AZIMUTH PROPULSION SYSTEMS FOR PILOTS

(AZ-010-014-ENG)

Objectives:	Enable navigators to become acquainted with these modes of propulsion and acquire a good grasp of both the limitations and the advantages of all these technologies.
Duration:	14 hours (2 days)
Schedule:	Begins at 8:30 *This schedule can be modified according to the group's needs or constraints*.
Participants:	Up to 3 participants
Prerequisites:	Holding a pilot's licence or in the process of acquiring such licence.
Teaching strategies used:	Basically, a **hands-on** approach. Brief theoretical explanations and exercises on the Navigation Simulator.
Training activities:	Theory followed by simulation exercises. Discussions among participants are encouraged during manoeuvres.
Certification:	The MSRC issues a participation certificate to all participants.

MARITIME SIMULATION AND RESOURCE CENTRE
271, de l'Estuaire street, Suite 201, Québec (Québec) G1K 8S8
Tel.: (418) 692-0183 • info@sim-pilot.com • www.sim-pilot.com

Course outline

1. Welcome/Registration; visit of the multidisciplinary and the facilities; presentation of the course outline

2. Presentation:
   - 2.1. General information about the various azimuth propeller propulsion systems
   - 2.2. Principles/ Concept/ Limitations/ Advantages of APS (**A**zimuth **P**ropulsion **S**ystems)
   - 2.3. Crash stop
     - 2.3.1. APS way
     - 2.3.2. Indirect way
     - 2.3.3. Full ahead to full astern
   - 2.4. Rudder effect of the pods
   - 2.5. Information on the different ways of manoeuvring ships equipped with **APS**
   - 2.6. Consequences of errors when Pods are not used properly
   - 2.7. Discussions on incidents that have occurred
   - 2.8. Ship consoles
   - 2.9. Operating modes
   - 2.10. Introduction to the various methodologies for helm orders for APS and variations found in the maritime industry

3. Exercises

The MSRC has an impressive inventory of exercises to cover the various navigation conditions encountered on the St. Lawrence River. The instructor will choose the exercises according to the groups and their specific needs.

Other geographical locations, normally visited by cruise ships, are also available: the ports of Montreal, Vancouver, Halifax, St. John's, Newfoundland, Saguenay Fjord, Gulf Islands (west coast), and New York.

The instructor offers exercises, but participants have the freedom and are encouraged to ask for special conditions for their exercises.

Course outline .....continued

Each participant will have at his disposal a gateway with control station to maximize the practice time.

3.1. Familiarization with the wheelhouse and navigational instruments

3.2. Practice in open water to properly assimilate the characteristics of this type of propulsion.

3.3. Exercises proposed by the instructor on the various ways to manoeuvre several vessels.

3.4. Exercises in various weather conditions to improve manoeuvring techniques

3.4.1. Unberthing without external factors

3.4.2. Unberthing with currents

3.4.3. Unberthing with currents and wind

3.4.4. Mooring without external factors

3.4.5. Mooring with currents

3.4.6. Mooring with currents and wind

Some of our exercises are precise reproductions of manoeuvres performed by certain liners in the Port of Québec. Participants will have the opportunity to perform these manoeuvres, should they so wish.

4. Training analysis and evaluation