EXEMPLAR FSRU TANKER

Filtersafe Case Study

BACKGROUND & PROBLEM

Excelerate Energy owns and operates one of the largest fleets of Floating Storage Regasification Unit (FSRUs) in the industry and has over 15 years of development, construction, and operational experience. The company's FSRUs are permanently moored to a docking facility at a location close to a market access point and tailored to fit specific environmental requirements.

For its latest charter, the FSRU Exemplar, Excelerate Energy needed a high-capacity ballast water management system (BWMS) capable of ballasting in the most challenging harbor conditions. To ensure efficient operations, the vessel needed a solution that could provide a flow rate of 5,000 m^3/h and fit into the limited space available in the engine room, to properly support the Exemplar's 150,900 m^3 storage capacity.

INDUSTRY

Maritime

APPLICATION

High Performing BWMS

FILTERSAFE

- 20+ years filtration experience
- 3,500+ installations
- 10 micros upwards filtration
- 50-6,870 m^3/h flow rates
- Modular configuration

FILTERSAFE SOLUTION

Excelerate Energy chose a De Nora BALPURE system incorporating **Filtersafe** filtration. Two BallastSafe filters with a capacity of 2,500 m3/h were installed and connected to the same flushing line. **Filtersafe**'s engineers recommended that a suction pump be installed to ensure that there was enough pressure to move the water over the relatively long distances required to send it overboard. A check valve was installed to prevent backflow pressures from damaging the system.

Filtration Degree	40 µm
Filters	BSE1004 x 2
Flow Rate	5,000 m^3/h (2,500 m^3/hr each)
Installation Year	2021
Client	De Nora
End User	Excelerate Energy

marine@filtersafe.net

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BENEFITS TO CUSTOMER

The **BallastSafe** Series features a modular design that allows for any possible configuration and is particularly helpful in retrofit installations. BallastSafe filters can be installed vertically or horizontally to provide the flexibility needed in tight spaces, and the vertical filter configuration operates in exactly the same manner as a horizontally positioned unit and to the same performance standard, whilst substantially reducing its area footprint. Filter orientation can be decided in as little as eight weeks before delivery.

Filtersafe's automatic screen filters utilize unique, patented, and cutting-edge technologies to ensure the high performance demands of the market are met. They are a dependable filter choice, are approved by all major class societies, and approved to work with most IMO and US Coast Guard leading BWMS systems.

The **smartweave™** screen technology ensures minimal sediment intake to the disinfection process and ballast tanks. Multiple screens can be installed in a single pressure vessle. In addition, two shorter screens are connected and installed to operate as one long screen within the vessel, thereby reducing service space requirements.

While this installation is design to be compatible with standard 'Safe Zone' requirements, **Filtersafe** offers explosion proof (EX ia) and pneumatically operated models for hazardous areas. A low operating pressure capability (1.6 bar/26psi) means lower ongoing energy costs.
Established in 2004, Filtersafe has grown to be a world leader in seawater filtration, and our filters are installed in over 3,500 ships around the world, filtering over 25% of the world's ballast water. We have manufacturing facilities, offices, and support personnel located across the globe.

Reach out to us to discuss what system and filter is best for your needs.

Have you seen our filters installed on a ship? click here to watch our video case study!

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DE NORA EXCELERATE ENERGY