European Inland Shipping Forum

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Event Ship "RheinEnergie"
in Cologne

Awarding of the esa Allianz "Inland Shipping Innovation Prize"

by Stefan Franke
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Ladies and gentleman,

As the high point of today's event, I have the honour and also the pleasure of awarding the "Inland Shipping Innovation Prize", endowed by esa Allianz, for the second time.

Some of you will now be asking yourselves why a specialist insurer for the inland shipping industry like esa Allianz would award an innovation prize. The answer is reasonable and simple:

As an insurance company for an important transportation industry like inland shipping, we have a great interest in technical progress, because this secures the future viability of this sector.

Innovations are the building blocks of technical progress, which have time and again stimulated industries with long traditions like inland shipping.

Without continual innovative processes, the inland shipping and port transportation system would have long ago ceased to be competitive.

Let's take container transport as an example, which has become an important growth driver for inland shipping over the last 40 years.

Without innovations on board the ships and on land in the ports, this lucrative business would be unimaginable today:

With tightly scheduled services controlled via satellite communication, modern container ships and integrated tugs and barges with a capacity of up to 500 standard containers are the most efficient connection between sea and inland terminals.

At the terminals themselves, processes are becoming more and more automated and software spanning several terminals and transport carriers controls the processes with growing efficiency.

There are many starting points for an "Inland Shipping Innovation Prize" in this overall logistics concept.

Because alongside operational objectives like greater efficiency and punctuality, innovative processes in the inland shipping and port transportation system are also driven by national economic objectives like more efficient use of infrastructure and environmental objectives like climate protection and relocating traffic from roads and rails to waterways.

So it was no easy feat for the jury of the "Inland Shipping Innovation Prize", comprising the editorial teams of the trade journals *Binnenschifffahrt* and *Schifffahrt und Technik*, to choose a suitable winner from a great number of innovative concepts and technological developments.

The discussions in our four workgroups, especially the workgroup "Innovations for Efficient Ship Operations", bore eloquent witness to the fact that there are still remarkable innovative developments in inland shipping despite the now seven-year crisis situation in the industry.

I am therefore particularly delighted to award the second "Inland Shipping Innovation Prize" to one of the products presented in this workshop, the 'fuel water emulsion technology for inland waterway vessels' developed by Exomission Umwelttechnik GmbH in Troisdorf.

Exomission's FWE impressed and persuaded the jury in particular with its unique combination of minimising pollutants, fuel consumption and CO2 in large diesel engines.

All other known technologies to reduce emissions through exhaust gas aftertreatment may lower emissions, but they also increase fuel consumption and thus CO2 emissions, and hit the operator with higher operating costs.

FWE from Exomission is different; it can pay for itself in a relatively short time by reducing fuel consumption and operating costs and then make money every year.

Diesel soot, as produced by the operation of marine engines, locomotives or large stationary systems (e.g. combined heat and power units), is one of the most significant causes of climate change. "Black carbon" – as the climate killer is also known to scientists – acts as a catalyst for melting processes in snow and ice.

The particle filtration technology used in land vehicles to reduce soot is problematic for inland cargo ships from a technical and economic point of view because downtimes are too low and servicing is costly.

On the other hand, the inland shipping industry needs convincing technical solutions for the emission control desired and required by environmental policy in order to continue living up to its claim of being the most environmentally friendly means of transport.

With its patented fuel water emulsion technology, Exomission offers an innovative solution that is applicable not only to new engines but also for the entire stock of existing marine engines, including older models.

A test by TÜV Nord in 2012 and the test runs with the tanker TMS RUDOLF DEYMANN, which was equipped with the first FWE system on board an inland waterway vessel in 2013, showed very good results.

Soot formation can be reduced down to the traceability limit, while nitrogen oxides can be minimised by up to 30%.

The values measured in the test runs show the vessel's reduced consumption at 4% to 9% - when deciding to install the system, Exomission and the shipowner Deymann expected fuel-saving potential of 2% to 5%.

The calculation for the owner of an inland vessel is as follows: diesel consumption falls by an average of 8 litres an hour. This means a saving of around 32,000 litres a year of EUR 22,000.

The environment benefits too, because the annual diesel saving amounts to 85,000 kg less CO2 emitted.

In a tanker running continuously and travelling 4,000 hours a year, the system will have paid for itself after just a year and a half.

As the water in the combustion chamber almost completely prevents soot formation, barely any soot is deposited on the injectors or gets into the engine oil.

In stationary application, another side effect is the considerably better condition of the engine on maintenance and an increase of the time required between oil changes.

According to Exomission engineers, these findings can be extrapolated to application on ships.

The longer service lives of cylinder liners, piston rings and injection nozzles and the lower consumption of engine oil provide further savings potential.

The results have also convinced state and federal ministries as well as the Federal Environment Agency.

The Federal Ministry of Transport has accepted the FWE solution into the "Federal Subsidy Programme for Low-Emission Engines".

Inland vessel owners are reimbursed 30% to 50 % of the total costs of investing in FWE technology.

The FWE method is suitable both for original equipment and retrofitting.

The innovative FWE technology from Exomission unites ecology and economy, strengthens the environmentally friendly image of inland shipping as a means of transport and makes a tangible contribution to the improvement of efficiency.

For these reasons, esa Allianz is backing the jury's decision, because everything that makes the inland shipping industry more environmentally friendly and economical receives our wholehearted approval and support.

Would the two Managing Directors of exomission Umwelttechnik GmbH, Stefan Fischer and Uwe Israel, please join me up here.

I know that a lot of conviction, innovative power and daring were needed to develop this innovative product.

I hope that this prize points the way for the European inland shipping industry and that your FWE technology is used on a large number of ships.

On behalf of the jury, I congratulate you on winning the "Inland Shipping Innovation Prize 2014", which I hereby present to you.