

Republic of the Marshall Islands

MARITIME ADMINISTRATOR

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MARINE SAFETY ADVISORY No. 16-20

To: Owners/Operators, Masters, Nautical Inspectors, Recognized Organizations

Subject: LOSS OF PROPULSION IN HIGH-DENSITY TRAFFIC AREAS IN CHINA

Date: 9 April 2020

This Marine Safety Advisory provides information on recent cases where ships have lost their propulsion while in areas of high-density traffic or narrow waterways in China.

CASE A: While under pilotage to the berth at Jiangyin, due to insufficient starting air pressure there were difficulties starting the main engine. A leaking flange in the starting air pipeline caused the problem and rectifying it resulted in two hours from stoppage to berthing.

CASE B: Departing Zhangjiagang under pilotage in Chang Jiang Kou (CJK), the main engine shut down for 15 minutes, due to fuel oil (F.O.) high temperature and low pressure. In planning for leaving the Domestic Emission Control Area (DECA), heating the F.O. for the fuel changeover began too early. This resulted in the F.O. vaporizing and shutting down the engine.

CASE C: Under pilotage from Nantong Anchorage, after 15 minutes, the main engine experienced various alarms. Eventually the engine could not increase its speed above half ahead and the pilots anchored the vessel for safety. Troubleshooting the main engine found the crank angle sensor adapter plate required modification according to the maker's instructions.

CASE D: Approaching the CJK pilot station, the main engine failed twice resulting in the vessel being not under command. The No.3 cylinder suction valve stuck and a main engine Fuel Injection Valve Actuation (FIVA) system failed causing the problem. A subsequent port State control (PSC) inspection found a previously unreported main engine remote control failure and a violation of the DECA requirements related to F.O. changeover timing.

CASE E: Departing from the shipyard, while in the CJK channel, the main engine's No.1 cylinder air starting valve sealing ring had heavy leakage resulting in loss of propulsion. The vessel required tug assistance to Baoshan anchorage. The PSC investigated and concluded improper maintenance caused the problem as these aged sealing rings had not been renewed after overhaul at the shipyard.

This MSA is evaluated annually by the Administrator and expires one year after its issuance or renewal unless otherwise noted, superseded, or revoked.

CASE F: Under pilotage from a Shanghai berth, the main engine protection device accidentally shut down the main engine. The failure of one revolutions per minute (RPM) sensor generated a false main engine overspeed signal. Subsequent inspection by the PSC found in addition, the main engine protection system could not display the actual RPM.

Local PSC authorities have increasingly been concerned at similar incidents where a ship presents a danger through its inability to freely maneuver in high-density traffic areas or narrow waters. When they occur, these incidents require the vessel to anchor for repairs as well as an investigation by the local PSC.

In several cases, these have led to PSC detentions in accordance with Appendix 2 of IMO Assembly Resolution [A.1138\(31\)](#), *Procedures for Port State Control, 2019*. This may also be considered a serious implementation failure of the International Safety Management Code. A major non-conformity will be raised during the additional audit.

As the cases above show, some incidents have occurred:

- When maintenance has been deferred, since the ship will be proceeding to a shipyard;
- After routine maintenance without renewing spares when required;
- On departure from a shipyard or after a long repair period, without purging the F.O. pipelines adequately or testing the main engine properly; and
- Inadequate investigation into the root cause resulting in repeated failures, or an incomplete solution of the problem.

Before entering high-density traffic areas or narrow waters, owners and operators are reminded to carry out proper main engine preparation and testing wherever applicable. Special attention must be given when entering or exiting a DECA to F.O. preparation and changeover. Any such incident should be immediately reported to the local authorities and to the Republic of the Marshall Islands Maritime Administrator (inspections-hk@register-iri.com) by the Master.