

Safety Alert

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Subject: Methanol Transfer

What Happened / Narrative

A vessel was advised by an installation of a discrepancy in the quantity of methanol received compared to expected. During the investigation a number of historical Methanol transfers were identified to have discrepancies whereby a quantity of Methanol was unaccounted for spanning a number of years. Unbeknown to the vessel personnel, during the transfer of Methanol to the installations, a quantity of the Methanol was also being discharged to sea via the system flushing line. This was possible as a spool piece was incorrectly left in place and two valves either side of the spool piece were passing. One rubber valve was found to be perished and the other Teflon valve was found with signs of corrosion. On closer inspection it was found that a grub screw, for limiting the movement of the gears was too far in and was restricting the range of movement. This resulted in the Teflon valve not closing fully and had been that way most likely from newbuild.

Why Did it Happen / Cause

The root causes of the incidents were as follows:

- Insufficient knowledge of the methanol cargo system. Poor familiarisation and deck system knowledge contributed to this incident. The vessel received several new permanent deck officers and several temporary placements during the period of time in question. It is not an unfair expectation that one of these persons could and should have identified that the spool piece was incorrectly positioned when tracing systems and comparing to system diagrams.
- Insufficient Planned maintenance. The investigation has concluded that the planned maintenance schedule of the vessel was completed in full as expected. However, it also concluded that the maintenance instructions contained within the schedule were insufficient due to a lack of internal inspection.
- Insufficient transfer procedures in place. Neither the procedure on the vessel, or the procedure on either installation identified the need to verify that the quantity of methanol discharged equalled the quantity of methanol received. Had this simple check been in place then it is reasonable to assume that following the initial transfer, the discrepancy would have been highlighted to the vessel and further investigation could have been initiated.
- Poor communication. The investigation identified several occasions where the discrepancies had been identified and/or discussed on the installation but were not communicated to either the vessel or shore management.

Corrective Actions Taken / Recommendations

Actions immediately implemented by company:

- All vessels engaging in cargo transfers were to ensure that they receive confirmation from the receiving installation that they have received the correct quantity of cargo. This confirmation must be recorded in the deck.
- Any discrepancies must be reported to shore management as per the incident reporting procedure.

In addition, as a result of the investigation:

- All vessels were requested to review their cargo system to ensure that any set-up designed to avoid discharge to sea is correctly in place, or removed, as per the system diagram. This included ensuring all blanks/spool piece/suet valves are recorded, correctly positioned and familiar to anyone using the system. Any lack of internal inspection was also to be considered for higher risk valves and any concerns were to be reported to the vessel manager.
- The Planned Maintenance System will be updated by onshore vessel management to include scheduled internal inspections of respective valves depending on vessel type and configuration.
- The procedures and checklists relating to cargo transfer and familiarisation will be updated based on the learnings from the incident.

Link below for new guidance document “The Carriage of Methanol in Bulk Onboard Offshore Vessels” recently published in conjunction with Oil Companies International Marine Forum:

<https://www.marinesafetyforum.org/guideline/the-carriage-of-methanol-in-bulk-onboard-offshore-vessels/>

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