

ZERO-EMISSION SHIPPING IS AN OPPORTUNITY



SeaTalk visited Wilfried Lemmens, director of the Royal Belgian Shipowners' Association (KBRV - Koninklijke Belgische Redersvereniging), just as Putin invaded Ukraine. Because so many Ukrainians work on board Belgian ships, the phone was ringing off the hook. In these dramatic moments, we managed to slip in for an interview.

A lot of fingers are pointing at shipping when it comes to climate. With its 'Fit for 55' programme * Europe is showing a lot of ambition. How does KBRV view this challenge?

Globally, merchant shipping is responsible for three per cent of emissions. So, we need to tackle the problem. Our strategy is based on three pillars, all of which are equally important.

- 1) We cannot possibly pass this environment on to our children.
- 2) A green paradise on an economic graveyard, that is equally impossible: we need to develop techniques that allow our children to be competitive with, for example, our Chinese counterparts.
- 3) Business opportunities. The first shipowner able to put in the water a zero-emission ship will have a competitive advantage. Currently, this 'green' aspect is not being validated, but the day will come when customers choose the greenest option.

What can be the solution to realise green investments without touching competitiveness?

It would make much more sense to us for the IMO (International Maritime Organisation) to impose a fuel levy. If everyone pays a surcharge of 200 to 300 dollars per tonne of bunker oil, it can be put into a fund for R&D and the development of zero-emission solutions.

Why this amount? Because it is precisely the delta between the new green fuels and the old, heavily polluting ones. This way, you take away the incentive to sail on HFO (Heavy Fuel Oil). And you obtain a global level playing field. This system would also solve the discussion surrounding 'Fit for 55': "Who is going to pay for this?"

Unfortunately, the IMO is too slow, for political reasons. Europe is asking to pick up speed. The 'Fit for 55' programme was installed specifically with the aim to increase pressure on the IMO.

Our main goal is still for the IMO to tackle the problem globally, because if Europe does not legislate conclusively, we could end up in negative competitiveness scenarios. There are unfortunately very few people who are familiar with shipping, let alone politicians. But they are finally starting to listen, and there is a form of cooperation, allowing the creation of a legislation that does not choke us.

IMO is a UN body, in which about 180 countries are represented. 60% of these are developing countries. They tell us: "Dear Western World, you have been able to build your wealth, heavily polluting in the process. Now we too have the right to increase our prosperity – polluting in the process."

And furthermore: "We kicked you out 50, 60 years ago because you had been treating us like slaves for three or four centuries, all the while stealing our natural resources. You cannot come and tell us how to deal with things now."

China, Russia and Saudi Arabia have understood this political game. They know how to weaken Europe. If Europe loses competitiveness, China will emerge victorious.

We are working on the ETS (Emission Trading System), so that it becomes a level playing field for all those entering and leaving the EU. We hope this will prove to be a wake-up call for the IMO. If you add 200 to 400 dollars per tonne as fuel levy, knowing that there is a fuel consumption of 300 million tonnes per year, you can see that a large amount of money will become available.

Now, let's go back to the developing countries. 60% of all goods shipped come from these countries. Their population lives mainly in coastal areas. Climate change, the rise of the sea level... Who are the first victims? We are working out measures, but there is no money for this in developing countries.

So, this fund could also be used to pay for large infrastructure works in those countries, for the mitigation of the effects of climate change. That would create jobs.

But meanwhile, the clock is ticking?

Yes, we cannot keep waiting for political games. How many ministers for the environment does our country have? You cannot count them on the fingers of one hand. We need to take action ourselves.

We can see there is an enormous amount of investments in new technology. CMB, for instance, is collaborating with ABC Motors in Ghent to develop hydrogen engines.

Ten years ago, one would have thought that LNG (liquid natural gas) was a good solution. Not any more?

LNG is now more expensive, so ships go back to using MDO. Mind you, LNG is an excellent transitional fuel, without sulphur or nitrogen emissions, no particulate matter, but still with CO₂ and methane emissions.

The problem is that a ship is built for the long term (20–25 years), while innovation currently moves at tremendous speed. So, we need to build ships that are adaptable.

When will we see ships sailing on hydrogen?

We are now able to power small and medium-sized engines with hydrogen. But hydrogen is very difficult to store as a fuel. You need to either compress it, or to cool it. Both solutions require a lot of energy and storage space on the ship, at the cost of cargo space.

An alternative is to find a carrier for the hydrogen, which is currently ammonia. We believe that within three years we will have the technology to run engines on ammonia.

But then it needs to be green hydrogen and ammonia?

Indeed. CMB is investing in large fields of solar panels in Namibia, to make green hydrogen, which can then be bound with green ammonia. If the engines can run on that and those fields can deliver, then we have taken a major step.

Do you think the objectives of 'Fit for 55' achievable?

Certainly, there is no choice. We have set up a think tank in our organisation. Back in 2016, I spoke before the IMO and said that we are convinced that we will be sailing emission-free by 2050.

For the moment there is still one point of concern with the engines. We can control the combustion process, but it creates nitrous oxide



Wilfried Lemmens, director of the Royal Belgian Shipowners' Association.

(N₂O – laughing gas). That is also a greenhouse gas, even more polluting than CO₂ and methane. We are working on a solution with large engine manufacturers as Wärtsilä and MAN, and will have mastered that too within the next three years.

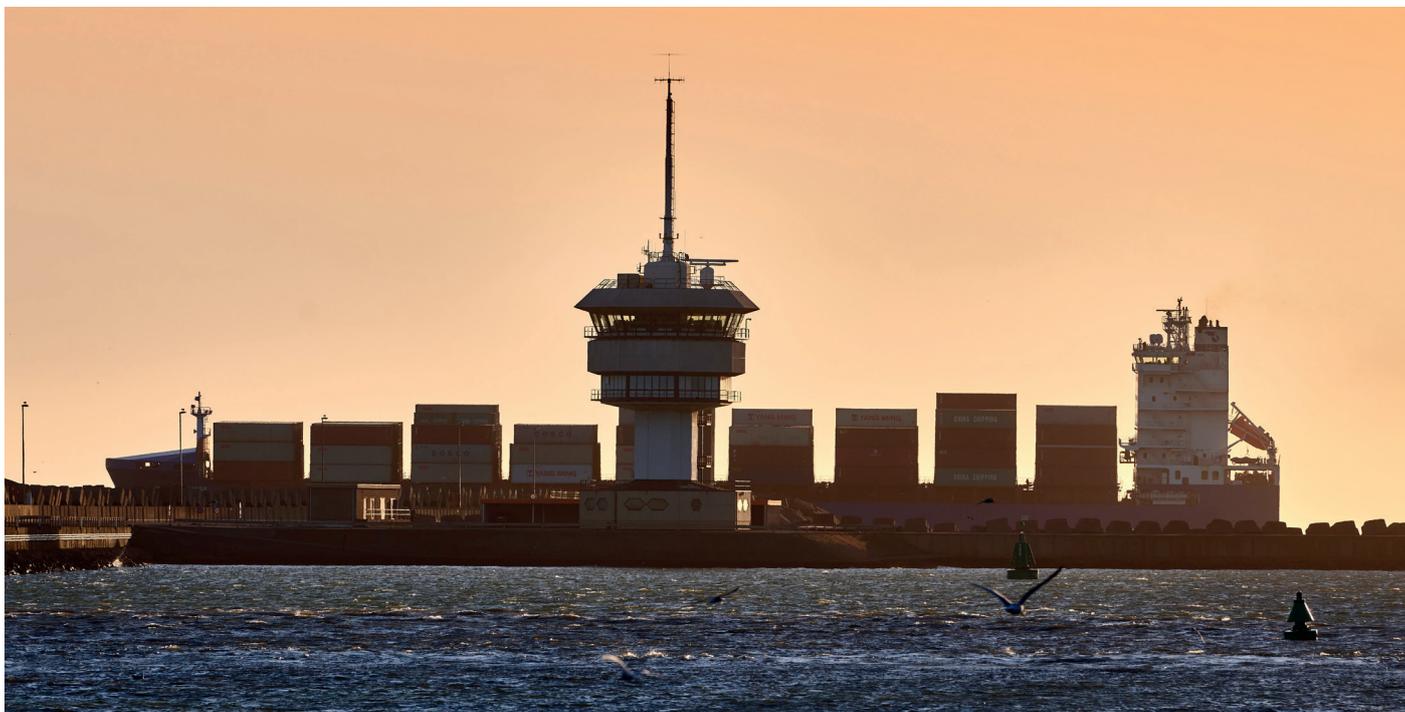
At this moment, small ships as tugboats, coasters, and ferries can easily run on hydrogen, because they can refuel every day.

We have some very passionate people here. With current techniques, we can reduce emissions by 35% (coating, propellers, hull shape, wind energy...) The other 65% will have to be achieved through fuel. That is where our research is currently at.

There used to be a clash between two business models, sailing with the old tonnages, or investing in new technology. When I sat on the boards of ECSA (European Community Shipowners' Associations) and ICS (International Chamber of Shipping), I initiated a dialogue between all stakeholders. Since then, we have been meeting every two months. All new projects are presented, and feedback is exchanged with manufacturers, refiners, shipping companies, etc.

In 2019, you spoke about the Belgian think tank at the United Nations General Assembly in New York. Are we sufficiently aware that Belgium is a front runner?

That is one of our major problems. When I was a child, ships were still being unloaded and loaded here on the Scheldt quays. On Wednesday afternoons, I came to the waterfront with my mum to see the ships. Everyone knew this. There were school trips from the other provinces in Flanders. The coaches could drive onto the quays. Then the port



moved away from the city. Nowadays, who still knows the port? No one. Then, after 9/11 came ISPS. No one is allowed on the quays any more. Who knows anything about seagoing ships? No one.

For a long time, we cherished the mentality 'live hidden, live happy', and we are now known as the big polluter, especially after shipping disasters like the Erika, the Prestige, the Evergreen. Unknown, unloved. We are working on polishing that image back up.

No less than 90% of all goods are transported over water. Per kilogram of cargo, we are the least polluting mode of transportation. But that does not mean that we do not have a responsibility to take. Those 3% are ours.

Can you tell us anything about crew welfare?

There is much criticism of IMO, yet shipping is the only industry with so many standards: SOLAS (International Convention for the Safety of Life at Sea), MARPOL (International Convention for the Prevention of Pollution from Ships), STCW (Standard for Training, Certification and Watchkeeping: what does the crew need to know, from ship's cook to captain), MLC2006 (maritime labour convention – a labour contract for the seafarer worldwide), ISM (International Safety Management). Fifty years ago, chaos reigned. Now everything is regulated. Belgium approved all these conventions. Every ship arriving here can be inspected by Port State Control for compliance with the rules. If anything is wrong, the ship is put under embargo. This does not happen very often, since regulations are being followed.

We also have an excellent cooperation with trade unions. Our 'flagship contact' is the envy of the rest of Europe. Every three months, we meet up with the Belgian Shipping Inspectorate (FPS Mobility, Shipping Division), and with the top shipowners' companies. We discuss every issue.

Is Belgium a maritime nation?

Belgium is a very big maritime nation, but people do not see this. We have world-class ports: Antwerp, Ghent, Zeebrugge. In those ports, you have very big maritime players like Katoennatie and Sea-Invest. Add to that, the Belgian shipowners, ranked 15th globally based on

total tonnage. Euronav, the largest independent tanker shipping company, is Belgian. So is CBM (dry cargo, chemicals, containers), Exmar (gas), the dredgers (Deme).

The Maritime Academy is still a thriving business. Being ranked 15th, there are still too few young people who chose a career at sea to man those ships.

The profession is also changing. Now, they go to sea for a few years, and then choose a job ashore. A captain or chief engineering has loads of experience. They are managers who learn to deal with problems on their own in the middle of the ocean. They are very sought-after on the labour market. Unfortunately, due to the high turnover, there are not enough graduates in Belgium to fill the vacancies.

Did you sail yourself?

Yes, I sailed for 18 years, ten of which as a captain on all sorts of ships (containers, tankers, bulk freighters, roro). I was the first Belgian captain to receive a pilot exemption certificate for the port of Rotterdam, when we sailed there with Exxtor Ferries ships. My Dutch colleagues gave me a hard time in that period.

SeaTalk wishes you all the best for your ambitious projects, we will continue to follow your progress...

Author & photographer: Mike Louagie



(*) 'Fit for 55' refers to the EU ambition to reduce the net emission of greenhouse gases with at least 55% by 2030. The programme should bring EU legislation into line with this objective.