it is known to increase the weight of an end of the heaving line to be thrown, such as by tying a large knot (known as a "monkey paw" or a "monkey's fist") in the heaving line. An example monkey's fist knot is shown in Figure 13. In some cases, additional weight, such metal objects e.g. bolts, is included in the knot to help the end of the heaving line to be thrown accurately. However, this is undesirable, since the AB could be injured if hit by a monkey's fist in the heaving line. Moreover, in extreme cases, the tugboat itself, such as its deck, may be damaged by the impact of a heavy monkey's fist.

[0005] Furthermore, conditions at sea or even in large harbours can make it difficult for tugboat crew members to get hold of a line of the tugboat, such as a messenger line, or to align and tie the line of the tugboat to a line of the other vessel, such as a heaving line.

[0006] Embodiments of the present invention aim to address the aforementioned problems.

SUMMARY

[0007] A first aspect of the present invention provides a line handling system for a tugboat, the line handling system comprising an actuatable coupling mechanism for coupling together a line of the tugboat and a line of a marine vessel by applying a connector to the lines when actuated, wherein the actuatable coupling mechanism is configured to cut the connector from a supply.

[0008] This system can help an AB or other crew member of the tugboat prepare for towing another vessel, such as a container ship, particularly in poor weather conditions.

[0009] Optionally, the actuatable coupling mechanism has a line engager defining a coupling zone for receiving the lines; and the actuatable coupling mechanism is actuatable to apply the connector to the lines when the lines are in the coupling zone.

[0010] Optionally, the actuatable coupling mechanism comprises a support for supporting the line engager, and the line engager is movable relative to the support for aiding alignment of the coupling zone with the lines in use.

CLAIMS:

1. A line handling system for a tugboat, the line handling system comprising an actuatable coupling mechanism for coupling together a line of the tugboat and a line of a marine vessel by applying a connector to the lines when actuated,

wherein the actuatable coupling mechanism is configured to cut the connector from a supply.

2. The line handling system of claim 1, wherein the actuatable coupling mechanism has a line engager defining a coupling zone for receiving the lines; and

wherein the actuatable coupling mechanism is actuatable to apply the connector to the lines when the lines are in the coupling zone.

3. The line handling system of claim 2, wherein the actuatable coupling mechanism comprises a support for supporting the line engager, wherein the line engager is movable relative to the support for aiding alignment of the coupling zone with the lines in use.

4. The line handling system of claim 2 or claim 3, wherein the line engager comprises a fork having two prongs, and the coupling zone is defined by and between the prongs.

5. The line handling system of any one of claims 2 to 4, wherein the actuatable coupling mechanism has a sensor for detecting a presence of the lines in the coupling zone, and for outputting a signal in dependence on the presence of the lines in the coupling zone; and

wherein the actuatable coupling mechanism is actuatable on the basis of the signal to apply the connector to the lines.

6. The line handling system of claim 5, wherein the actuatable coupling mechanism is configured to automatically actuate to apply the connector to the lines to couple together the lines, when the signal indicates the presence of the lines in the coupling zone.

7. The line handling system of claim 5 or claim 6, wherein the sensor comprises a touch sensor and/or a proximity sensor.

8. The line handling system of any one of the preceding claims, wherein the actuatable coupling mechanism is selectively actuatable by a user to apply the connector to the lines to couple together the lines.

9. The line handling system of any one of the preceding claims, wherein the actuatable coupling mechanism is configured to wrap the connector around the lines when actuated.

10. The line handling system of claim 9, wherein the actuatable coupling mechanism is configured to twist together free ends of the connector after wrapping the connector around the lines, thereby to hold the connector in position relative to the lines.

11. The line handling system of any one of the preceding claims, wherein the connector is a length of wire.

12. The line handling system of any one of the preceding claims, wherein the line of the tugboat is a messenger line.

13. A tugboat for assisting a marine vessel to manoeuvre, the tugboat comprising the line handling system of any one of claims 1 to 12.

14. The tugboat of claim 13, comprising a hull having a perimeter, wherein the actuatable coupling mechanism is for coupling together the lines when the lines are at a predetermined region of the perimeter.

15. The tugboat of claim 14, wherein the line handling system is movable relative to the hull so as to vary the predetermined region of the perimeter at which the actuatable coupling mechanism is for coupling together the lines.

16. The tugboat of claim 15, wherein the line handling system is rotatable relative to the hull about an axis that passes through the hull so as to vary the predetermined region of the perimeter at which the actuatable coupling mechanism is for coupling together the lines.

17. The tugboat of any one of claims 13 to 16, wherein the actuatable coupling mechanism is movable between a first position, at which the actuatable coupling mechanism is actuatable to apply the connector to the lines to couple together the lines, and a second position, at which the actuatable coupling mechanism is stowed.