ATL 8.6 R/V Atlantis Loss of Steering

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1. Purpose

The purpose of this procedure is to establish general instructions for responding to a loss of steering event on board R/V Atlantis.

2. General

A loss of steering event can happen at any time. Atlantis is set up to respond to a loss of steering in a number of ways. The starboard steering thruster motor is fed from power panel P427 and the port motor is fed from EP401.

From the bridge console

The center console on the bridge is equipped with emergency steering capabilities. To utilize this feature, the following steps must be followed:

A. At each LIPS BRIDGE THRUSTER panel, place the EMERGENCY CONTROL switch in the “ON” position. Steering of the vessel is accomplished by using small joysticks found on the main LIPS BRIDGE THRUSTER panels. Steering mode is in the non-follow-up mode.
B. The EMERGENCY CONTROL switch position does not effect THRUSTER / MOTOR RPM. The vessel movement through the water is still achieved by moving throttle handles.
C. When vessel steering is operated from the EMERGENCY CONTROL panel, the LIPS system will automatically deselect the computer control of the vessel if this mode is in operation at the time of the event.

From the Manual Steering Controls (MSC)

Emergency steering control is also available from the MSC as follows:

A. Vessel steering is accomplished by utilizing the Manual Control Station (MCS) joystick. During this mode of steering, the steering is in the non-follow-up mode.
B. Utilization of the gyro-repeater is important when performing this task.
C. MCS joysticks control the thrusters. Forward and aft movement of joystick will achieve desired motor / propeller speed.
D. Maintain constant communications with the Bridge at all times

From the propulsion motor room

The third mode of emergency steering is performed from the propulsion motor room at the local panel.

A. Vessel steering is accomplished by utilizing the hydraulic steering motor clockwise and counterclockwise solenoid valves. During this mode of steering, steering is in the non-follow-up mode.
B. Utilization of the gyro-repeater is important when performing this task
C. Control of THRUSTER speed from this location is achieved by a small potentiometer, which is located on either LIPS panel.
D. Maintain constant communications with the Bridge at all times.

3. Steps to follow:

On Loss of Steering

Upon loss of steering control, the first action of the watch is to utilize the emergency control mode located on the center console described above.

Bridge EMERGENCY CONTROL switch is not working

a) On the Bridge, place the ship's steering into MANUAL CONTROL.
b) Remove all way from the ship and return all LIPS throttles and steering commands to the ZERO position.
c) At the BRIDGE TRANSFER STATION panel, place the selector switch to the MCS position and notify the Engineer on watch.
d) The Engineer will position the MSC CONTROL SELECTION switch to the "MCS" position.
e) MCS now has control of the ship's steering and thrust.

CONTROL IN PROPULSION MOTOR ROOM (PMR)

a) At the LOCAL LIPS control panel, place the LOCAL / REMOTE switch in the LOCAL position.
b) At the individual steering motor hydraulic power unit, utilize the clockwise and counterclockwise solenoid valves to achieve steering commands. Use the steering indicator attached to each THRUSTER as a reference when accomplishing steering angles / degrees.
c) Control of the THRUSTER speed from this location is achieved by a small potentiometer, which is located on either LIPS panel.
d) Utilize the gyro-repeater located in the PMR and maintain communications with the Bridge.