

# Designs for life - from initial ship design right through to its end-of-life, Wärtsilä can guide the way

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For Wärtsilä, a company synonymous with being a total ship solutions provider, the December 2006 acquisition of German ship designer SCHIFFKO can only be viewed as a logical step forward.

Of course, Wärtsilä has itself presented a number of innovative ship designs, such as the CODED panamax cruise ship concept and the LNG-fuelled ropax, but these have acted primarily as a catalyst for propulsion projects. These were concept designs that merely tickled and inspired the market.

But with SCHIFFKO's integration into

the Wärtsilä network, the company can now offer owners complete ship design and newbuild consultancy services, together with the dialogue it can provide on whole ship processes, including propulsion, automation, and systems integration.

The acquisition means that Wärtsilä can, as a project partner, be even more resourceful and valuable in bringing technology concepts and solutions to the discussion table, since it is now in a position to understand the whole ship, not just the engineering products within the ship. Through the integration of SCHIFFKO designs and services, Wärtsilä can now offer customers initial

design (general arrangement), basic design (classification drawings), detailed design (production drawings), as well as upgrade and conversion designs. It has the capability to oversee whole projects from the initial concept, on to the building and operation, and through to the life after sale stages.

Wärtsilä will continue to focus on SCHIFFKO's established presence in the containership, research and special ship sectors, and will update existing SCHIFFKO designs. New designs, such as the recently introduced CV 7300 RESOLUTE (Reliable, Economic, Safe Operation, Leading Ultimate Technology



■ Fig.1 - The recently introduced CV 7300 RESOLUTE-class containership design.

and Engineering)-class containership design, will continue to be promoted.

The CV 7300, an 85,000 dwt, 322.34 m long vessel, capable of 25.5 kts with a power output of 62,920 kW, features the company's state-of-the-art design and engineering capabilities. One of the most noticeable innovations of this vessel type is the modular compact deckhouse, which allows for more crew comfort and maximum weight saving (40%).

The effective mass production process for the modules means that the fabrication and assembly time is much faster than for a conventional deckhouse design, and the cost is 40% lower. The U-shaped outline of the deckhouse also enhances optimisation of cargo space. The CV 7300 can accommodate a wide range of container sizes, and facilities for temperature controlled freight are also provided.

In addition to the successful CV 1100 series, which with more than 130 vessels built is the most successful 1100 TEU container feeder design ever, the company has also released a new design, the SCHIFFKO Reefer 350XT. This is intended to meet demand for reefer container capacity. This new design can accommodate 363 high cube FEUs and 118 standard TEUs.

Wärtsilä will, in time, develop its design portfolio to include other vessel types but in the meantime, will continue to design containerships, offshore vessels and other specialist ships.

In the 1960s, SCHIFFKO was instrumental in pioneering the 3-D CAD system. Its customised software was eventually merged into the KCS group system, to become the revered Tribon ship design software – a system that will still be used following the acquisition, although other programmes will be used too for hull, outfitting and for the piping designs system. Further software applications include the BRAVO system, FORAN 60 and ShipConstructor, as well as the general CAD software AutoCAD and ANSYS for FE-calculations. Today all design work at SCHIFFKO is done using computers, and traditional manual drafting is no longer practised.

Wärtsilä can also offer customers the latest advanced developments to the SCHIFFKO Combi System. These advancements combine a

larger number of integrated programs and functions for cargo handling, monitoring, control and alarm, as applicable both onboard and ashore.

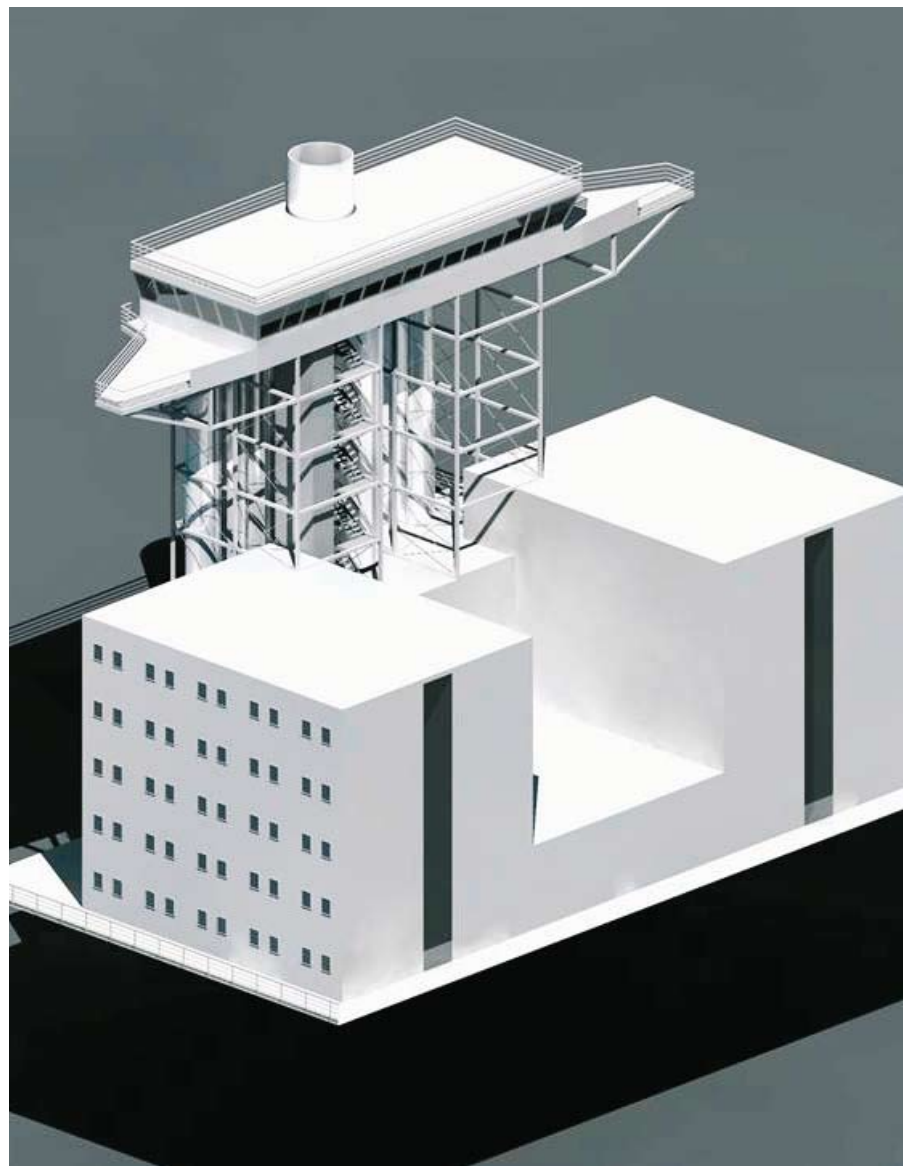
The application area covers the ship's safety operation, nautical route planning, monitoring and alarm system, ship related administration and communication, life cycle maintenance, crew training and system simulation.

Ships can now be designed that are energy efficient, operationally efficient, and environmentally efficient. With Wärtsilä's deep understanding and knowledge of energy management, which places the company in a very unique

position as a ship designer, the company has the potential to design ships that out-perform other market designs on operating costs and environmental impact.

Along with its traditional and established Wärtsilä products, the company can now offer initial/basic/detailed designs for:

- Container, multi-purpose and reefer vessels
- Fast patrol and rescue boats
- Biological, hydrographic, geophysical and oceanographic research vessels and seismic survey vessels
- Pipe laying barges and vessels
- Crane barges and vessels. ●



■ Fig. 2 – The modular, compact deckhouse of the CV 7300 containership.