yacht while we are building the superstructure, foundations and pipework. It saves time and money, and by digitally sorting the production of pieces in a way that optimises the amount of material needed, we significantly reduce waste material – a highly advantageous concept. It really is a game changer.

Such digitalisation could also offer significant benefits in the after-sales department, if requested by the owner. For example, if a yacht needs to exchange some pipework according to the maintenance plan before it breaks, we would no longer send team members and materials out to the yacht to make the replacement. Instead, the crew could scan the pipe with an iPhone, send the coding over to us and we can build the exact pipe again in our workshop and send it to the yacht without having to travel there. Again, it saves time and costs, but it also increases the availability of the systems for the owner.

Having completely digitalised the production of all pipework at Lürssen in 2019, and proved that the concept is successful, we are now rolling it out to the hull and superstructure. The next step is to expand the concept to the cabling. However, while our ambitions with regards to digitalisation are high, you will not be seeing robots taking over all the work in our shipyard – we will always need a highly skilled workforce to meet the owner's demands. All digitalisation does is make production more efficient by making information available and transparent.

At Lürssen, we are very lucky to have been given the opportunity to invest in digitalisation in the production process, because it's a significant investment and such investment always comes with risks. But Lürssen is a company that welcomes new ideas and ways to optimise, and as a result we are always innovating and pushing forward.



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