

	<i>HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT SYSTEM</i> 85.0: Influence of current, wind, water depth, displacement and machinery status on handling characteristics and stopping distances <i>ON THE JOB TRAINING</i>	OJT : 085 Page : 1 of 2 Date : 07 Nov 2025 Rev : 01 Appr : BMM
---	--	---

VESSEL : _____

DATE : _____

Training: Influence of current, wind, water depth, vessel displacement and machinery status on handling characteristics and stopping distances of the ship.

The handling characteristics and stopping distances are correct in the environment e.g. the wind speed/ direction, sea condition and water depth etc when this data is obtained under controlled conditions, at light displacement during sea trial.

The handling characteristics and stopping distances of a ship are influenced by the current, water depth, vessel displacement and the status of its machinery. Any change in the environmental condition may affect the handling characteristics and stopping distances of a ship.

Influence of Current

- The direction and strength of the current can affect the ship's manoeuvrability. A strong current can push the ship off course, making it harder to maintain a straight path.
- Currents can alter the turning circles of a ship, making it more difficult to execute precise manoeuvres.
- Strong currents can increase the stopping distance of a ship as they can either aid or hinder the ship's deceleration depending on their direction.

Influence of Wind Speed and Direction

- Wind can exert significant forces on a ship, especially on the exposed areas above the waterline.
- The larger the exposed area, the greater the effect of the wind on the ship's handling.
- Headwinds can slow down the ship, while tailwinds can increase its speed

Influence of Water Depth

- Shallow waters can increase resistance on the ship's hull, affecting its speed and manoeuvrability.
- In very shallow waters, the ship's hull can interact with the seabed, causing additional resistance and affecting handling.

Vessel Displacement

- Vessel displacement has a marked on stopping distances, turning circle and effect of the rudder. In shallow water and channels added effects of bank suction, bank cushion and squat will also affect the optimal displayed data.

Influence of Machinery Status

- The performance of the ship's engine directly affects its handling characteristics. A well-maintained engine ensures better control and responsiveness.
- The status of the propulsion system, including the rudder is crucial for manoeuvring. Any malfunction can lead to reduced control over the ship's movements.

Combinations of conditions

It is important for the bridge team to be aware that no one influence will act alone, but the effect on the vessel will be a combination of the factors above. As many of these are caused by dynamic external forces, they may not be the same for any determined length of time. Constant monitoring and monitoring of all the influencing factors must be carried out during a sea passage or pilotage.

	<i>HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT SYSTEM</i> 85.0: Influence of current, wind, water depth, displacement and machinery status on handling characteristics and stopping distances <i>ON THE JOB TRAINING</i>	OJT : 085 Page 2 of 2 Date : 07 Nov 2025 Rev : 01 Appr : BMM
---	---	--

Above has been read, practically test carried out and understood.

C/O

2/O

3/O

D/C

Verified by: Master _____

Please file in OneDrive/ 3.2.3 Training folder