



## ESCORT TUG OPERATIONS FOR PILOTS

(RE-010-014-ENG)

Objectives:	Give pilots an overview of escort tug operations principles in narrow channels.
Duration:	14 hours (2 days)
Schedule:	Begins at 08:30 <i>This schedule may be tailored for specific requirements.</i>
Participants:	A maximum of three (3) participants.
Prerequisite:	Completion of a recognized AZIMUTHING PODDED PROPULSION course and, holding a pilot's licence or being in the process of acquiring such a licence.
Teaching strategies used:	Theoretical explanations with PPT presentations. Case studies, demonstration by the Instructor/Pilot and exercises on the Navigation Simulator.
Training activities:	Theory followed by simulation exercises.
Certification:	Issuance of a training certificate.



## Escort tug operations for pilots

### Course outline

The course content is reviewed regularly in order to stay abreast of new technologies and practices currently applied in shipping industry.

The following course outline indicates the subjects that will be discussed. The instructor may change the order of execution or adjust the time depending on the circumstances.

#### DAY 1

1. **Welcome, course registration, handing out course material**
2. **Overview of the course outline**
3. **Ship Assist Tugs comparison with regards to capabilities and limitations**
  - Conventional (Single and Twin Screws)
    - Flanking Rudders
  - ASD (Azimuted Stern Drive without Skeg)
  - RSD (Reverse Stern Drive)
  - VSD (Voith Schneider Drive) - RAVE
  - Tug positioning effectiveness

#### **PPT Ship Assist Tugs**

4. **Escort Tugs: types, definition, capabilities and limitations**
  - ASD (Azimuted Stern Drive with Skeg)
  - VSD (Voith Schneider Drive) with Skeg
    - RAVE – Carrousel
  - Azimuted Tractor Drive
  - Rotor Tug (3 ASD)

#### **PPT Escort Tugs**

5. **Escort Tug Manœuvres**
  - Indirect
  - Direct
  - Powered indirect
  - Transverse Arrest
  - Stop and Hold
  - Indirect Breaking
  - Heads and tails



## Escort tug operations for pilots

### Course outline

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#### DAY 1

##### 6. Familiarisation with Ships bridge simulator equipment:

- ECDIS and Radars
- View controls
- Steering and Propulsion systems
- Communication systems
- Etc.

##### 7. Practical exercises designed to demonstrate the tug manoeuvring characteristics and the tying up procedures to the bow, the stern and the shoulder of a vessel.

- Refresher on the ASD tug manoeuvres

##### 8. Escort Tug Commands and specifications

##### **PPT Escort Tug Commands**

##### 9. Practical exercises in escort mode designed to demonstrate the escort tug commands in a narrow channel

- Powered Indirect mode
- Indirect mode
- Direct mode
- Transition from Indirect to Direct mode



## Escort tug operations for pilots

### Course outline

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#### DAY 2

##### 1. Escort operations

- Overview of various escort operations in different areas
- Escort tug performance comparisons
- New technology pertaining to tug design
- Escort configurations
- Considerations for Ultra Large vessels

##### **PPT Escort Operations**

##### 2. Practical exercises designed to demonstrate escort operations in a narrow channel and the associated tug commands. Different types of large vessels will be used at various speeds (6, 8 and 10 knots) within the operational environmental limits which are encountered in specific Pilotage waters.

- Interventions with different types of emergencies such as rudder or engine failure, in two different configurations:
  - Single escort configuration will be used
  - T2 configuration will be used

##### 3. Practical exercises designed to demonstrate escort operations in a narrow channel and port approaches.

- Two tugs in the T + 1 method used at the typical escort speed.
- Different types of emergency manoeuvres will be practiced.

##### 4. Chocks and Bitts, definition and use.

- Positional efficiency of towline in relation to the tug
- Typical chocks and bitts damages
- Chocks and bitts rating for various class of ships

##### **PPT Chocks and Bitts**

##### 5. Administration

- Course evaluation.
- Issuance of certificates.