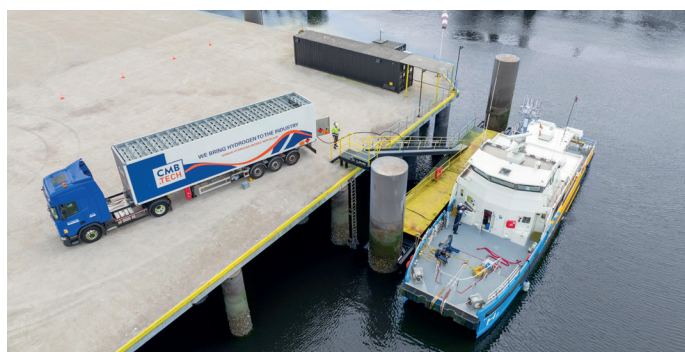


CMB'S GREEN COMPASS

In the complex arena of global trade, with shipping as its crucial backbone, it's essential to have enterprises that not only brave the waves, but also lead the way towards a more sustainable future. CMB (Compagnie Maritime Belge), based in the dynamic port of Antwerp, is one such pioneer. Through various departments and activities, they take the maritime industry, and especially innovations, to unprecedented heights. In her role as Head of Marketing and Communications of CMB, Katrien Hennin (36) attempts to inform, and above all inspire, companies and industries who strive for a harmonious balance between economic growth and ecological sustainability.

After a career at Cronos Group, the largest technology group in Belgium, Katrien ended up at her current employer. As she had a keen interest in technology and innovation, CMB seemed to offer her a new challenge. The link with water was also a plus, as her grandfather, Robert Hennin, once sailed with the Leopoldville (one of CMB's first ships). So, the past and the future intermingle in the strangest ways, not just for CMB, but also in Katrien's life story.

Under the motto 'Always a Step Ahead', CMB seamlessly interweaves tradition with pioneering innovation to lead the maritime industry into a greener and more sustainable future. "We believe that the strong traditions of the maritime industry go hand in hand with innovation and pioneering spirit. Our history and the development of new technologies reinforce and complete each other," Katrien explains. "It's not just while working on CMB's daily activities and strategies that I'm conscious of environmental issues. This month, we are participating with EXMAR and Euronav in the Port CleanUp, cleaning up street litter around our buildings and at the Antwerp Maritime Academy. Little steps can make a huge difference. It may sound cliché, but using the bike more often, taking the stairs instead of the elevator, being conscious about my purchases, etc. I also strongly encourage innovation for the next generation, including my two children. It's important to live with an open mindset."



Your core business is shipping. How does the diversification of CMB's portfolio – ranging from shipping to clean tech – contribute to the company's success and sustainability?

"With our clean tech company CMB.TECH, we're pioneers in developing ecofriendly maritime applications, with a focus on hydrogen and ammonia. These combustibles don't emit CO₂, and combustion engines are more affordable and reliable than other technologies. They can also be deployed on a megawatt scale. While our own fleet is future-proof, with hydrogen-propelled ships such as the Hydroville, Hydrocat, Hydrobingo, and Hydrotug and our large ammonia-propelled bulk carriers, container ships, and chemical tankers, it also paves the way for other companies and industries towards a greener future."

Can you give us some examples of how CMB.TECH's clean tech initiatives helped transform maritime industry?

"We noticed how dual-fuel technology is not only applicable in our ships, but also in heavy-duty applications. Following that, we have already built several systems, from trucks to straddle carriers. Basically, you can equip any heavy-duty application with dual-fuel technology. As more companies get inspired and willing to collaborate, we can make faster and more significant progress in the field of sustainability."

Why does CMB.Tech use combustion engines?

"Large maritime and industrial applications can nowadays be converted with dual-fuel technology in the combustion engines, allowing them to run on hydrogen and ammonia. Combustion engines are robust, reliable, and have an operational lifespan of many years. You get an ideal balance between maximum emission reduction and minimal additional cost. ICE (Internal Combustion Engine) mono fuel engines reduce greenhouse gas emissions to zero, while ICE dual-fuel engines reduce emissions with 60 to 90%, depending on the workload and the engine type."



How does dual-fuel technology work?

"Hydrogen is released from its storage tanks and kept under low pressure, after which it's injected at the right time and with the correct dosage into the air inlet of the engine. By sucking in hydrogen, less diesel fuel is needed to get the same amount of energy from combustion. During the hydrogen injection, the engine reduces its injection of traditional fuel. Less diesel also means lower CO₂ emissions, so adding hydrogen results in a 1-on-1 reduction of CO₂."

How does CMB ensure that their new technologies, such as hydrogen and ammonia, remain affordable and reliable at megawatt scale?

"We don't just convert applications, but also produce our own hydrogen at our hydrogen fuel station, which supplies green hydrogen via mobile refuellers to numerous applications in port areas. Furthermore, we have an important project in Namibia, where we created a joint venture with a Namibian company to produce and distribute hydrogen, and later on also ammonia, on an industrial scale."

What are the specific advantages offered by a location such as Namibia for the creation of hydrogen production projects?

"Namibia is strategically located near major trade routes. It's the ideal place for renewable energy, thanks to an extremely favourable climate: sun, wind, or hydropower are perfect for the production of green hydrogen through electrolysis. This production process does not release any CO₂, which makes green hydrogen the sustainable combustible and source of energy of the future. Moreover, the country has gigantic potential for cheap green electricity."

The insights shared by Katrien make increasingly clear what role CMB is playing in the global shift towards greener and more responsible maritime practices. "CMB.TECH's current achievements are just the start, we are developing more green hydrogen projects, which I will gladly share with you in the future. Spreading the word, making the brands within the group bigger, inspiring companies and getting them to cooperate with us, those are the ways of making big steps quickly. That's my ambition and I also consider this to be my personal objective within CMB."

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