

Filtration Group Application example – Separation technology

Chemical-free ballast water treatment – OPS 800



Marine Industry

Initial situation

In order to curb the unwanted spread of living organisms through ballast water, the International Maritime Organization (IMO) is drawing up a convention to regulate the handling of ballast water in the future. The internationally binding convention should come into force for newbuildings from 2012, or 2016 at the latest. By 2016 at the latest, the convention will thus be applicable law for the international merchant fleet. Step by step, the entire world merchant fleet must be equipped or retrofitted with ballast water treatment systems.

Solution statement

These container ships will each be equipped with an OPS-800 system, which treats a ballast water flow rate of 800 m³/h using proven Filtration Group technology in accordance with the applicable IMO D2 standard.

The OPS unit consists of:

- A maintenance-free-pre-filter unit
- An automatic backwashing main filtration unit
- Disinfection treatment with low pressure UV radiation

Even the stricter requirements of the USA (USCG standards) can be met without any problems, as the IMO specifications were clearly exceeded in both land and sea tests.

Customer value

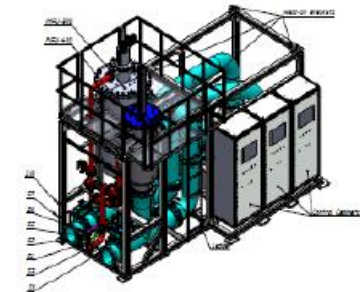
- Reliable operation due to many years of testing of all components in the system
- Effective filtration through two-stage pre-treatment
- Energy-efficient disinfection by UV low-pressure lamps
- No addition of chemicals necessary
- Optimal adaptation to new existing vessels due to modular design of the OPS system
- Worldwide sales and service by Filtration Group Industrial



Challenge

A major shipping company from Hamburg, Germany, had 6 ships of 6,900 TEU (Twenty Foot Equivalent Unit) each built at the world's largest shipyard of Hyundai Heavy Industries (HHI) in Ulsan, Korea.

The 332-meter-long and 48.2-meter-wide container ships were to be equipped with a ballast water system that not only protects the environment by meeting IMO specifications but also impresses with its energy-efficient operation and low maintenance requirements.



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