Blog #2 | Word Count: 340

**Revolutionizing Marine Shipping (Part 2)**

Marine Shipping is undergoing a major transformation as it seeks to decarbonize. Will wind power be part of the solution?

*Continuing where we left off previously …*

**1. Hard and Soft Sails**

To many people, sails are as old as shipping itself. So, it’s no surprise that in the quest to reduce carbon emissions, sails are making a comeback harnessing new technologies and materials that provide a more modern take on the cloth, flax and linen sails of earlier times. This new generation of sails fall into two main categories – hard and soft – and are designed to assist other methods of propulsion including engines. It’s estimated that they can achieve fuel savings of 30% depending on weather conditions during the voyage. Most sails can be lowered and stored when not in use due to their side-mounting when unloading or taking on cargo. There are six large ship projects using soft sails and more than ten using hard sails. Find out more about this system here.

**2. Flettner or Rotor Ships**

Although they rely on the wind, the special vertical spinning cylinders or rotors of this design do not look anything like a traditional sail. Tubes are mounted vertically on the deck of the ship and look like upright pipes. It is the system that has been most widely adopted by the shipping industry and that is in active service.

They depend on an aerodynamic phenomenon for propulsion called the Magnus effect. This phenomenon was named after the 1850s German physicist, Heinrich Magnus, who noticed that when a spinning object – such as a ball – moves through the air, it experiences a sideways force. In the case of the ship, when the wind blows from the side of the spinning rotors, the Magnus effect creates a forward thrust. The rotors on the ship are not powered by the wind, and must have their own small motor so that they spin. A simple explanation of the principle and the aerodynamics behind it is provided in this video clip.

*With such rapid progressions & advancements in the ever-changing field of technological innovations, Westline Shipping has introduced several revolutionary changes in maritime shipping, which also envelope the faculty of Careers in Merchant Navy,*

*adhered to many new introductions in training for Merchant Navy!*