

SUPERYACHT

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Industry breakthrough

Alessandro Cappiello on how to create a successful superyacht equipment business

The art of glass

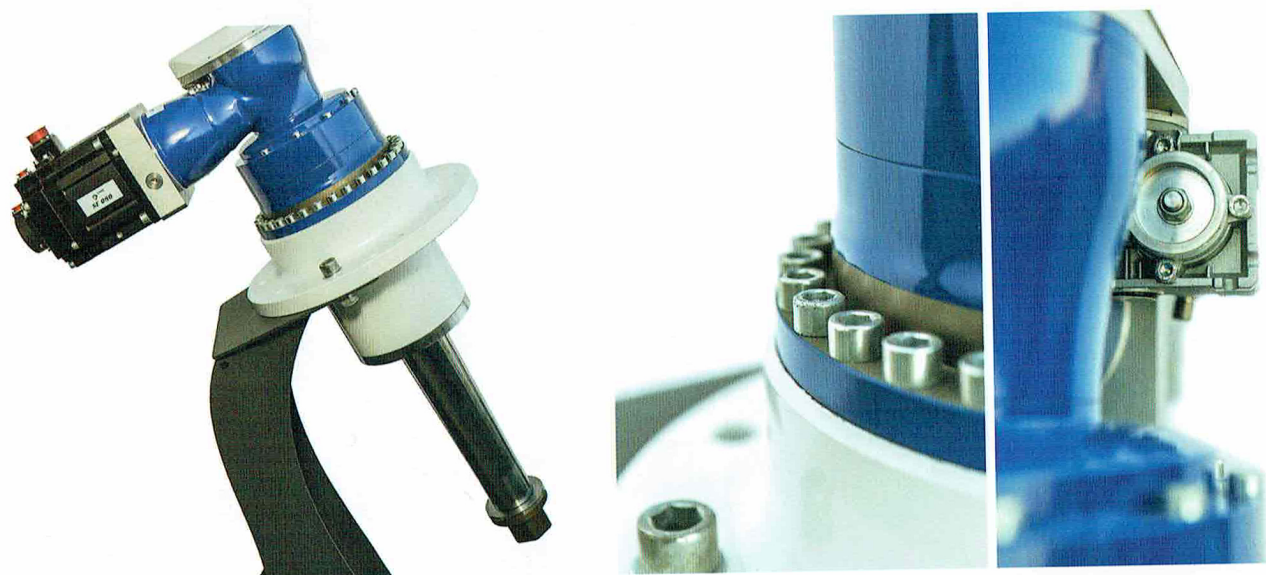
How growing demand for larger glazed areas is creating striking technological solutions



Creating a stable business platform

Alessandro Cappiello founded CMC Marine to bring electrically powered fin stabilisers to the superyacht sector — now his business is going from strength to strength.

JAKE KAVANAGH REPORTS



The Stabilis Electra is CMC Marine's leading at-anchor stabilisation product

“When a yacht is at anchor — that is when the stabilisers will work the hardest,” Alessandro Cappiello told SYB at his stand at METSTRADE 2016. “Traditionally, the task has fallen to hydraulic systems to counteract the roll, but in 2008 we developed the first electrically-powered stabilizer, and it has been a great success. Now we have a fin unit that is simple to install, only requires three cables to connect up, is incredibly quiet, and reacts very quickly. This is because we have used the latest actuator technology

from commercial partners such as Mitsubishi Electric, Wittenstein (motion control systems), and Danfoss (electronic controls). We also developed the first simulator programme to identify just how a stabilizer will perform in a customer's yacht, and so give that performance a guarantee.”

Cappiello, an Italian national who speaks excellent English, founded CMC Marine just over 12 years ago. Prior to that, he had spent 30 years as a systems engineer, working mainly for German and Italian companies within the shipping industry.

“Before founding CMC Marine, I was the head of Rodriguez Marine Systems, where my job was to deal mainly with stabilization,” he

I wasn't the only one to realise things needed to change — but I felt I had the right idea, at the right time, and I had the courage to see it through

explained. “Not just roll dampening, but stabilizing the entire platform. This included everything needed to keep a fast ferry as comfortable as possible at sea, because you can't stop the boat mid-voyage in order to give the passengers a bit of a rest.”

After eight years with Rodriguez, Cappiello decided to start CMC Marine, where he would focus entirely on stabilization, although he later developed thruster units as well. He had a lot of ideas and knowledge, but initially began with hydraulic systems. However, having seen big advances in commercial applications of compact electric motors, and their fast and almost silent response to commands, he knew they would have major advantages over hydraulics.

“I wasn't the only one in the stabilizer industry to realize things needed to change, but when you identify a need, the ideas soon follow because you see things differently. I felt I had the right idea, at the right time, and I had the courage to see it through.”

The courage was needed because the industry remained very conservative in this particular area. The feeling was that a lot of torque was required for proper stabilization, and only hydraulics could supply it, but Cappiello knew that this mindset was perhaps 10-15 years behind the times. He had already seen hydraulic drives give way to electric versions, and by 2008 “the market was mature enough to change”.

Cappiello admits that it took a while for his potential customers to grasp the concept. “It was a long step away from tried and trusted hydraulics,” he said. “We had to train our clients to some extent, and clearly demonstrate the benefits.”

Harnessing talent

Helping him to move the thinking in a new direction was his team at CMC Marine, where research and development accounts for at least 15 per cent of the turnover.

“The average age of my team is below thirty, and many started with me as their first job after university. Young engineers have a lot of energy, and they are full of new ideas. The key to success is to trust these young people, to back them up with strong R&D facilities, and to do things seriously. There are no other rules. If you give value to your team, you get value back. You can still be a dreamer, but when you have an idea, give it all your energy, and then rely on your staff to make it happen, because one man alone is nothing.”

Cappiello was keen to emphasize that R&D should not be disjointed.

“If you want to be successful, have only one department for this. Everyone involved in that department is only looking after that element of the business. Working with a university or research institute is equally important, especially as you will find the talent there to staff your business.”

From the moment he founded his company, Cappiello approached two universities — one in Milano, Pavia, and the other a test tank facility in Napoli — to help him create the right tools for a simulation programme. The collaboration proved ground breaking.

“The simulator was very sophisticated, and meant that for the first time the manufacturer of a stabilizer could approach a client and clearly demonstrate the effect the product would have on a yacht. For example, we can predict a 92 per cent roll reduction, with just a 1 per cent margin. We could then issue a guarantee, and agree to take back the unit if it didn't meet that predicted performance. This was the first time a company had done this, and it forced the competition to open up a bit.”

Integrated approach

But passenger comfort onboard isn't just about the roll of a superyacht, it's more about platform stabilization, which Cappiello insists must include climate control.

“The movement of a superyacht — the pitch, roll and yaw — inflicts acceleration forces on your passengers. It's not the angle of a yacht that makes people seasick, it's the acceleration involved in getting there, and nothing else. People react to this acceleration by expending energy to push back. So, at the end of the trip, even if they haven't been running around the deck or hoisting sails, they still feel physically tired, because their

Marine Systems, where there was research not on just reducing both roll and pitch, but also the quality of the air inside the yacht. Even the colour scheme had a role to play in passenger wellbeing.

Expanding the footprint

Backed up by the simulator programme, CMC Marine sold its first electric stabilisers to its two most important customers, Benetti and Sanlorenzo, in 2010, and hasn't looked back.

“As soon as they had to chance to try them, they decided to switch entirely away from hydraulic,” Cappiello says.

Since then, the company has moved to



Cappiello believes all aspects of a yacht should work in harmony to minimize a body's stress levels

body has spent all day countering acceleration. So comfort at sea is not just about preventing seasickness, it is also about the elimination of fatigue.”

From his work on passenger ferries, Cappiello is also concerned that all aspects of a yacht should work together in harmony to minimize the stress levels on a body. After all, he argues, the passenger is there for an enjoyable experience.

“What continues to surprise me is that even today, no-one asks the stabilizing company to co-operate with the air conditioning supplier. Have you ever been aboard a yacht in a Mediterranean summer

much larger premises, and in March 2017 will expand again by doubling its footprint to 1,500m². Although the electric stabilizers will work well on ‘smaller’ yachts (70ft-85ft) CMC sees it's main market for yachts up to 60 metres, and even beyond with 4-fin systems.

“There is nothing new within the industry,” Cappiello remarked, “but what is changing are the systems harnessing and integrating various elements within specific superyachts. Manufacturers have to ask if they are creating a new demand, or following the existing demand, and sometimes the two concepts are mixed together.”

“We also have owners with a new type of

What continues to surprise me is that even today, no-one ever asks the stabilising company to co-operate with the air-conditioning supplier

when the air conditioning isn't working? You can't stay aboard — it's almost impossible to tolerate the high temperatures and humidity, and excessive heat will also lead to seasickness. A yacht must be able to run its stabilizers and climate control at their full potential in tandem.”

This was a philosophy that Cappiello was working on with his time at Rodriguez

mindset — they haven't progressed up the size range as they have grown older, but have instead started with a 50m craft as their first yacht. We have to think how we can give them a technical product that meets their expectations when they may not have much knowledge or experience of what it can achieve. You have to give the best solution according to their project.” **SB**