

# Safety Alert

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**Subject: Manual Handling Injury During Bulk Hose Operations**

## What Happened / Narrative

A member's vessel was preparing for bulk cargo operations at an offshore installation. The installation crane operator lowered a bulk hose with dry break connection via the hooky hook to the vessel where the crew were standing by to connect. Once received, the crew attempted to connect the dry break connection to the midships manifold on top of the safe haven, but the hose was heavy to manoeuvre due to residual liquid inside. The crew further struggled to connect due to the angle of the vessel manifold and an awkward series of rigid connectors and adapters on the hose end. The crewmember was forced to put the hose over his shoulder and raise onto the balls of his feet to line up the connecting parts, resulting in a muscle sprain injury to his right calf muscle. The crewmember required first aid attention and a period of restricted work duties.

## Why Did it Happen / Cause

The crewmember was forced into an awkward manual handling position causing additional strain and overexertion due to the following contributing factors:

- the angle of the vessel manifold in relation to the connections, deck and surrounding pipework
- the length of the hose end including a series of rigid connectors and adapters
- the weight of the hose due to residual liquid inside the hose length

Experience indicates the points of connection are a common weak link and most likely to experience fatigue which could result in a leak. An increased number of connections and adapters, increases the risk of manual handling injury to crew and environmental pollution. Best practice dictates the number of connections on the hose should be kept to a minimum and efforts made to drain back the liquid contents of the hose on completion of operations and prior to transfer.

## Corrective Actions Taken / Recommendations

- The manifold arrangement was reviewed with proposal for modification and improvement across the sister vessels.
- The installation operator was requested to review the hose connection arrangement with opportunity for improvement in mind.
- The installation operator was requested to review internal procedures for draining back hoses.
- The lessons learned have been shared with industry safety bodies with proposed recommendations to be included in the review of relevant chapter of the Guidelines for Offshore Marine Operations (GOMO).

## Photographs / Supporting Information



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