

INTRODUCTION TO WIND-ASSISTED PROPULSION

COURSE OBJECTIVES

To provide maritime professionals with a comprehensive understanding of Wind-Assisted Propulsion Systems (WAPS), encompassing aerodynamic fundamentals, technology types (Flettner rotors, suction sails, kite sails, and rigid wing sails), onboard operations and crew handling, fuel optimization strategies, and structural installation methods — enabling safe, efficient, and regulatory-compliant integration of wind propulsion into modern shipping operations.

ABOUT THE COURSE

This course offers a comprehensive technical and operational grounding in Wind-Assisted Propulsion Systems (WAPS) for the modern maritime professional. Beginning with aerodynamic fundamentals — lift, drag, and the Bernoulli principle — participants build a firm theoretical base before exploring the four principal WAPS technologies: Flettner rotors (Magnus Effect), suction sails (boundary layer control), kite sails (high-altitude wind capture), and rigid wing sails (precision airfoil geometry). The course then transitions to onboard operations, equipping crew with the knowledge to deploy, monitor, and maintain WAPS safely — including automation logic, storm protocols, harbor maneuvering, rudder and thruster interactions, fuel savings monitoring, and performance reporting. The final section addresses installation methods for both retrofit and newbuild vessels, covering structural engineering requirements, stability assessments, and class society approval processes.

PARTICIPANTS

Deck Officers and Ship Masters, Marine Engineers, Ship Operators & Fleet Managers, Naval Architects and Technical Superintendents, Safety Officers and Maritime Naval Architects and Technical Superintendents, Safety Officers and Maritime Compliance Staff, Shipbuilding and Retrofit Engineering Teams

DURATION

One day (Six Hours)

KEY TOPICS

- Introduction to Wind-Assisted Propulsion Systems (WAPS)
- Types of Wind Propulsion Technologies and Aerodynamic Principles
- Onboard Operations, Crew Handling, and Safety Procedures
- Fuel Optimization and Energy Efficiency Strategies
- Structural Installation, Maintenance, and Regulatory Compliance

TRAINERS



CE Saurabh Kaushik

Mr. Saurabh Kaushik joins Charismight as Superintendent (Technical). A veteran maritime professional, he brings over 20 years of experience operating LPG, LNG, and Ammonia carriers. His expertise in operations and training strengthens Charismight's commitment to excellence.