

# PROPULSION SYSTEM INTEGRATION (PSI)

## COURSE OBJECTIVES

- Understand the correlation between resistance, speed and powering of ships
- Interpret results of model tests to arrive at powering estimates after allowing for various margins
- Understand the design consideration involved in selection of marine propulsion systems in the light of mission statement of the vessel as specified
- Interpret the data provided by manufacturers of individual machinery/ components of a propulsion system (prime mover, gearbox, shafting, propeller, Power Take-off, shaft generator, etc.) and match their individual performance characteristics to propose a stable propulsion system configuration, which will meet the specified operational requirements
- Understand power management scenarios in different operating conditions and propulsion controls
- Carryout detailed system integration by applying the learning through a case study

## ABOUT THE COURSE

Choosing the propulsion systems could become a challenge for non-conventional and specialist vessels – such as naval ships, drill ships, vessels engaged in offshore services, etc., which are typically engaged in multi-tasking in a wide range of operating conditions.

## PARTICIPANTS

Engineers and Naval Architects engaged in design of ships, engineers and managers working in shipyard design and drawing office, consultants and ship owners' technical managers.

## DURATION

Four days

## KEY TOPICS

- Correlation between speed and powering
- Interpretation of mission statement and impact of operating conditions on propulsion system
- Interpretation of manufacturers' data in proposing a propulsion system
- Power management in different operating conditions
- PSI for a given vessel/hull through a case study