



TECHNICAL CIRCULAR No. 729 of 5th May 2022

To	All Surveyors/Auditors. All flags
Title	Engine cylinder cover crack
Reference	CONARINA Instructions

Overtightened Bolts Caused Cylinder Cover Crack

The incident: A bulk carrier loaded a cargo of soya beans in an American port prior to travelling to Asia. After loading was completed, the ship anchored to wait for a favorable tide. At midnight, the ship departed and a pilot was on board, and briefing had been carried out with the Master.

The alarms sounding: After two hours, a main engine slowdown alarm was triggered due to a loss of cooling water in the main engine. The Master order half head, but there was no response from the engine.

An alarm then sounded in the engine control room, which had been triggered by one of the main cooling fresh water pumps stopping.

The Chief Engineer ran out of the engine control room to the main engine and saw that cooling water was coming out of a crack on one of the cylinder cover jackets.

The Chief Engineer alerted the Master. The Master ordered the starboard anchor to be dropped. He ordered dead slow astern then full astern, but still nothing happened. The ship was drifting towards the port side of the river.

Two minutes later, the main engine expansion tanks low level alarm sounded. The engineers then closed the cooling water inlet and outlet valves of the effected cylinder unit.

Because of the excessive loss of cooling water, the high cooling water temperature alarms sounded for all cylinders.

The grounding: Although the starboard anchor had been dropped, it could not prevent the grounding which happened minutes later.

Following the grounding, the Chief Officer checked all ballast tanks for any water ingresses.

There were no damaged tanks, but the hull was dented. The coast guard also boarded the vessel

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and carried out an inspection to see if there was any pollution, which there was not. The ship received tug assistance and returned to the loading port for more detailed inspections.

The findings: Locating bolts overtightened.

It was found that the cracks were caused by overtightening of the locating bolts during the last cylinder cover overhaul.

The manufacturer had issued a service letter, which included a warning for overtightening the screws. This as a delicate process that need to be done correctly.

REFERENCES:

- CONARINA Instruction to surveyors

ATTACHMENTS: No

Kindest Regards,
CONARINA Technical Office

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