

## Press Release

### Cruises very popular with Germans

#### Freudenberg Group products for cruise ships

**Weinheim, Germany. August 7, 2018. Cruises are growing in popularity among German vacationers. In 2017, 2.18 million Germans traveled on cruise ships, more than ever before. The passenger numbers have thus increased by 8.4 percent, according to the German Travel Association (DRV) and the Cruise Lines International Association (CLIA). Germany is thus ranked third when it comes to cruises, behind the US and China. The Freudenberg Group offers innovative mobility solutions that make cruise ship travel better.**

Innovative technologies make sure that passengers and crew sail safely and comfortably. One example is the seals from the Freudenberg Sealing Technologies Business Group. The highest possible functional reliability and long maintenance intervals are important for ships. Seals need to permanently prevent oil leaks; on stormy seas, in constant contact with salt water and salty air, in arctic cold and tropical heat. Their reliability benefits more than the operators, vacationers and crew. They are also key to helping marine species: Leak-free seals protect marine flora and fauna.

Freudenberg produces PTFE seals for ship engines and - further down the powertrain towards the propeller - the stern tube seal. Hydraulic sealing systems are used on deck or in the rudder. Rotation seals help keep things on course. TBM seals allow the drive to swivel beneath the hull for optimal maneuvering. When the ship finally drops anchor in the harbor, Freudenberg seals also used in the anchor winch.

#### Filters keep air clean and protect engines

Pocket and cassette filters from the Freudenberg Filtration Technologies Business Group clean the air in cruise ship climate

#### Press Contact

Dr. Astrid Kasper  
Freudenberg & Co. KG  
Director Corporate Communications  
Tel. 06201 80-6688  
Fax 06201 88-6688  
[astrid.kasper@freudenberg.com](mailto:astrid.kasper@freudenberg.com)  
[www.freudenberg.de](http://www.freudenberg.de)

Martina Muschelknautz  
Freudenberg & Co. KG  
Corporate Communications  
Tel. 06201 80-6637  
Fax 06201 88-6637  
[martina.muschelknautz@freudenberg.de](mailto:martina.muschelknautz@freudenberg.de)  
[www.freudenberg.de](http://www.freudenberg.de)

control and ventilation systems as well as the engine room. The filters protect diesel engines from contamination for example. The biggest challenge on board is the damp, salty air. Both filter types are well-suited for such use thanks to their excellent droplet separation capacity. Due to their extreme robustness, greater separation levels, low pressure differential as well as the longer service life, the filters provide reliable protection and secure motors and system performance. The filters are placed in installation and mounting frames planned and installed by Freudenberg experts.

### **Bright lubricant works even with salt water and heat**

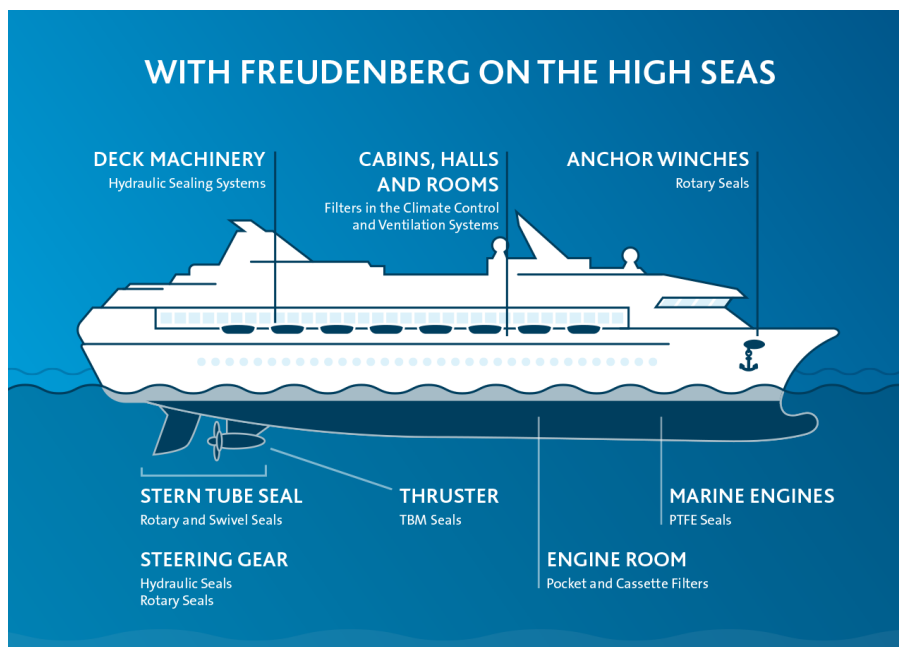
Dark, graphite lubricants on ship cables and pulleys serve their purpose but are unpleasant if they drip. Conditions at sea involve salt water, tropical and arctic temperatures and constant strain, posing a special challenge for lubricants. So Klüber Lubrication developed a high resilience adhesive lubricant that can master the challenges of the high seas and has a bright color for cleaner appearance, particularly on the life boat decks. As an operating and priming lubricant for open gears, it remains highly adherent even at high temperatures and maintains excellent lubricating and corrosion protection properties even under the influence of salt water. The lubricant also extends the refill intervals, significantly lowering consumptions and costs.

### **Creative carpeting from recycled polyester**

Water lilies or a wooden walkway: High performance spunbonded nonwovens are used as backing material for creative cruise ship carpets. The tufted carpet backing materials from the Freudenberg Performance Materials Business Group make it possible. They are made from recycled polyester and free from chemical binders. Working closely with customers, Freudenberg Performance Materials adapt the spunbonded nonwovens from

recycles to the ever-expanding technical demands of state-of-the-art carpet design.

The solutions from the Freudenberg Technology Group are invisible to passengers and improve safety, appearance and comfort on board cruise ships. So passengers can arrive safely and enjoy their vacation.



### About the Freudenberg Group

Freudenberg is a global technology group that strengthens its customers and society long-term through forward-looking innovations. Together with its partners, customers and research institutions, the Freudenberg Group develops leading-edge technologies and excellent products and services for more than 30 markets and for thousands of applications: seals, vibration control components, nonwovens, filters, specialty chemicals, medical products, IT services and the most modern cleaning products.

Strength of innovation, strong customer orientation, diversity, and team spirit are the cornerstones of the Group. The 169-year-old company holds strong to its core values: a commitment to excellence, reliability and pro-active, responsible action.

In 2017, the Freudenberg Group employed approximately 48,000 people in some 60 countries worldwide and generated sales of more than €9.3 billion. For more information, please visit [www.freudenberg.com](http://www.freudenberg.com).

