

## Wärtsilä dual-fuel engine breakthrough in Korean LNG carrier newbuilding market

Wärtsilä has received an order from Hyundai Heavy Industries Co. Ltd. of Korea to supply four sets of Wärtsilä 50DF dual-fuel engines to power a series of 155,000 m<sup>3</sup> dual-fuel-electric LNG carriers, with an option on four more sets. The ships were ordered by BP Shipping of the UK and are scheduled for delivery from Hyundai Heavy Industries' shipyard in Ulsan and Hyundai Samho Heavy Industries' shipyard in Mokpo from the middle of 2007 onwards. Each ship will be equipped with two 12- and two 9-cylinder Wärtsilä 50DF dual-fuel engines with an aggregate power of 39.9 MW. Delivery of these engines from Wärtsilä's Trieste factory will commence in early 2006. This latest dual-fuel engine order signals the breakthrough of the Wärtsilä dual-fuel engine on the high-volume Korean LNG carrier newbuilding market.

The combination of proven Wärtsilä dual-fuel engine technology and the proven electric propulsion system brings to the market an LNG carrier machinery concept that offers significant benefits compared to classical steam turbine installations and other currently emerging alternative machinery concepts for LNG carriers. "The dual-fuel-electric machinery concept is far ahead of the competition in terms of environmental friendliness, reliability, redundancy, maintainability, fuel flexibility, as well as operating economy and safety," says Mikael Mäkinen, Group Vice President, Wärtsilä Ship Power. "The recent introduction of heavy fuel oil as fuel for the engine's 'diesel mode' further enhances fuel flexibility and provides ship operators the highest degree of control over operating costs under fluctuating gas and liquid fuel prices."

The first dual-fuel electric LNG carrier, the 75,000 m<sup>3</sup> Gaz de France Energy, is scheduled to leave Alstom Chantiers de l'Atlantique of France by the end of this year to enter service for Gaz de France. Gaz de France Energy is equipped with four 6-cylinder Wärtsilä 50DF dual-fuel engines with a combined power of 22.8 MW. The 154,000 m<sup>3</sup> dual-fuel-

electric LNG carrier Provalys is scheduled for delivery by Chantiers de l'Atlantique to Gaz de France by the end of next year. Provalys will be equipped with three 12- and one 6-cylinder Wärtsilä 50DF dual-fuel engines, which were recently delivered from Wärtsilä's Trieste factory, with a total power of 39.9 MW. Further dual-fuel engine orders for LNG carriers are imminent.

Among further applications of Wärtsilä dual-fuel engines are two FPSOs that use natural gas as fuel and two dual-fuel-electric offshore supply vessels that use LNG as fuel. In addition, for land-based power plants twenty-three Wärtsilä dual-fuel engines are in service or on order. ■



Mr Bob Malone, CEO, BP Shipping Ltd. and Mr Yu Kwan-hong, President and CEO of Hyundai Heavy Industries Co. Ltd. at the contract signing ceremony.

## Dual-fuel-electric machinery gains ground in LNG carrier newbuilding market

Wärtsilä has received an order from Alstom Chantiers de l'Atlantique of France to supply one set of Wärtsilä 50DF dual-fuel engines to power the 154,000 m<sup>3</sup> dual-fuel-electric LNG carrier Gaselys. This ship, carrying hull number P32, was ordered a few months ago by a joint-venture between Nippon Yusen Kaisha (NYK) of Japan and Gaz de France and is scheduled for delivery from Chantiers de l'Atlantique's shipyard in Saint Nazaire at the end of 2006. Just like her

sister ship Provalys, she will be powered by three 12-cylinder and one 6-cylinder Wärtsilä 50DF dual-fuel engines with an aggregate power of 39.9 MW. Delivery of these engines from Wärtsilä's engine factory in Trieste, Italy, is scheduled for October 2005. ■