Coast Guard Sector Houston-Galveston
Marine Safety Information Bulletin 02-19

Sector Houston-Galveston Port State Control
Common Deficiency Areas on Liquefied Gas Carriers

This bulletin addresses five common deficiencies that Sector Houston-Galveston Port State Control Officers (PSCOs) find on liquefied gas carriers. In 2018, Sector Houston-Galveston conducted 141 Certificate of Compliance (COC) exams on liquefied gas carriers, seven of which resulted in IMO detentions. This equates to a 5% detention ratio, which more than doubled the national average for IMO detentions in 2018 (1.5 %). Some combination of the below listed deficiencies were cited in all of the Sector's aforementioned gas carrier detentions. The purpose of this bulletin, therefore, is to share information and prompt owners, operators, and other involved parties to take proactive steps to identify and correct sub-standard safety and environmental stewardship conditions before Coast Guard port state control intervention, including COC removal, cargo cessation and/or detention, becomes necessary.

1. **Deck Water Spray System**
   PSCOs continue to find inadequate and/or even zero spray coverage in way of cargo tank domes, transfer manifolds and other critical areas requiring protection under section 11.3 of the IGC Code. The main cause has been spray nozzle and associated piping blockages caused by extensive debris such as sand blast grit, rust/scale and even locally prevalent menhaden. Routine maintenance and testing of the system should lead to easy identification and correction of blockages. The periodic removal of orifice plates and/or in-line filters installed on the main or branch lines to check for and remove debris has proven to be an effective best practice in ensuring a free-flowing system.

2. **Fixed Gas Detection**
   PSCOs commonly encounter systems that are not functioning properly and/or crewmembers that are unfamiliar or unprepared to operate their installed systems. PSCOs have observed everything from lack of and/or use of improper span gas, widespread component malfunction, and systems displaying nonsensical outputs. The proper operation of fixed gas detection units is critical for crew protection and the safe handling of cargoes on gas carriers. Periodic maintenance, thorough testing and frequent crew training all help to avoid unnecessary technical and operational complications that may result in delays.

3. **Electrical Equipment in Hazardous Areas**
   PSCOs routinely see explosion-proof lights with cracked housings, significant standing water inside, compromised explosion-proof enclosures, and other explosion-proof or intrinsically safe equipment not properly installed or maintained. Frequent inspections and keeping spare parts readily available help crews maintain compliance of hazardous space equipment.

4. **Cargo Tank Safety Relief Valves**
   PSCOs have observed the use of "in harbor" safety relief valve settings used during sea passages. Cargo tanks are at risk of overstress if they are subjected to dynamic sea conditions under higher tank pressures associated with "in harbor" safety relief valve settings. PSCOs also find safety relief valves with missing or broken sealing wires or that do not correspond with the record of setting and sealing as required by IGC 8.2.6. Lastly, PSCOs have encountered vessels using the wrong safety relief valve setting based on the cargo's density. Such misuses of cargo tank safety relief valves necessarily triggers scrutiny into whether or not the vessel's Safety Management System (SMS) has been effectively implemented and often results in additional ISM-related deficiencies.

5. **Significant Errors on Certificates of Fitness (COF)**
   Among the first items PSCOs review during an exam is the COF and they continue to frequently encounter obvious and significant errors on this key certificate. Issues found have included certificates altogether missing cargoes, listing of incorrect ambient design temperatures, incorrect relief valve settings, etc…It is incumbent on the issuing authority, the vessel's owner/operator and crews to verify the accuracy of these certificates or risk cargo delays.

These five items are not all inclusive and in no way cover the entire scope of deficiencies found during PSC examinations on liquefied gas carriers. Rather, they represent an executive summary of five common issues discovered by Sector Houston-Galveston PSCOs on liquefied gas carriers in 2018 that have specifically resulted in intervention measures. Vessel owners and operators are reminded that if any system on board the vessel is not in good working condition, the crew should take the necessary actions to remedy the situation in accordance with their company's SMS, and receive full support from the operating company. It is highly recommended that a record of any actions taken be maintained as evidence that the SMS is being used to proactively manage the situation.

For more information, questions, or comments regarding this bulletin, the primary contact is:
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