**Lesson Overview: Small Boat Coming Alongside**

**Learning Outcomes**

**LO 1** - The student will know all of the steps necessary to conduct the operation of having a small boat come alongside the vessel

**LO 2** - The student will know all safety concerns and safety precautions which are associated with the operation of a small boat coming alongside the vessel

**LO 3** - The student will understand the different positions and responsibilities of each position. The student will also understand how all of the positions interact with each other and how the various steps of each position rely upon the others.

**Lesson Structure:**

 **Phase 1: In-Class Discussion**

 The Teacher will open a discussion, covering the steps and safety concerns related to the operation of a small boat coming alongside a larger vessel. The Teacher will also discuss which types of operations this usually takes place onboard a commercial vessel including during a Pilot Transfer and while recovering a Fast Rescue Boat.

**Phase 2: View 360 Degree Videos**

First print out the Lesson Worksheet so that you can complete the answers after watching the videos. Also, complete the corresponding quiz for each 360 Degree Video after you have watched the video. These quizzes will help you determine if you are learning the material.

**Phase 3: Classroom Review**

All of the students will meet with the teacher and have another discussion to review and discuss the entire operation.

**Phase 4: Final Test**

The students will then take the Final Test, demonstrating their level of knowledge and achievement of the Learning Outcomes

**Required items within each Learning Outcome which must be demonstrated**

**LO 1: Steps necessary to conduct the operation of having a small boat come alongside the vessel include**:

 Bridge:

* Check area for traffic or navigation issues
* Come to a steady course and speed which creates a lee for the vessel
* Give small boat permission to come alongside
* Maintain course and speed
* Once small boat is away, you may alter course and/or speed

Small Boat

* Radio permission to come alongside
* Approach from astern
* Identify point on vessel you wish to come alongside at (pilot ladder or painter)
* Slowly move forward on the vessel until you are online with the intended point (pilot ladder or painter)
* Be careful of the vessel’s wake
* Adjust speed to match vessel’s speed alongside the intended point
* Slowly move in towards the intended point, be careful of the vessel suction, it should pull you into the side of the vessel and hold you there
* If using a painter, attach the painter to the forward point of your vessel
	+ Slowly reduce speed of small boat until the painter is pulling you alongside the vessel
	+ Attach other lines moving forward to aft

Bow

* Lower painter down to small boat
* Pay out line as small boat moves down side of vessel
* When small boat is appropriate location, hold painter and make off
* Pay attention to information coming from small boat, if they say to stop the operation and bail out, release all tension on the painter

**LO 2: Safety Concerns for operation of a small boat coming alongside**

* Snapback – lines under extreme tension can snap with extreme force, easily killing anyone nearby. Make sure no one is standing in snapback zones. Inspect the lines for signs of line rot, sun damage, or excessive wear which will increase the risk of the line snapping. Be aware of excessive tension, if the line looks like it will snap, let people know and ease the line.
* Small Boat Motion due to weather/seas – Create a lee to help reduce the amount of motion for the small boat. If the small boat is rolling or pitching excessively, people can be thrown out of the small boat causing them to potentially drown or be crushed by the small boat. If weather is too severe, do not conduct the operation.
* Vessel Suction – This is an interaction between the vessel and the small boat which occurs due to physics and the principles associated with a vacuum. It can pull the small boat into the vessel. Try to let the bow of the small boat touch the vessel first so that the stern is sucked in by the vessel suction last. This will allow more control of your small boat.
* Vessel Wake – The vessel will create a significant wake or wave from the vessel pushing through the water. If you get caught on top of the wake, it is difficult to steer. Try keeping on one side or the other.
* Vessel Safety – The vessel must maintain their course and speed through the entire operation. If the vessel alters their course or speed, the small boat could be crushed by the vessel. This makes checking the vessel’s surroundings critical. Look ahead for any potential traffic issues as well as any navigation issues which may be experienced in the future.

**LO 3: Interaction between positions**

* Vessel must maintain course and speed – communication between the vessel and the small boat is critical. Small boat cannot approach the vessel until the vessel has granted permission
* Small boat must attach painter and the movement of the ship can make this dangerous as a hand can be crushed if it caught between the painter and the forward point of the small boat if there is too much tension. Communication between the bow and the small boat is critical. The bow cannot take tension on the painter until the small boat has attached the painter.
* Small boat can be pulled under the vessel or flipped due to instability of the small boat and tension of the painter – if anyone yells bail out or stop operation, tension must be released on the painter and then painter released
* Snapback occurs under extreme tension – snapback can kill anyone on the small boat or the bow. If anyone yells bail out or stop operation, tension must be released on the painter and then painter released

**Rubric for Final Test**

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| --- | --- | --- | --- | --- |
|  | Significant Issues (1 Point) | Approaches Standard(2 Points) | Standard(3 Points) | Exceeds Standard(4 Points) |
| Content | The essay did not address the question and content is unrelated | Answer is incomplete. Answer contains some errors in the discussion | Answer is complete. Answer contains only a few errors and in discussion  | Answer is complete and contains no errors in the discussion |
| Thoroughness | Demonstrates significant misunderstanding | Demonstrates a moderate level of understanding | Demonstrates a competent level of understanding  | Demonstrates a high level of understanding |
| Organization/Logic | Weak organization, sentences are rambling, or ideas are repeated. Does not demonstrate connections being made between different points of view | Minor problems of organization or logic. Demonstrates some connections are being made but needs work on transitions between ideas | Clear and logical presentation which demonstrates a good understanding behind the connections and interaction between the points of view | Clear and logical presentation which demonstrates a high level of understanding behind how the points of view connect and interact together |
| Writing Mechanics | Major problems with mechanics of language with awkward sentence construction, poor or absent transitions. Is often difficult to understand. | Frequent problems with mechanics of language with occasional awkward sentences and poor transitions which reduce the readability | Clear and readable with good use of transitions. Some minor issues with spelling, punctuations, or grammar which do not take away from content | Clear and readable with good use of transitions. No issues with spelling, punctuations, or grammar. |