

# **UNITED STATES COAST GUARD**

# REPORT OF THE MARINE BOARD OF INVESTIGATION INTO THE COMMERCIAL FISHING VESSEL DESTINATION SINKING AND LOSS OF THE VESSEL WITH ALL SIX CREWMEMBERS MISSING AND PRESUMED DECEASED APPROXIMATELY 4.4 NM NORTHWEST OF ST. GEORGE ISLAND, ALASKA ON FEBRUARY 11, 2017



**MISLE ACTIVITY NUMBER: 6088430** 



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COMMERCIAL FISHING VESSEL DESTINATION (O.N. 632374)
SINKING AND LOSS OF VESSEL
WITH ALL SIX CREMEMBERS MISSING AND PRESUMED DECEASED
APPROXIMATELY 4.4 NM NORTHWEST OF ST. GEORGE ISLAND, ALASKA ON
FEBRUARY 11, 2017

# **ACTION BY THE COMMANDANT**

The record and the report of the marine board of investigation designated to investigate the subject casualty have been reviewed. The record and the report, including the findings of fact, analysis, conclusions, and recommendations are approved subject to the following comments. The report and Findings of Concern will be shared with industry.

# COMMENTS ON THE REPORT

- The loss of DESTINATION with 6 persons aboard was a tragic and preventable accident. I
  offer my sincere condolences to the families and friends of the mariners whose lives were
  lost. The Coast Guard will take appropriate action on all that we have learned from this
  investigation.
- 2. I thank the members of the Marine Board of Investigation (MBI) for their exhaustive work and independent recommendations. The MBI conducted much of their investigation in public view providing a high degree of transparency to their proceedings. As a result, other vessel owners and operators were able to apply lessons learned in near real time, enhancing safety of their own operations.
- 3. While many factors contributed to this marine casualty, the most significant were the vessel's unsafe stability condition due to the combined detrimental effects of carrying heavier crab pots than stability instructions anticipated, carrying additional bait high atop these crab pots, ice accumulation from freezing spray, and downflooding from the open number 3 cargo hatch.
- 4. Critical to the stability of uninspected fishing vessels is the owner's use of a qualified individual to perform tests or calculations necessary to evaluate the vessel's stability and update onboard stability instructions. This was not done despite several changes made to DESTINATION's characteristics after stability instructions were issued in 1993. In addition, the master did not follow the vessel stability instructions when he allowed number 3 deck hatch to be open, and loaded bait high atop the crab pots. The master also sailed from Dutch Harbor under heavy freezing spray warnings with a fatigued crew unfit to properly remove ice accumulations and perform other emergency actions.

5. This combination of actions and events placed DESTINATION in a very vulnerable condition and compromised the vessel and crew's ability to survive when exposed to wind and waves beyond the lee of St. George Island in the early morning hours of February 11, 2017.

# **ACTION ON SAFETY RECOMMENDATIONS**

Recommendation 1: Recommend [Thirteenth District] D13 and [Seventeenth District] D17 conduct education and outreach to promote awareness, compliance, and training opportunities with [Commercial Fishing Vessel] CFV stability instructions requirements of 46 CFR 28 Subpart E - Stability. Education and outreach can include developing safety alerts, attending industry workshops or hosting industry days with local CFV owners, captains, operators and naval architects or qualified individuals. The Coast Guard should highlight the owner's responsibilities to select qualified individuals to conduct stability assessments consistent with regulatory requirements, and to provide their captains with accurate stability instructions that reflects vessel alterations, modifications and changes to any new fishing gear, including the weight of crab pots. The Coast Guard should also encourage CFV owners and captains to attend stability training such as those offered by the [North Pacific Fishing Vessel Owners' Association] NPFVOA and [Alaska Marine Safety Education Association] AMSEA. The training should include basic stability principles regarding overloading, alterations and weight creep, watertight integrity, icing, stability risks for the vessel's fishery, and the effective use of stability instructions specific to the vessel. Increasing awareness of stability will promote the importance of maintaining accurate stability instructions and reduce future catastrophic stability casualties.

Action: I concur with this recommendation. Owners and operators of commercial fishing vessels need accurate stability data and instructions and should be thoroughly familiar with the applicable details. They must understand the importance of safe loading and watertight integrity, as well as the hazards of operating with excessive weight and icing. This should be a focus of Coast Guard outreach. The U.S Coast Guard issued Marine Safety Alert 11-17 on October 6, 2017 to address these stability issues on fishing vessels, providing several online resources, including online stability training. I will forward this recommendation to the Commanders of the Thirteenth and Seventeenth Districts for further action, complementing outreach they have already undertaken since this casualty. With assistance from Coast Guard Headquarters Office of Commercial Vessel Compliance, Fishing Vessel Safety Division (CG-CVC-3), they will prepare and execute an outreach plan to address all topics in this recommendation within their respective areas of responsibility.

Recommendation 2: Recommend D13 and D17, consistent with COMDTINST 16711.13B, conduct a targeted oversight audit on all [Bering Sea and Aleutian Islands] BSAI crabbing vessels operating or home ported in their respective area of responsibility. The oversight audit should focus on efforts to promote the BSAI crabbing fleet's compliance, and documentation of stability instruction requirements as it relates to vessel weight creep modifications, conversions or substantial alterations. This targeted oversight audit will help promote and ensure the accuracy of stability instructions across the BSAI crabbing fleet.

Action: I concur with this recommendation. I will forward this recommendation to the Commanders of the Thirteenth and Seventeenth Districts for action. With assistance from Coast Guard Headquarters Office of Commercial Vessel Compliance, Fishing Vessel Safety Division (CG-CVC-3), a Concentrated Examination Program (CEP) for BSAI crabbing vessels operating in and/or from their respective areas of responsibility will be conducted.

Recommendation 3: Recommend D17 develop policy regarding [Stability and Safety Compliance Check] SSCs and [Alaska Department of Fish & Game] ADF&G 24-hour notice regulations. The policy should address the planning, training, and execution of scheduled SSC operations, the scope and purpose of SSCs, and procedures examiners should follow when conducting and documenting SSCs or receiving ADF&G 24-hour notices. Developing policy regarding SSC and ADF&G 24-hour notices will establish expectations and provide BSAI crabbing fleet operators and Coast Guard examiners with improved procedures to confirm a vessel complies with stability requirements.

Action: I concur with this recommendation. While policy issues for voluntary Stability and Safety Compliance Checks (SSCs) were not a causal factor in this casualty, improved policy and procedures for these checks will benefit Coast Guard examiner consistency and training. This should not be taken to diminish that the responsibility for complying with stability requirements fundamentally lies with vessel operators. The effectiveness of SSCs, in fact, hinges on vessel operator participation, including a discussion of information upon which the Coast Guard may assist with compliance. This responsibility is described in detail in Marine Safety Alert 11-17 and Findings of Concern 006-19.

Recommendation 4: Recommend D13 and D17 CFVEs use direct verification to weigh the vessel's crab pots during dockside safety examinations and SSCs. Examiners should conduct direct verification by actual weight observations of a sample amount of crab pots using a calibrated scale supplied by the Coast Guard. In cases where the weight of the crab pots with its gear is different than the weight used to establish the vessel's stability instructions, the examiner should require the owner to work with a qualified individual to amend the stability instruction's loading tables. This direct verification should help ensure the weight of the crab pots are consistent and in accordance with the weights used to develop the vessel's stability instructions.

Action: I partially concur with this recommendation. While the responsibility for complying with stability requirements lies with vessel operators, spot checks conducted by the Coast Guard may help reduce risks of overloading. Commercial scales that are registered, periodically tested, and decaled through state and industry standards for use in the sale and transport of goods in the aquaculture trades may be used to weigh the crab pots and gear, as well as scales made available by the Coast Guard upon request. I will forward this recommendation to the Commanders of the Thirteenth and Seventeenth Districts for action and direct them to implement a program that spot checks crab pot weights prior to the commencement of crab-fishing seasons.

Recommendation 5: Recommend Commandant conduct a targeted oversight audit on all Commercial Fishing Vessels [CFVs] subject to the stability requirements of 46 CFR, Subpart E. The oversight audit should focus on efforts to promote stability compliance and documentation of stability instruction requirements as it relates to vessel weight creep, modifications, conversions or substantial alterations. The audit should also evaluate the efficiency of examination forms and the CFVE PQS to verify and document CFV stability and freeing port area compliance. This targeted oversight audit will help promote and ensure compliance and the accuracy of CFV stability to required standards.

Action: I do not concur with this recommendation. There is not sufficient evidence in this report to conclude additional oversight is needed across the entire fleet of commercial fishing vessels. The Commanders of the Thirteenth and Seventeenth Districts will address this issue, specifically as it applies to Bering Sea/Aleutian Island (BSAI) crabbing vessels, through the CEP described in my response to Recommendation 2. I will also issue Findings of Concern 006-19 and forward to all Coast Guard Districts to stress the importance of stability compliance and maintenance of accurate stability instructions that account for weight creep, modifications, conversions, or substantial alterations for all commercial fishing vessels subject to the stability requirements of 46 CFR 28, Subpart E.

<u>Recommendation 6</u>: Recommend Commandant amend 46 CFR 28.530 – Stability Instructions, to require owners to ensure the qualified individual includes within the stability instructions the assumed weight of crab pots used within the stability calculations. Requiring stability instructions to indicate the assumed weight of the crab pots will more effectively enable CFV owners to track weight creep and update the stability instructions before it adversely affects the vessel's stability.

Action: I do not concur with this recommendation. The requirements for stability instructions in 46 CFR §28.530 are for all types of uninspected commercial fishing vessels, not just those using crab pots. The general requirement in §28.530(b) states "each vessel must be provided with stability instructions which provide the master or individual in charge of the vessel with loading constraints and operating restrictions which maintain the vessel in a condition that meets the applicable stability requirements of this subpart (46 CFR Part 28)." This is supplemented by the requirements in §28.530(e), which require that stability instructions, "...be developed based on the vessel's individual characteristics." These instructions may include sample loading conditions, any other necessary guidance for maintaining adequate stability under normal and emergency conditions, a general description of the stability criteria that are used in the development of the instructions, and any other information the owner feels is important to the stability and operation of the vessel. The existing regulations require that the weight of the crab pots, as well as other associated factors including the number of pots carried and loading arrangement, be included as part of that vessel's individual characteristics. I will direct the weight and loading arrangement of crab pots and associated impacts on vessel stability be included as part of the outreach plan discussed in my response to Recommendation 1 and the CEP discussed my response to Recommendation 2.

Recommendation 7: Recommend Commandant amend 46 CFR 28.550- Icing, to reflect the intent of the icing regulations as indicated in the preamble to the final rule. The regulations should specifically require the owner to ensure the qualified individual includes within the stability instructions the weight and thickness of assumed ice used within the stability calculations. Further, when vessels operate under NWS freezing spray forecasts, the stability instructions should indicate the vessel may experience icing conditions that exceed the vessel's stability and that captains shall consider delaying departure from port, or if already underway, seek protected waters or take immediate action to minimize ice accumulations. Requiring stability instructions to indicate ice weight and thickness accumulation calculations will more effectively enable CFV captains to anticipate and manage ice accumulations before it adversely affects the vessel's stability.

Action: I do not concur with this recommendation. While 46 CFR §28.550 specifies the values to be used for the assumed weight and thickness of ice used in performing the stability calculations required by 46 CFR Subpart E, it does not include format or content requirements for the stability instructions provided to the master or individual in charge. Those requirements are found in 46 CFR §28.530. As discussed in my response to Recommendation 6, these requirements are general in nature, focusing on the overall ease of understanding and use of the instructions by the master or individual in charge instead of prescribing detailed requirements for their specific content. As explained in the stated intent of the regulations, this is to provide maximum flexibility for owners and qualified individuals to determine how the instructions are conveyed, taking into account the unique issues that apply to an individual vessel, its personnel who will be using the instructions, and its anticipated operating conditions. The stability instructions should include conditions of icing where it is reasonable that it will be encountered. I will direct icing and its impact on vessel stability be included in the outreach plan discussed in my response to Recommendation 1 and the CEP discussed in my response to Recommendation 2.

Recommendation 8: Recommend Commandant amend 46 CFR Part 28, Subpart E – Stability, to require CFV owners and captains to present evidence of course completion after attending Coast Guard approved stability training. This will ensure owner and captains are aware of stability instructions requirements and procedures to minimize the potential for preventable vessel losses attributed to inaccurate stability instructions or improper loading of fishing vessels.

Action: I partially concur with this recommendation. The 2010 Coast Guard Authorization Act, specifically 46 USC 4502(g)(1) and (2) as amended, includes provisions for individuals in charge of the vessels operating beyond 3 nautical miles to pass a training program covering certain competencies, including stability. While the Coast Guard has not implemented regulations requiring this training, a Coast Guard accepted course has been created by the North Pacific Fishing Vessel Owners Association (NFPVOA) that satisfies some elements of 46 USC 4502(g)(1) and (2). NFPVOA is currently drafting a course that covers stability and they intend to submit to the Coast Guard National Maritime Center for consideration as an accepted course. With this training and adequate stability instructions required by existing regulations in 46 CFR §28.530, vessel owners and operators are able to avoid loading and operating

conditions that exceed vessel stability limitations. To further promote awareness of these issues, I will direct the outreach plan discussed in my response to Recommendation 1 include material from Marine Safety Alert 11-17 and Findings of Concern 006-19.

<u>Recommendation 9</u>: Recommend Commandant amend 46 CFR Part 28, Subpart E – Stability, to require CFVs owners to notify the Coast Guard when the vessel undergoes modifications, conversions or substantial alterations and if the owner selected a qualified individual to conduct a stability assessment. Such notifications will promote the Coast Guard's ability to obtain and document vessel modifications and to facilitate constructive conversations with the owner to detect and correct inaccurate stability instructions and reduce future catastrophic stability casualties.

Action: I do not concur with this recommendation. Existing regulations are clear and adequate in detailing the vessel owner's responsibility to select a qualified individual to perform the required tests and calculations, to maintain the results of those tests and calculations, and to provide stability instructions that meet the requirements and intent of 46 CFR Part 28, Subpart E. However, to reinforce compliance with the existing requirements related to this topic as it applies to BSAI crabbing vessels, I will direct that the outreach plan described in my action on Recommendation 1 from the Marine Board include a focus on the vessel owner's responsibilities with respect to stability. I will also issue Findings of Concern 006-19 to raise awareness of the impacts of modifications, conversions or substantial alterations on vessel stability.

<u>Recommendation 10</u>: Recommend Commandant amend 46 CFR Part 28, Subpart E – Stability, to require CFVs owners to maintain an onboard and shore side record of all incremental weight changes to the vessels lightship condition and fishing/cargo gear. Requiring the vessel owner to track weight changes over time will help the owner readily determine if the aggregate total will require a qualified individual to update the vessel's stability instructions, and thus reduce future catastrophic stability casualties.

Action: I do not concur with this recommendation. As an uninspected vessel, 46 CFR §28.501 and §28.530 require owners to be cognizant of how incremental weight changes could adversely affect their vessel's stability over time. The intent of §28.530 is to ensure vessel masters and individuals in charge of vessels are provided with enough stability information to allow them to maintain their vessel in a satisfactory stability condition. This requires owners to be cognizant of how incremental weight changes over time could fall under the definition of "substantial alterations" and adversely affect their vessel's stability. However, to reinforce compliance with existing requirements, I will direct that the outreach plan described in my action to Recommendation 1 include tools for owners to track weight changes.

<u>Recommendation 11</u>: Recommend Commandant amend 46 CFR Part 28, Subpart E – Stability, to require CFV owners and captains implement shipboard policies to address crew rest, work hours and fatigue. The shipboard policies should reflect the basic principles of the Coast Guard's Crew Endurance Management System (CEMS) used to identify and control crew endurance risk

factors. Requiring owners and captains to implement crew rest policy would give crewmembers the opportunity to reduce their risk of fatigue-related accidents and help prevent casualties.

Action: I do not concur with this recommendation. While implementation of shipboard policies that address crew rest, work hours, and fatigue based on the principles of the Coast Guard's Crew Endurance Management System (CEMS) could benefit the safety of commercial fishing vessels; it is not appropriate to be imposed as a regulatory requirement. However, a voluntary approach similar to that undertaken by some members of the towing vessel industry could benefit the commercial fishing industry. I will direct the Commanders of the Thirteenth and Seventeenth Districts to prepare and implement, with assistance from Commandant (CG-CVC-3), an outreach plan that addresses this topic within their respective areas of responsibility.

## **ACTION ON ADMINISTRATIVE RECOMMENDATIONS**

Recommendation 1: Recommend Sector Puget Sound, consistent with MOC Policy Letter 04-07, rescind acceptance of the NAVTECH/USSA third party surveyor who conducted the last dockside safety examination on the DESTINATION in June 2016. This will ensure the third party surveyor does not conduct another dockside safety examination until NAVTECH/USSA has provided the surveyor remedial training on CFV stability compliance verification and has recertified the surveyor to conduct Coast Guard third party examinations.

Action: I concur with the intent of this recommendation. The Coast Guard's Office of Commercial Vessel Compliance, Fishing Vessel Safety Division, Commandant (CG-CVC-3) has oversight responsibility for approval of Third Party Organizations (TPO) that are permitted to conduct commercial fishing vessel examinations on behalf of the Coast Guard. The June 2016 dockside examination form discrepancies and report, as well as surveyor statements made to the Marine Board are of concern. I will direct NAVTECH/USAA to conduct an internal assessment of their Fishing Vessel Safety Examiner program, to include how they qualify and maintain designated examiner competency. NAVTECH/USAA's internal assessment should include how corrective actions and/or remedial training is assigned when non-conformities within their Fishing Vessel Safety Examiner program are discovered. I will also direct CG-CVC-3 to conduct a site-visit to assess this and NAVTECH/ USAA's related inter-company TPO procedures.

<u>Recommendation 2:</u> Recommend Sector Anchorage initiate Civil Penalty proceedings against the owner of the DESTINATION for failing to provide the captain with accurate stability instructions to maintain the vessel in a satisfactory stability condition, as required in 46 CFR 28.530.

<u>Action:</u> I concur with the recommendation. The alleged violations will be referred to the Sector Commander, Anchorage, for further investigation and enforcement action, as appropriate.