



Venezuela

Let's set sail

The brainchild of Beluga Shipping and SkySails heads for success

MV “Beluga SkySails”, a multipurpose heavy-lift project carrier new-build that was christened on December 15 last year, and recently enjoyed its maiden voyage, is the world’s first modern merchant vessel to be co-powered by wind energy.

The 10,000-tdw carrier is owned, managed and operated by Beluga Shipping GmbH, a project and heavy-lift carrier based in Bremen, Germany. Through the company’s initial €500,000 investment in this future-oriented innovation, very good opportunities of substantially reducing the fuel costs of the strategically growing fleet open up.

The benefit of a vessel such as MV “Beluga SkySails” first and foremost is a remarkable cost reduction. Given the current fuel prices of more than US\$400 a tonne, it is necessary for shipping companies to find new, innovative alternatives. For the time being, MV “Beluga SkySails” is equipped with a 160 m² large towing kite. “If we succeed in saving 10-15% of fuel per day by means of SkySails, then we are talking about almost US\$2,000 a day,” says Niels

Stolberg, founder and CEO of Beluga Shipping. Later this year, the kite installed to MV “Beluga SkySails” will be scaled up to 320 m² in size which will also double the effects. Then, bunker consumption can possibly be reduced by 20-30%. The SkySails system is a way out of the direct dependence on the oil price, which has been climbing from one record high to another for some years. Also, SkySails represents the only suitable model to make effective use of cost-free wind energy, as it strongly and steadily prevails on sea; no bothersome masts on deck, no restriction of stowage space, no hindrances to loading and discharging, and no risk to crew, cargo or ship.

“The SkySails system allows for economic and ecologically responsible entrepreneurial action at the same time,” says Niels Stolberg, pointing out the second benefit of the unrivalled towing kite system. So far, the maritime industry is one of the greatest contributors to environmental pollution worldwide. Nearly 1bn tonnes of CO₂ are emitted each year on the oceans, for example. The SkySails system as applied

on MV “Beluga SkySails”, will significantly reduce the emission of harmful greenhouse gases. This environmental aspect has impacted Beluga’s decision to implement this new technology to a great extent. MV “Beluga SkySails”, hence, is the visible result of a pioneering spirit promoting both economy and ecology.

The SkySails system, developed and distributed by Hamburg-based company SkySails GmbH & Co. KG, and seeing its launch in commercial applications by Beluga Shipping, mainly consists of a towing kite with towing rope, a launch and recovery system and a control pod for automatic operation. Instead of a traditional sail fitted to a static mast, the only connection this kite has to the ship is the towing rope. Hence, the aerodynamic effectiveness of the paraglider-like kite can best be used through dynamic flight manoeuvres ahead of bow in up to 300m height, while the heeling which a large lever arm usually causes to sailing ships is minimal and in fact negligible on MV “Beluga SkySails”, as a result of the spatial separation of the kite and the vessel.



Being a sailor himself, Niels Stolberg is familiar with the effects of the wind and therefore convinced that the system functions effectively. Master Mariners and other sea personnel working for Beluga Shipping spent intensive training time on board a test ship in the Baltic Sea for several months, in order to become acquainted with the individual components and with the system before the vessel headed towards Venezuela.

The utility will certainly increase when handling the towing kite system will have become a question of routine to the crew, which is going to benefit as well since 20% of the savings are distributed to the people onboard.

Being persuaded of the efficiency of the system and taking into account the positive effects of using alternative propulsion forces, Beluga Shipping plans to equip another two multipurpose heavy-lift project carriers of 20,000 tdw, that are currently under construction, with towing kites as large as 600 m². Then, fuel savings in the dimension of up to ten tonnes daily can be

anticipated, corresponding to a reduction in ship voyage expenses of more than US\$6,000 per day.

These vessels, belonging to the 16 vessels of the so-called Beluga P1- and P2- series, each identical in design, create the new generation of clean, open-box shape carriers like any other Beluga vessel constructed to enable flexible assignments such as shipping plant equipment, windmill equipment, transformers, LNG cold boxes or harbour cranes. They provide for up to 20,000 tdw tonnage and onboard crane gear with lifting capacities of up to 1,400 tonnes in tandem usage. By the end of 2010, they will take the Beluga fleet size to a strategically effective number of 75 units.

The intensive core business, however, does not account for the only activities Beluga Shipping is focussed on. Assuming social responsibility as well is regarded as a corporate obligation to the company. With the aim of offering optimal support and rare practical experience to junior nautical staff, the Beluga Sea Academy was established in 2005. Per year up to 160

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cadets are trained onboard six specifically equipped training vessels which, of course, fulfil commercial operations simultaneously. Within the upcoming months, a maritime campus, incorporating education, research, industry and housing facilities in one area, will be built in the city of Elsfleth, near Bremen, to further improve the education and training of future seafarers. So in the end, the growing number of vessels can be manned with highly motivated and highly qualified staff. ■

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