POST PANAMAX VESSELS:

NEW CHALLENGES FOR PILOTS

(PP-670-014-ENG-HP)

Objectives:	Analyzing the challenges of Post-Panamax vessels on pilotage: transit in confined waterways, ship handling, traffic management, tug requirements, infrastructures and seaways limitations.
Duration:	14 hours (2 days)
Schedule:	Begins at 08:30 *This schedule may be tailored for specific requirements.*
Participants:	Three (3)
Prerequisite:	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.

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Course outline

1. **Evolution of the container ship –** What is new?
    a. Size
    b. New Panamax vs Panamax
    c. Evolution

2. **Introduction –** Ship models presentation
    a. Perseus
    b. Hydrus

3. **New Panamax ships –** Challenges
    a. For the vessels
    b. For the ports & seaways
    c. For the pilots

4. **Effects of Wind**
    a. Description of wind forces
        i. On the beam
        ii. On the bow
        iii. On the stern
    b. Drift
    c. Leeway
    d. Increase in draft due to heel

5. **Transit**
    a. Speed
    b. Meeting
        i. Room available vs. vessel size
        ii. Critical locations
    c. Traffic density
    d. Traffic management
    e. Effect of wind during transit

6. **Manoeuvring**
    a. Bollard pull required
        i. Basic bollard pull required
        ii. Aerodynamic resistance
        iii. Hydrodynamic resistance
    b. Effects of under-keel clearance on current force

7. **Swept Path –** Crab angle

8. **Surge**
    a. Effects of passing ships
    b. Mooring loads

9. **Turning Basins –** Dimensions vs ship size

10. **Summary**
    a. Evaluations
    b. Conclusion