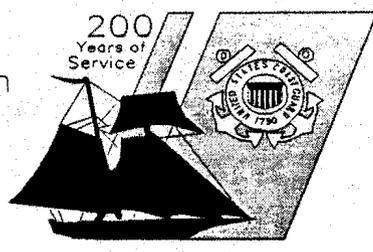


G-M copy

U.S. Department
of Transportation

United States
Coast Guard



PROGRAM FOR THE INTERIM OPERATION OF FISHING INDUSTRY VESSELS REQUIRING LOAD LINES

<p>VESSEL NAME: _____</p> <p>OFFICIAL NUMBER: DN _____</p> <p>OWNER'S NAME/ADDRESS/PHONE:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>NAVAL ARCHITECT'S NAME/ADDRESS/PHONE:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
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U. S. COAST GUARD HEADQUARTERS
WASHINGTON, DC
JULY 1990

PART I: INTRODUCTION

BACKGROUND:

The Coast Guard Marine Board of Investigation into the sinking of the fish catcher-processor vessel ALEUTIAN ENTERPRISE revealed that a significant number of similar vessels have been operating without a required load line. Immediate actions must be taken to ensure these vessels are operated safely, particularly with respect to vessel stability. To satisfy this need, the Coast Guard has developed a program that will permit the interim operation of these fishing/fish processing vessels until they can feasibly be made available for complete survey, stability review, and load line assignment. This document describes the interim program and provides a uniform format for documenting its implementation.

To be successful, this program will require a cooperative effort from vessel owners and their naval architects, classification societies, and the Coast Guard. While this is a voluntary program, vessel owners who do not choose to participate may be subject to civil penalty action for noncompliance with applicable regulatory requirements and may have their vessel detained by the cognizant Officer in Charge, Marine Inspection (OCMI), preventing operation of their vessel in service requiring a load line.

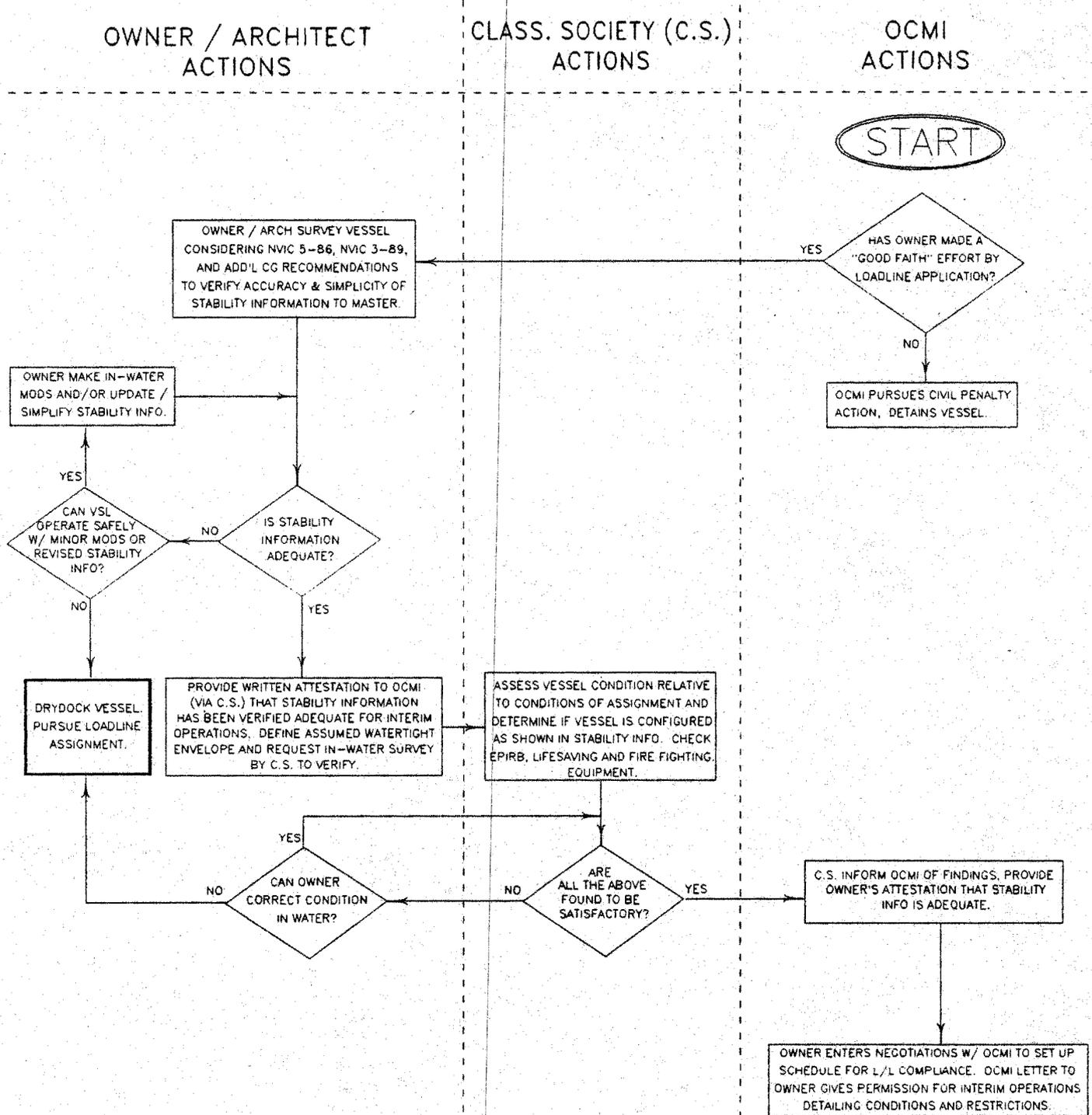
The basic flow of events and breakdown of responsibilities are shown in the flow chart on the following page and further described below.

OWNER/NAVAL ARCHITECT ACTIONS

The owner of a fishing/fish processing vessel requiring a load line is eligible to participate in the Program for Interim Operations if he has demonstrated a "good faith" effort to acquire a load line by making application to his chosen classification society. In developing this program, the Coast Guard has worked with the American Bureau of Shipping and Det norske Veritas Classification and these societies are prepared to carry out the "classification society actions" described herein. You should read through all parts of this booklet to familiarize yourself with all aspects of the interim program. Your classification society surveyor's in-water survey will go much smoother if you have pre-checked the items to be examined and corrected obvious deficiencies before his arrival.

Part II of this booklet describes actions required of the vessel owner and his naval architect. Part II-A provides guidance to owners and naval architects for evaluating the validity of vessel stability calculations and the ease of use of stability guidance provided to the Master.

INITIAL ENFORCEMENT PROGRAM FOR FISHING INDUSTRY VESSELS REQUIRING LOAD LINES



Before permitting interim (non-load lined) operations, the OCMI will require a letter from the owner. The letter must attest to the fact that the vessel substantially meets applicable stability criteria, that suitable stability guidance is provided to the Master, that the Master is qualified in the use of the stability guidance, and that the vessel will not be altered without first determining the affect on stability. The sample in Part II-B shows the desired format for this letter.

You must provide a sketch of the watertight (freeboard deck and below) and weathertight (above the freeboard deck) envelope upon which the vessel's stability calculations are based. You may use the form provided in Part II-C or submit an annotated plan of suitable size. See the additional notes at the top of page II-C-1.

Identify the condition(s) in your Trim and Stability Booklet or other stability guidance under which interim operations will be conducted. You must provide a list detailing the major items of equipment (cranes, winches, etc.), fishing gear (nets, wire rope, doors, etc.), fish processing equipment, cargo (categorized by location), condition of tanks (fuel, water, ballast, lube oil, etc.) for the surveyor's use. Include sufficient detail to satisfy the surveyor that the stability guidance adequately reflects the vessel as configured.

You must provide information on all inlets and overboard discharges including size, type of valves, height above keel, and system served. Use the form provided on page II-D-1 to present this information.

When you have completed these tasks, you should schedule an initial in-water survey by your chosen classification society (ABS or DnVC). You will need to provide the surveyor with the following items:

- ◆ This booklet, with completed sketch of the assumed watertight / weathertight envelope and the listing of information on inlets and overboard discharges; and
- ◆ Your letter of attestation on the accuracy and usability of stability information (addressed to the cognizant Officer in Charge, Marine Inspection), including any proposed operational restrictions that are necessary to permit interim operations in compliance with the stability criteria; and
- ◆ A copy of the vessel's Trim and Stability Booklet and/or simplified stability instructions for the Master. For T&S Booklets, identify the condition(s) in the booklet under which the vessel will be operating. Provide your list of major equipment, fishing gear, tankage, cargo, etc. so the

surveyor can verify that the vessel's actual configuration is properly reflected in the stability guidance.

- ◆ Your proposed schedule to bring the vessel into full compliance with load line requirements.
- ◆ A general arrangement and deck plan indicating the locations of tank boundaries, air pipes, ventilators, fire extinguishers, lifesaving equipment, lifting devices, major equipment, etc.

CLASSIFICATION SOCIETY ACTIONS

Once provided with the information noted above, the cognizant classification society surveyor will conduct an initial survey of the vessel to determine:

- ◆ if the vessel's actual configuration is as shown in the stability information; and
- ◆ the integrity of the assumed watertight / weathertight envelope; and
- ◆ the degree to which the vessel meets the conditions of assignment for a load line; and
- ◆ whether or not minimum lifesaving, fire fighting and EPIRB requirements for uninspected vessels are met.

The OCMI will rely heavily on the findings of this survey when determining whether or not the vessel is suitable for interim operations. Thus, to the extent practical, the owner should attempt to correct any deficiencies found. Deficiencies in lifesaving, fire fighting or EPIRB requirements will not be permitted.

The field surveyor will use the forms in Part III-A to document the condition of the vessel with respect to conditions of assignment (items 1 through 14), the validity of the assumed watertight envelope (item 15) and his comparison of the actual vessel configuration against that shown in the stability guidance (item 16).

Part III-B will be used to document compliance with the requirements of 46 CFR Subchapter C for uninspected vessels.

In Part III-C, the surveyor will summarize all outstanding deficiencies noted in his survey and provide any other information he feels may be helpful to the OCMI in making a determination regarding the advisability of permitting interim (non-load lined) operation of the vessel.

At the completion of his survey, the classification society surveyor will provide the following items directly to the cognizant OCMi:

- ♦ A copy of the owner's application for load line assignment; and
- ♦ This booklet, with all portions completed; and
- ♦ The owner's letter of attestation regarding stability; and
- ♦ A copy of the vessel's Trim and Stability Booklet and/or simplified stability instructions for the Master. Include the information provided by the owner that was used to verify that the vessel configuration is properly reflected in the stability information.
- ♦ The owner's proposed schedule to bring the vessel into full compliance with load line requirements.

OCMI ACTIONS

Upon receipt, the OCMi will review the package provided by the classification society surveyor to ensure that:

- ♦ the owner has provided the required letter of attestation of adequate stability and stability information; and
- ♦ the vessel meets minimum lifesaving, fire fighting and EPIRB requirements for uninspected vessels and that the vessel substantially complies with the conditions of assignment; and
- ♦ any owner-proposed operational restrictions are reasonable and practical; and
- ♦ the owner has proposed a reasonable schedule for bringing the vessel into full compliance with load line requirements.

If the OCMi is satisfied that the vessel can be operated safely in the interim (until formal survey, stability review, and load line assignment can be accomplished), he will issue a letter to the vessel owner to this effect. The letter will reference the owner's letter of attestation and the accepted schedule for load line compliance; plainly state any operational restrictions that have been accepted by the OCMi; and acknowledge that the owner has satisfied the requirements for interim operations under this program. The original letter shall be posted in the pilothouse of the vessel throughout the interim period of non-load lined service.

PART II-A: OWNER VERIFICATION OF STABILITY

RECOMMENDATIONS FOR OWNER / NAVAL ARCHITECT VERIFICATION OF STABILITY FOR INTERIM OPERATION OF FISH PROCESSING VESSELS

Fish processing vessels are required by statute to have a load line. Load line regulations require that vessel stability be assessed.

The following information is provided to help owners of fish processing vessels and their naval architects verify the adequacy of the vessel's stability information. This information is not intended to be all-inclusive. It should be used in conjunction with Navigation and Vessel Inspection Circulars (NVICs) 5-86 and 3-89. If you are not already familiar with NVICs 5-86 and 3-89, you should read them now.

You may apply either of the following sets of stability criteria:

Alternative 1:

- 46 CFR 170.173 - Criterion for Vessels of Unusual Proportion and Form, and
- 46 CFR 170.170 - Weather Criterion, and
- 46 CFR 173, Subpart B - Lifting (if applicable), and
- 46 CFR 173, Subpart E - Towing (if applicable)

Alternative 2:

- Torremolinos Convention Criteria (NVIC 5-86), and
- IMO Severe Wind and Rolling Criteria (NVIC 5-86), and
- Lifting Criteria (NVIC 5-86) (if applicable), and
- 46 CFR 173, Subpart E - Towing (if applicable)

NOTE: NVIC 5-86 contains a recommendation that the Torremolinos Convention Criteria be supplemented with a minimum range of stability of 60 degrees. This recommendation was intended for fishing vessels with hatches that are normally kept open at sea during fishing operations. Your fishing/fish processing vessel need not meet the minimum 60 degree range criterion if either:

- ♦ hatches in the watertight / weathertight envelope are normally kept closed at sea (e.g. the live tank hatch is only opened intermittently, under controlled conditions); or
- ♦ unintentional flooding through these hatches does not result in progressive flooding to other spaces,

Your intact stability analysis must, however, consider that spaces accessed by such hatches are flooded full or flooded to the level having the most detrimental effect on stability when free surface effects are considered, whichever is the worst case.

For the interim (until formal survey, stability review, and load line assignment can be accomplished), you should ensure that your vessel

substantially meets one of these alternative combinations of intact stability criteria. To determine this, you must conduct an in-water survey of the vessel in the condition under which you desire to conduct interim operations. Before your survey, you should familiarize yourself with the content of Part III of this pamphlet and pre-inspect the items that your classification society surveyor will be checking.

During your survey, you should pay particular attention to the following items:

- ◆ Have any major modifications been made to the vessel since the last update of the stability information? If so, document them now. Have these modifications significantly altered the vessel's displacement, vertical / longitudinal centers of gravity, or wind profile? Ensure that the effect of these modifications are accounted for in the vessel's stability information.
- ◆ What items were included in the original lightship data? Was any fishing or fish processing equipment included in lightship and is this equipment still aboard? The weight, VCG, and LCG of all major equipment should be itemized to produce "baseline" lightship data since freezers, conveyor belts, winches, processing machines, etc. are often removed or replaced over the years.
- ◆ What is the condition of tanks (fuel, water, lube oil, etc.), cargo holds? Record the vessel's fore and aft drafts and compare the actual displacement and trim to that predicted by the stability information. Determine the cause and effect of any unexplained weight growth or shift in LCG.
- ◆ Does the vessel have a permanent list? If so, determine why.
- ◆ What is the location, type and amount of ballast?
- ◆ What is the location, type and capacity of lifting gear? If lifting capacity or arrangement has changed, ensure that this is reflected in the stability information.
- ◆ How will the condition of the vessel change as consumables are expended and the catch is loaded and processed at sea?
- ◆ Verify the integrity of watertight / weathertight envelope assumed in the stability information. Check vent closures, freeing ports, doors, sill heights, integrity of through-hull penetrations (including fish/scrap chutes), scuppers, hatchways, machinery space openings, etc. Verify the critical points of downflooding identified by the owner. Ask the crew which openings are typically left open at sea and whether or not they can be rapidly closed in an emergency. Sketch the assumed watertight envelope for later verification by your chosen classification society (See Part II-C).

During your survey, you should also look for any inherently unsafe conditions that may be present, whether or not they affect the vessel's stability. At a minimum, you should check the following:

- ◆ Are the requirements of 46 CFR Subchapter C met with respect to lifesaving equipment, Emergency Position Indicating Radio Beacons (EPIRBs), and firefighting equipment. Classification society surveyors will be examining this equipment on behalf of the Coast Guard.
- ◆ Are there any hull structural problems? (i.e. corrosion, cracking, buckling, etc.)
- ◆ Is all equipment properly secured to prevent shifting at sea?
- ◆ Are there any unsafe conditions with electrical equipment, machinery, cargo handling gear, etc.

Once you have completed your survey, determine if the stability information accurately reflects actual vessel operations. If it does not, what are the discrepancies and how can they be corrected or compensated for? Is guidance provided concerning the effects of water on deck? If significant amounts of water are typically found on the processor deck at sea, are its effects considered in the stability guidance available to the master? Is there a means to determine the effects of topside icing?

If your vessel, as configured, does not fully comply with one of the alternative sets of stability criteria described above, you should take one or more of the following courses of action, as you deem most appropriate:

- ◆ Make minor in-water modifications to the vessel or its stability information so that it does fully meet one of the criteria. This may include, but is not limited to:
 - Removal of unnecessary equipment that has resulted in vessel weight growth not reflected in the vessel's stability information.
 - Relocation of movable items to lower the vertical center of gravity or reduce trim.
 - Install/repair watertight closure devices at critical downflooding points.
- ◆ Propose operational restrictions that will permit interim operations in compliance with the stability criteria. These might include:
 - Limit cargo capacity.
 - Require critical hull openings to be kept closed at sea, increasing the angle of downflooding.

- Minimize the effects of free surface by limiting the number of slack tanks and keeping the processor deck free of excessive water.
- Define cargo loading and fuel burnout sequences that will preclude unsafe loading conditions.
- ♦ If the vessel cannot fully comply with the stability criteria with reasonable operational restrictions, forego interim operations and pursue load line assignment.

If you have determined that the stability information is correct from a technical standpoint, you must then evaluate its ease of use. You should consult NVIC 3-89, Guidelines for the Presentation of Stability Information to Operating Personnel. Keep in mind that while the Coast Guard encourages the use of the simplest possible stability guidance, it is not our intent to limit the operational flexibility of your vessel. Of primary importance is that the stability guidance is in a format that is easily understood and used by the Master of your vessel. It is the owner's responsibility to ensure that the Master is sufficiently qualified to use the available information.

If you have satisfied yourself that the Master is provided with accurate stability information and that he is sufficiently qualified to use the information, you should prepare a written attestation to this effect. A sample has been provided for your use in preparing this letter (See Part II-B). This letter must be provided to your classification society surveyor along with the other information specified in Part I.

PART II-B: OWNER ATTESTATION OF ADEQUATE STABILITY

Date: _____

COMMANDING OFFICER (CID)
U.S. Coast Guard Marine Safety Office
1519 Alaskan Way S.
Seattle, WA 98134-1192

Subj: Stability verification of F/V _____
O.N. _____

Ref: Program for the Interim Operation of Fishing Industry
Vessels Requiring Load Lines, July 1990

I am the owner of the subject vessel. I certify that the vessel, as currently configured, is in substantial compliance with the recommended stability criteria described in the above referenced document, that suitable stability information is provided to the Master and that it is presented in a format that permits the Master to readily ascertain the stability of the vessel in any loading condition. In making this determination, I have been guided by the recommendations of _____ (my naval architect), and the stability recommendations contained in Navigation and Vessel Inspection Circulars 5-86 and 3-89.

I further certify that I have provided the necessary training to ensure that the Master has the qualifications to properly use the stability information.

(Describe any modifications made to the vessel and/or stability information to ensure the stability information is accurate and usable by the Master.)

(If the vessel cannot fully meet the recommended stability criteria, define any proposed operational restrictions intended to compensate for any deficiencies in the vessel's stability and/or deficiencies in the stability information provided to the Master.)

I will not permit any alterations to be made to the subject vessel affecting its stability without first notifying you, consulting with my naval architect, and reverifying the adequacy of the stability information provided to the Master.

Vessel Owner's Signature

PART II-C: SKETCH OF ASSUMED WATERTIGHT ENVELOPE

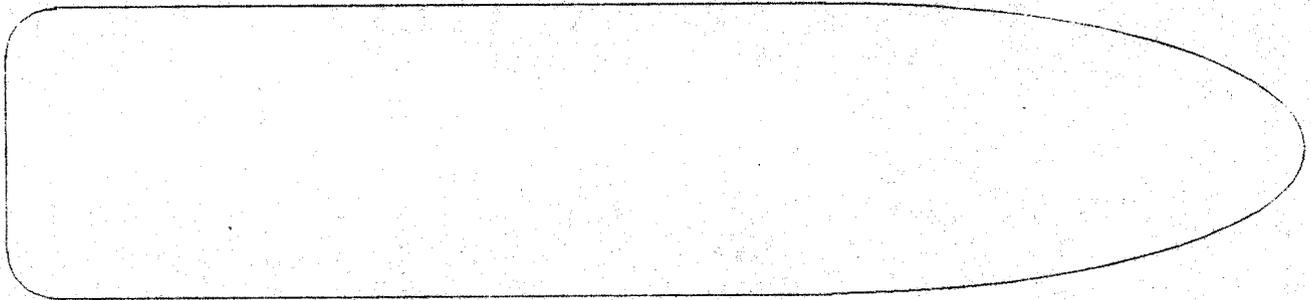
(TO BE COMPLETED BY OWNER / NAVAL ARCHITECT)

Sketch the boundaries of the watertight / weathertight envelope upon which stability calculations have been based. Provide sufficient detail (i.e. label decks, bulkheads, etc.) to allow a classification society surveyor to verify the integrity of this envelope. Locate and identify critical down-flooding points assumed in the stability calculations.

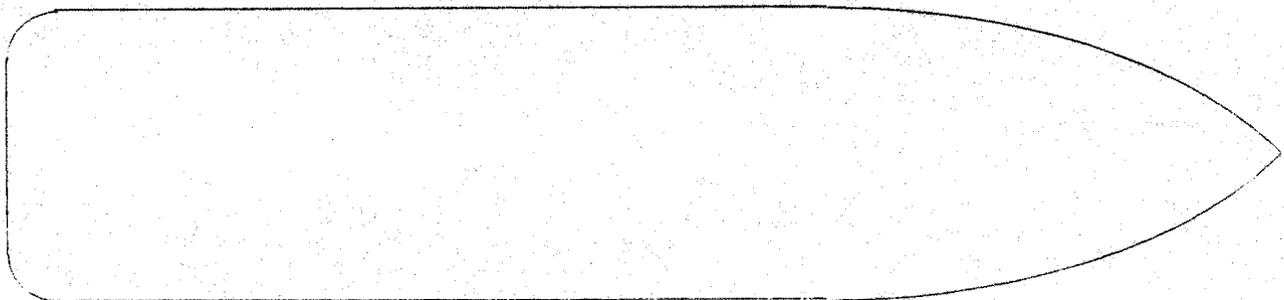
An annotated plan of suitable size may be substituted for these sketches.



ELEVATION (LABEL THE FREEBOARD DECK)



SUPERSTRUCTURE DECK



FREEBOARD DECK

PART III-A: CONDITIONS OF ASSIGNMENT

FREQUENTLY NOTED DEFICIENCIES

The following is a list of deficiencies commonly found during surveys for load line assignment. While this is not an all-encompassing list, it does indicate potential problem areas. It will be beneficial for the owner to examine these items before the classification society's in-water survey.

- ◆ Ventilators / air pipes with no ball check valves, or other means of closing.
- ◆ Ventilators / air pipes with insufficient height above deck.
- ◆ Overboard discharges from an open system with no valve in line.
- ◆ Sea valves and overboards with wafer-type butterfly valves.
- ◆ Insufficient freeing port area.
- ◆ Weathertight boundaries partially removed or penetrated (for machinery additions/alterations, etc.) and no longer weathertight.
- ◆ Cargo hatches with insufficient dogs, wedges, etc.
- ◆ Bulwarks of insufficient height.
- ◆ Guard rails of insufficient height and/or gap too large between courses.
- ◆ No check valves in bilge piping (allows back-flooding of mach'y spaces).
- ◆ Use of non-weathertight doors above the freeboard deck.
- ◆ Lack of deadlights on portholes (especially in watertight doors).
- ◆ Insufficient coaming height on hatches.
- ◆ Lack of full penetration welds on hull plating butts and seams. One-sided welding of framing.
- ◆ Trash chutes (waste overboard) open to sea with no valving.
- ◆ Fish conveyors/frozen cargo conveyors penetrating superstructure deck (sometimes main deck as well) with no means of closing provided.

PART III-A: CONDITIONS OF ASSIGNMENT

(TO BE COMPLETED BY CLASSIFICATION SOCIETY SURVEYOR)

Examine the following items and indicate compliance with the provisions of 46 CFR Subchapter E and the International Convention on Load Lines, 1966 by initialing in the left hand column. Items not found to be in full compliance should not be initialed and must be explained in the "Remarks" column. Remarks should be identified by the corresponding item number and must explain discrepancies and any corrective actions taken. Mark "N/A" in the left hand column if an item is not applicable.

INIT	SURVEY ITEM	REMARKS
	1. HATCHWAYS & COVERS and their coamings, stiffeners, stays, beams, fore & afters, carriers, tarpaulins, cleats, battens, wedges, lashings, gaskets, and dogs.	
	2. MACHINERY CASINGS and their fiddley openings, casings, doors, sills, and skylights.	
	3. FLUSH SCUTTLES and their attachments.	
	4. COMPANIONWAYS and their doors, sills and fastenings.	
	5. VENTILATORS and their coamings, deck connections, supports and closing arrangements	

PART III-A: CONDITIONS OF ASSIGNMENT (Continued)

(TO BE COMPLETED BY CLASSIFICATION SOCIETY SURVEYOR)

INIT	SURVEY ITEM	REMARKS
	6. AIR PIPES and their closing arrangements.	
	7. GANGWAY, CARGO AND OTHER PORTS IN SHIP'S SIDES and their closing arrangements.	
	8. SCUPPERS AND SANITARY DISCHARGES and their valves.	
	9. SIDE SCUTTLES and their deadcovers.	
	10. GUARD RAILS OR BULWARKS.	
	11. FREEING PORTS and their shutters and bars.	

PART III-A: CONDITIONS OF ASSIGNMENT (Continued)

(TO BE COMPLETED BY CLASSIFICATION SOCIETY SURVEYOR)

INIT	SURVEY ITEM	REMARKS
	12. PROTECTION AND ACCESS TO CREW'S QUARTERS, including gangways and lifelines.	
	13. END BULKHEADS OF SUPER-STRUCTURES and their closing appliances and fastenings.	
	14. SPECIAL TYPE supplementary fittings.	
	15. Verify the integrity of the watertight / weathertight envelope defined by the vessel owner / naval architect in the sketch provided in Part II-C. Check the down-flooding points to verify they are the critical points of water entry.	
	16. Review the list of major equipment, cargo, conditions of tanks, cranes and their gear, fishing gear (nets, wire rope, doors, etc.) provided by the owner. Compare the actual condition of the vessel to that shown in the stability guidance for the condition under which interim operations will be conducted. Look for discrepancies that may have resulted from undocumented alterations of the vessel.	

PART III-B: LIFE PRESERVERS, FIRE EXTINGUISHERS & EPIRBs

(TO BE COMPLETED BY CLASSIFICATION SOCIETY SURVEYOR)

Examine the following items and indicate compliance with Title 46 CFR Subchapter C - Uninspected Vessels, by initialing in the left hand column. Items not found to be in full compliance should **not** be initialed and must be explained in the "Remarks" column. Remarks should be identified by the corresponding item number and must explain discrepancies and any corrective actions taken. Mark "N/A" in the left hand column if an item is not applicable.

INIT	SURVEY ITEM	REMARKS
A. LIFE PRESERVERS AND OTHER LIFESAVING EQUIPMENT		
	<p>1. Is there at least one life preserver (Type I PFD), approved exposure suit, or approved hybrid PFD of a suitable size for each person on board? (Each hybrid PFD is acceptable only if it is:</p> <ul style="list-style-type: none"> ◆ worn when vessel is underway and wearer is not within an enclosed space; and ◆ used in accordance with the conditions marked on the PFD & in the owner's manual; and ◆ labeled for use on uninspected commercial vessels. 	
	2. Are all life preservers and/or exposure suits fitted with retroreflective material?	
	3. Do all PFDs and exposure suits have an approved light securely attached to the front shoulder area?	
	4. Are life preservers, hybrid PFDs and exposure suits stowed in a readily accessible, plainly marked location?	
	5. Is at least one approved ring life buoy on board?	
	6. Is the required ring life buoy stowed in an immediately available location?	

PART III-B (Continue)

(TO BE COMPLETED BY CLASSIFICATION SOCIETY SURVEYOR)

INIT	SURVEY ITEM	REMARKS										
B. FIRE EXTINGUISHERS												
	<p>1. Are the proper number of Type B-II fire extinguishers on board as per the following table?</p> <table border="1" data-bbox="183 520 808 688"> <thead> <tr> <th>GROSS TONS</th> <th># of B-IIs required</th> </tr> </thead> <tbody> <tr> <td>50 - 100</td> <td>2</td> </tr> <tr> <td>100 - 500</td> <td>3</td> </tr> <tr> <td>500 - 1000</td> <td>6</td> </tr> <tr> <td>1000 & over</td> <td>8</td> </tr> </tbody> </table>	GROSS TONS	# of B-IIs required	50 - 100	2	100 - 500	3	500 - 1000	6	1000 & over	8	
GROSS TONS	# of B-IIs required											
50 - 100	2											
100 - 500	3											
500 - 1000	6											
1000 & over	8											
	<p>2. Is there at least one type B-II fire extinguisher for each 1000 BHP, or fraction thereof, of the main engine. [No more than 6 B-IIs required]</p>											
	<p>3. If vessel is over 300 GT, is there either one Type B-III semi-portable fire extinguishing system OR a fixed fire extinguishing system in the machinery space?</p>											
C. EMERGENCY POSITION INDICATING RADIO BEACONS (EPIRBs)												
	<p>1. Is there an FCC Type Accepted Category 1 float free, automatically activated, 406 MHz EPIRB; OR a 121.5/243 MHz Class A EPIRB on board? [NOTE: A CG approved 121.5/243 MHz Class A EPIRB is allowed on board until Aug 1, 1991 if the EPIRB is operable & installed on the vessel on or before Oct 3, 1988]</p>											
	<p>2. Test the EPIRB in accordance with instructions on the label. Remind Master of CG requirement that this test is to be done on a monthly basis. [Any additional EPIRBs installed on CG approved inflatable liferafts only need to be tested during the annual liferaft servicing at an approved facility.]</p>											

