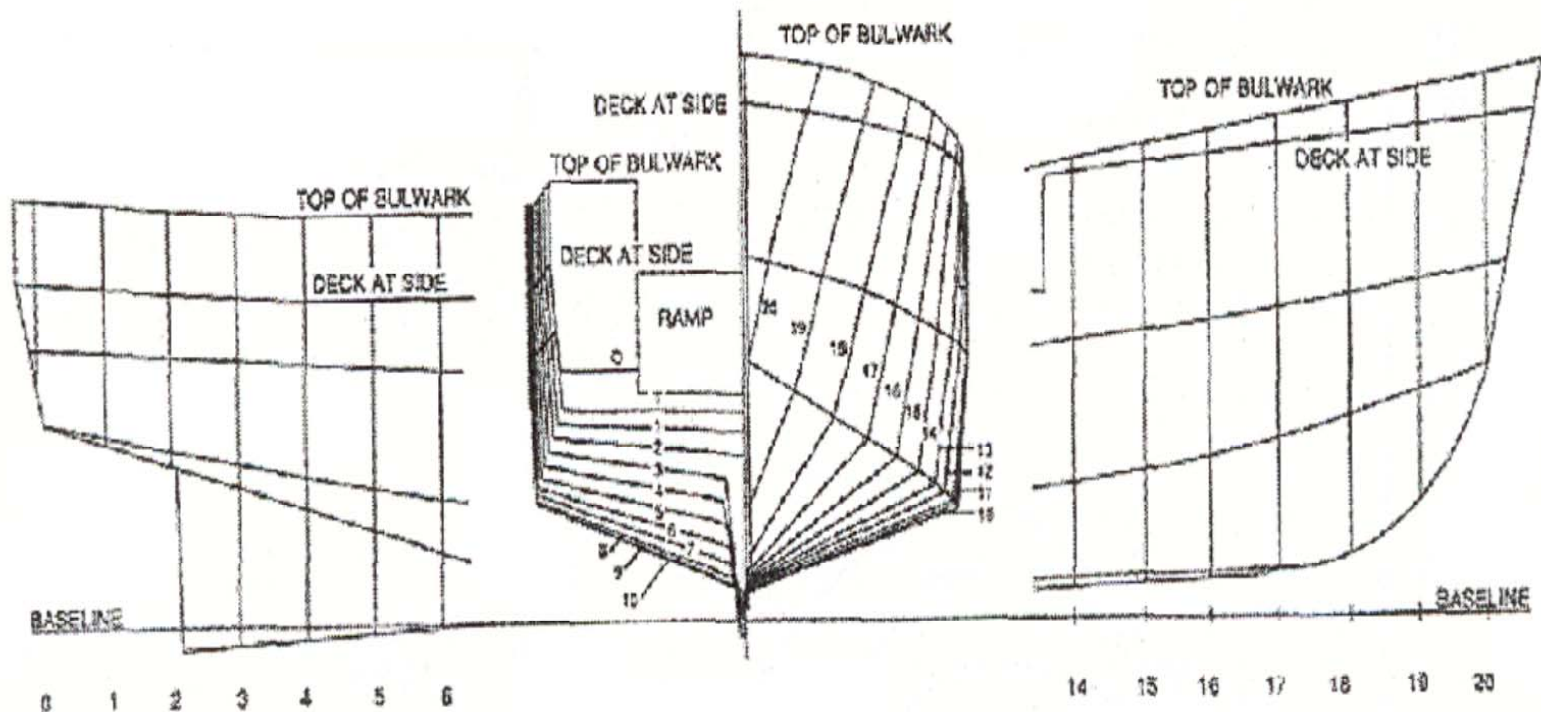


# VESSEL STABILITY



## CG Enforcement (Penalty Phase to begin)

October 01, 2002: Stability Instructions

March 01, 2003: Coaming Heights, Deadlight Covers, Piping

# D8 TACNOTE 02-01

## CFV Stability Enforcement

46 CFR PART 28.500, SUBPART E - Stability

46 CFR 28.530            Stability Instructions

46 CFR 28.560 (b)      Watertight and Weathertight Integrity

46 CFR 28.560 (f)      Portlights and Deadlights

46 CFR 28.580 (h)(3)   Efficient, Hinged, Inside Deadlights

33 CFR 155.420        Pumping, Piping, and Discharge

## 46 CFR PART 28.500, SUBPART E - Stability

Each commercial fishing industry vessel which is **79 feet** (24 Meters) or more in length that was constructed, underwent a major conversion, or has been substantially altered **on or after September 15, 1991** is required to meet the stability requirements of SUBPART E.

# 46 CFR 28.530 Stability Instructions

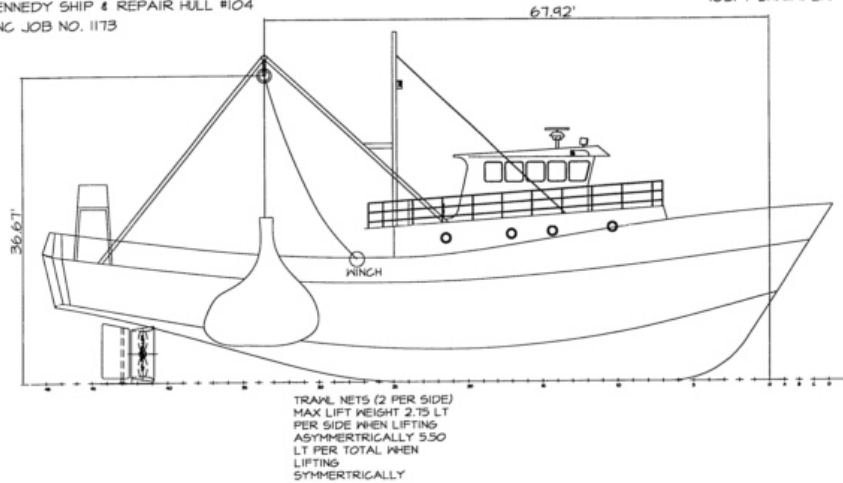
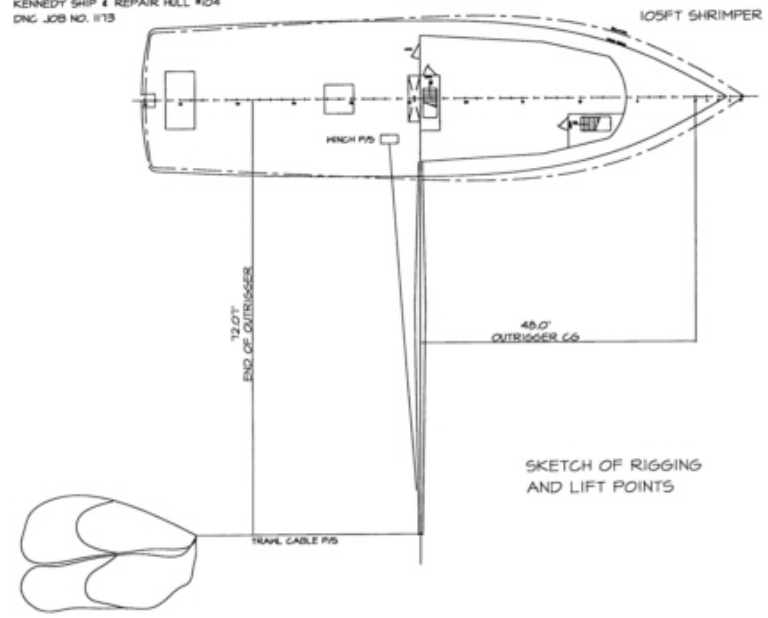
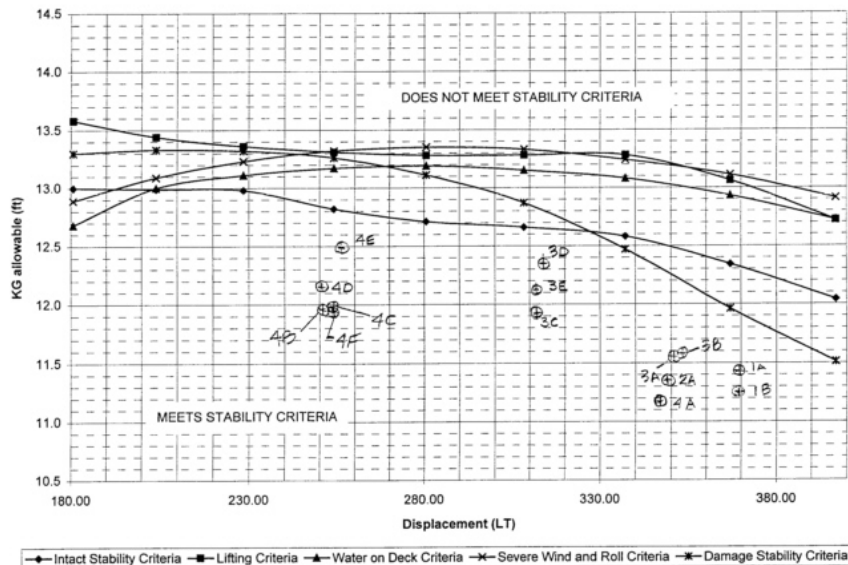
May include any of the following:

- Owners responsibility to select a qualified individual.
- Results and calculations must be maintained by the owner.
- Stability Booklet with sample calculations.
- Must be easily understood by the master or individual in charge of the vessel.
- Provide loading constraints and operation restrictions.
- Simple loading diagram with instructions.
- General arrangement plans showing watertight compartments, closures, vents, and tanks.
- Tank and hold capacities, center of gravity, and free surface effects.
- General precautions to prevent unintentional flooding... etc.

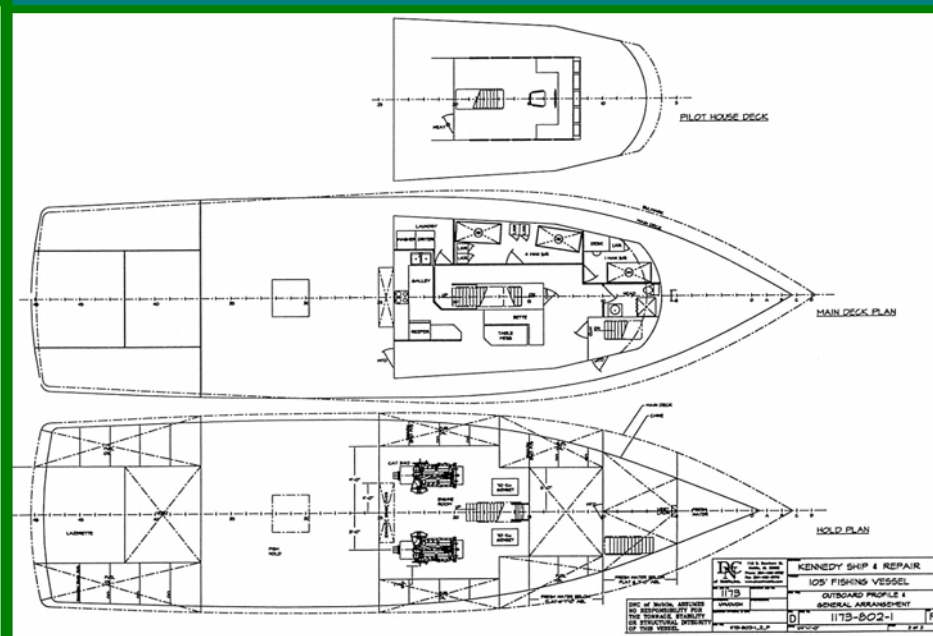
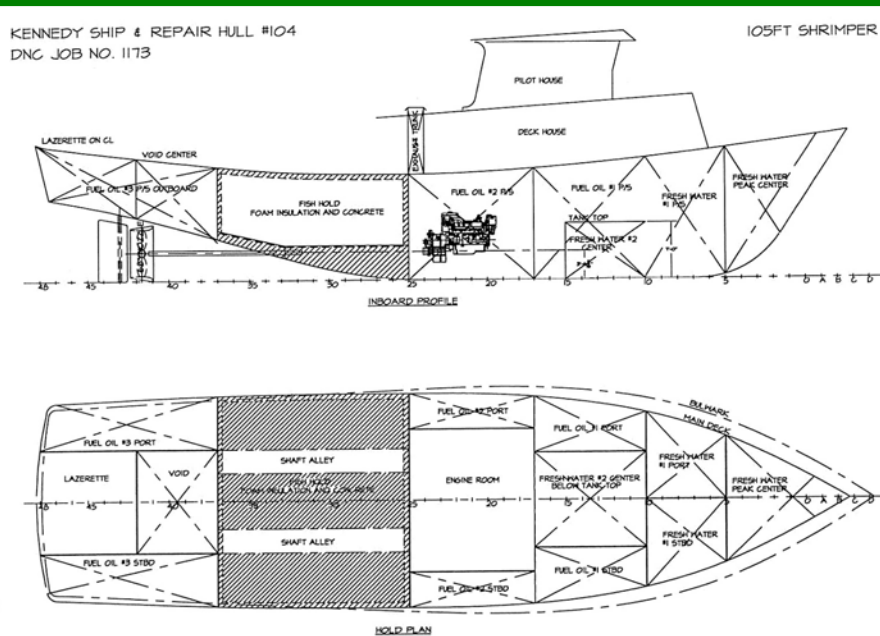
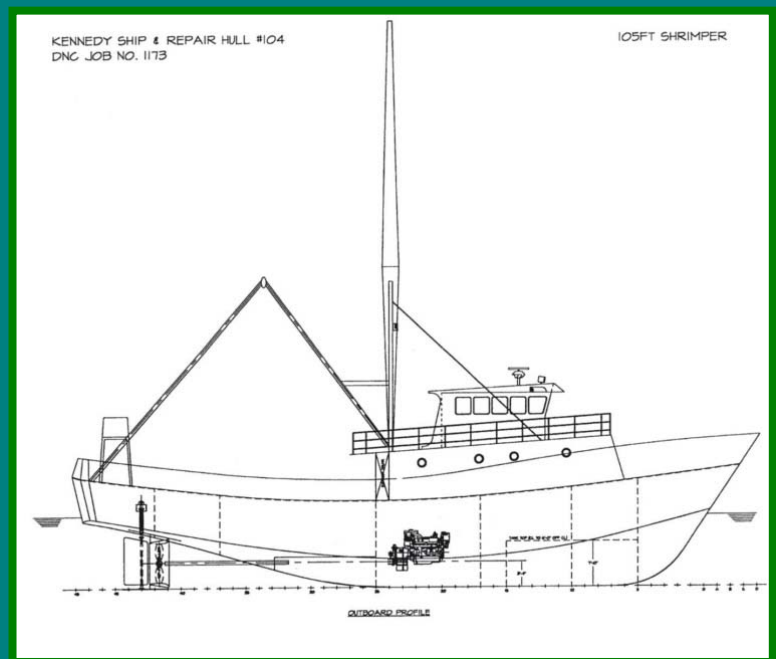
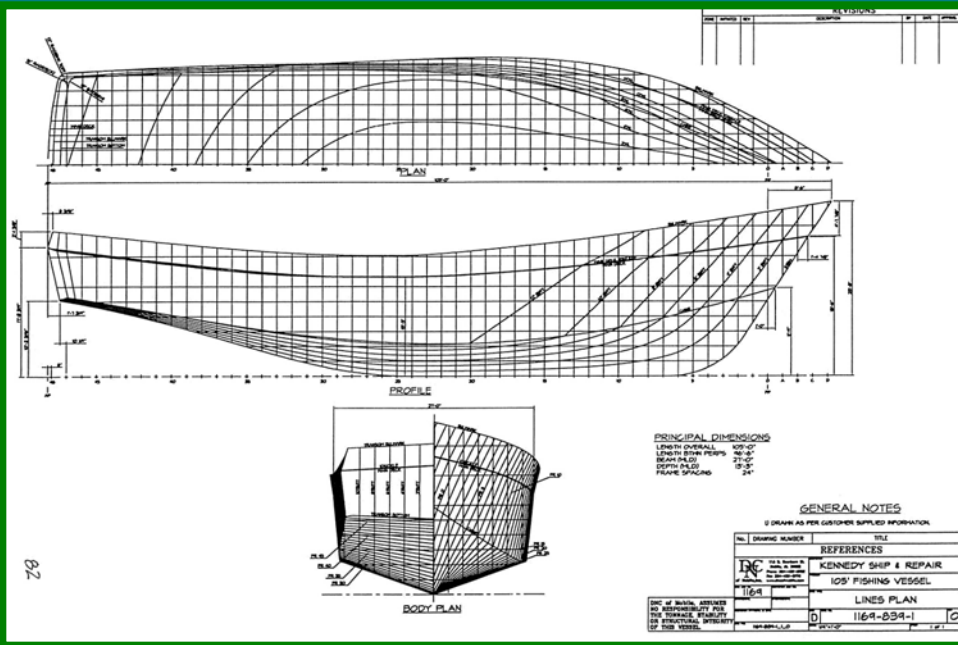
## OPERATING INSTRUCTIONS

- 1) Route: Operation on exposed waters is permitted. Since the vessel's route is based on other considerations in addition to stability, the Master is cautioned that the USCG may further limit the route.
  - 2) Freeboard and Draft: A maximum mean draft of 11'-6" above baseline is permitted. This corresponds to a displacement of 397.03 long tons in salt water.
  - 3) All tons used in this booklet are long tons. 1 long ton = 2240 lbs.
  - 4) The trim and list of the vessel shall be kept to a minimum at all times.
  - 5) Weight changes: No fixed ballast or other such weights shall be added, removed, altered and/or relocated without authorization and supervision of the US Coast Guard or a Qualified Individual.
  - 6) No watertight bulkheads shall be removed, added or altered without authorization and supervision of the US Coast Guard or a Qualified Individual.
  - 7) Hull Openings: All Main Deck hatches, weathertight doors, and watertight doors to Deck House, Machinery spaces and Hold spaces shall be kept closed and fully secured at all times when the vessel is underway, except when actually used for transit under safe conditions.
  - 8) Tank Usage: It is recommended that the following tanks be used in the burn sequence listed:
    - Fuel Oil Tanks:
      - First Burn : Fuel Oil No. 3 Port & Stbd
      - Second Burn : Fuel Oil No. 1 Port & Stbd
      - Third Burn : Fuel Oil No. 2 Port & Stbd
    - Fresh Water Tanks:
      - First Burn : Fresh Water Peak
      - Second Burn : Fresh Water No. 1 Port & Stbd
      - Third Burn : Fresh Water No. 2 center
- Tank pairs should be depleted to minimum content before proceeding to the next tank pair.
- 9) Tanks General: No more than one centerline or one port and starboard pair of the following tanks may be partially filled at any one time.
    - a) Fuel Oil Tanks
    - b) Fresh Water Tanks

**MAXVCG vs. DISPLACEMENT CHART**  
Displacement vs Maximum Allowable KG  
Uncorrected for Free Surface Effect



SKETCH OF RIGGING AND LIFT POINTS

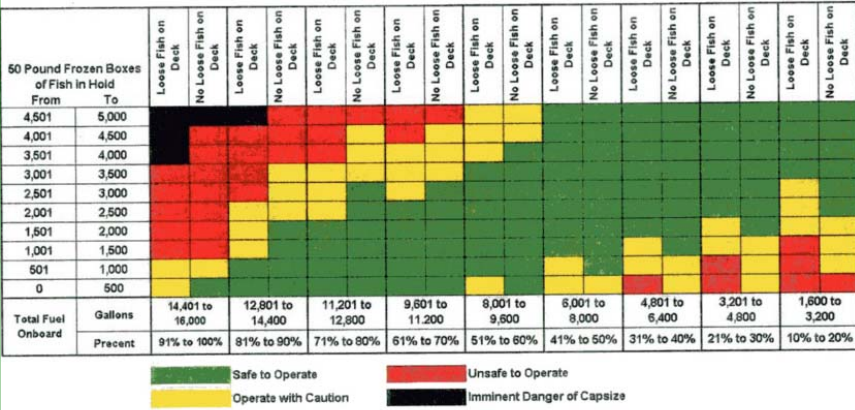


Survey Load Matrix Type 1 - Basic Stern Trawler Processor

F/V 130 Foot Stern Trawler

Safe Loading Table - Unrestricted Ocean Service

Fresh Water Tank Any Level

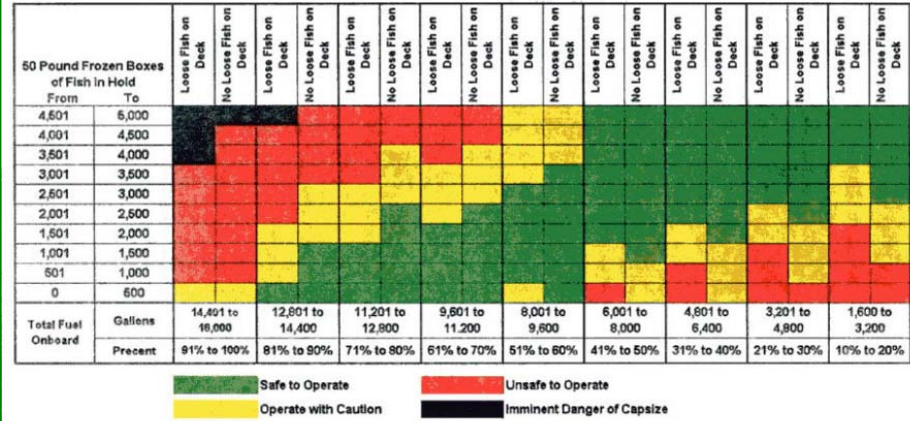


Fuel Usage Procedure: Burn off the fuel tanks in the following order; 1) Forward Engine Room Port & Starboard Wing Tanks, 2) Mid Engine Room Port & Starboard Wing Tanks, 3) Fish Hold Port & Starboard Wing Tanks

F/V 130 Foot Stern Trawler - Matrix Type 2B1

Safe Loading Table - Unrestricted Ocean Service

RSW Tanks Pressed Full - Fresh Water Tank Any Level

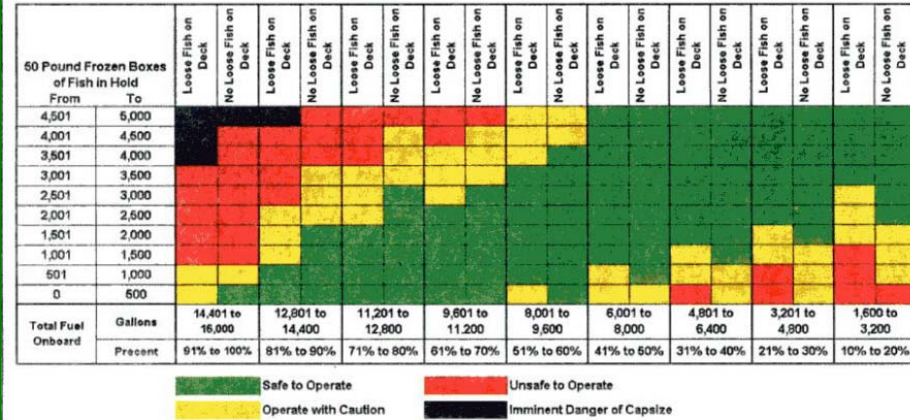


Fuel Usage Procedure: Burn off the fuel tanks in the following order; 1) Forward Engine Room Port & Starboard Wing Tanks, 2) Mid Engine Room Port & Starboard Wing Tanks, 3) Fish Hold Port & Starboard Wing Tanks

F/V 130 Foot Stern Trawler - Matrix Type 2B2

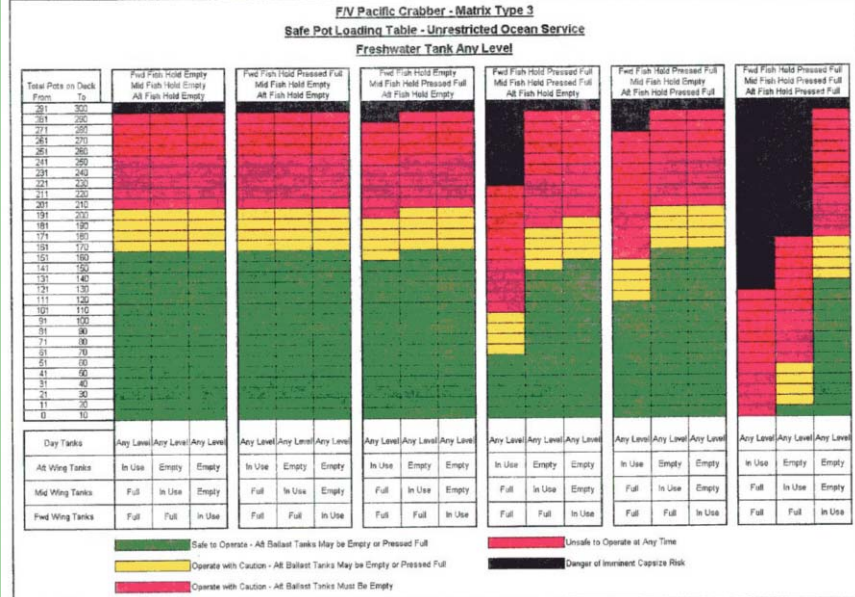
Safe Loading Table - Unrestricted Ocean Service

RSW Tanks Empty - Fresh Water Tank Any Level



Fuel Usage Procedure: Burn off the fuel tanks in the following order; 1) Forward Engine Room Port & Starboard Wing Tanks, 2) Mid Engine Room Port & Starboard Wing Tanks, 3) Fish Hold Port & Starboard Wing Tanks

Single Matrixes - One Sheet each for RSW Tanks Empty and Full

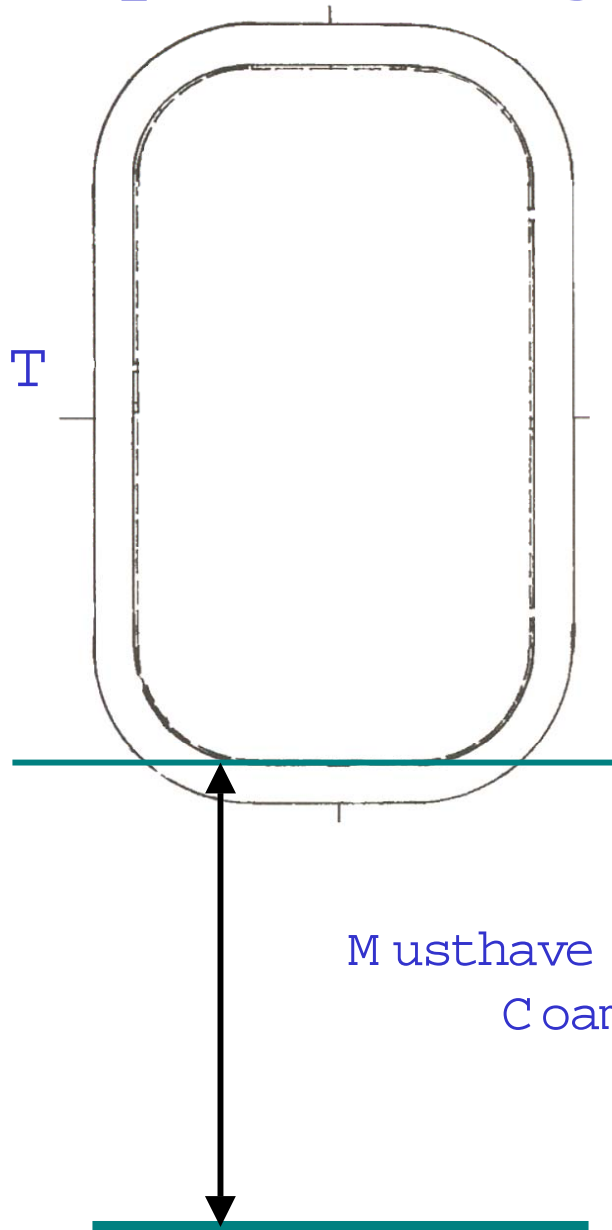


Load Matrix Type 3 Format



# 176a Stability / Watertight Integrity

VESSEL 79 FEET  
OR MORE

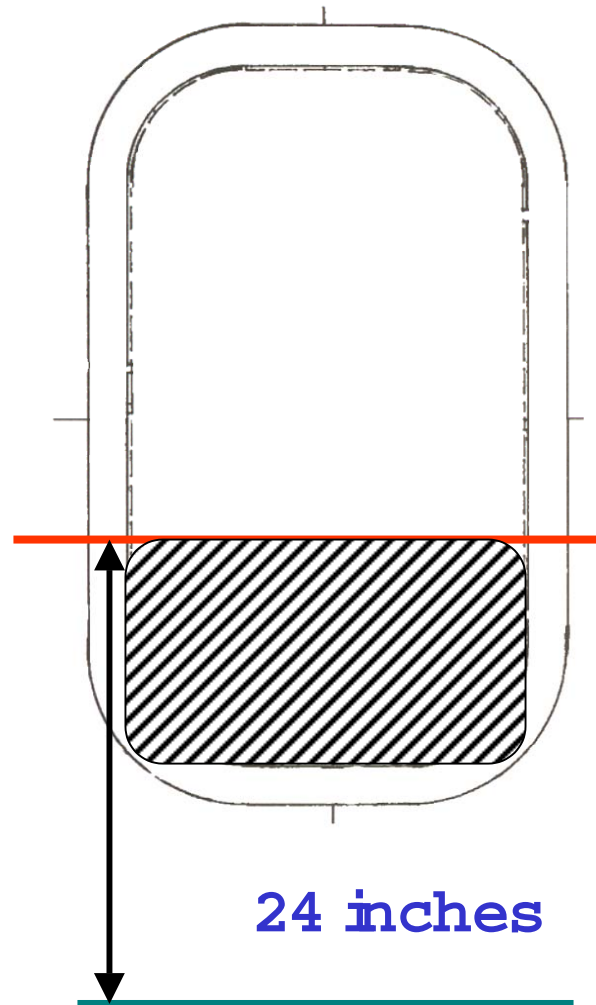


Must have 24 inch Watertight  
Coaming Height

# 176a Stability / Watertight Integrity

## OPTION ONE

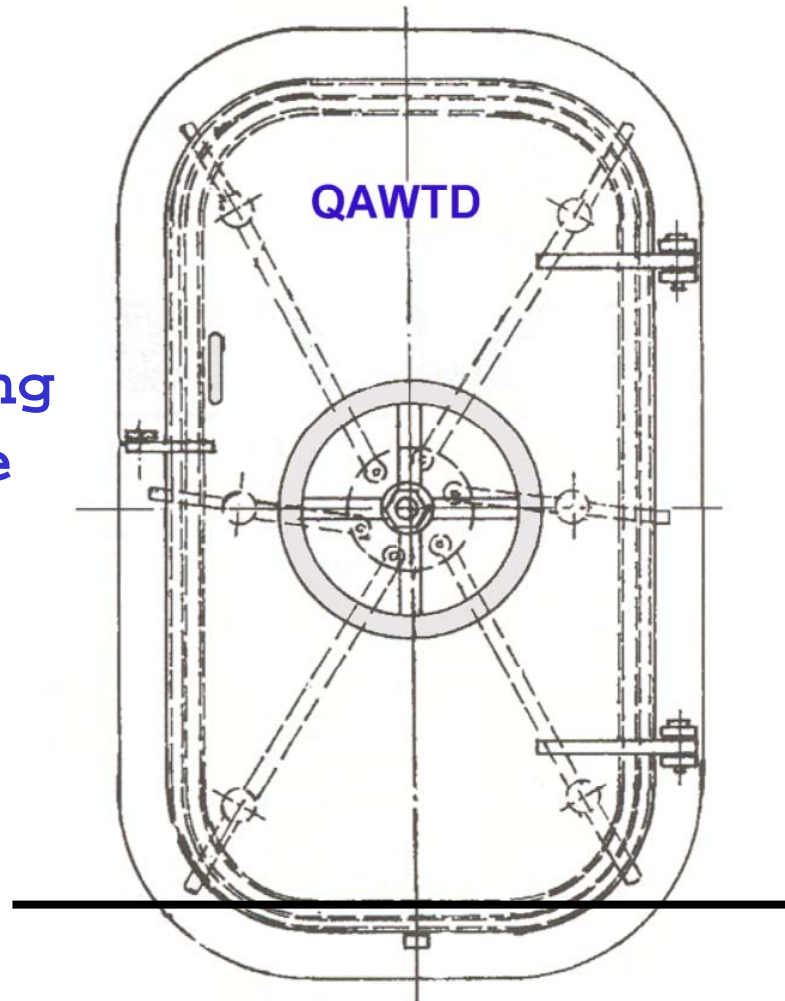
Install Watertight  
Coaming

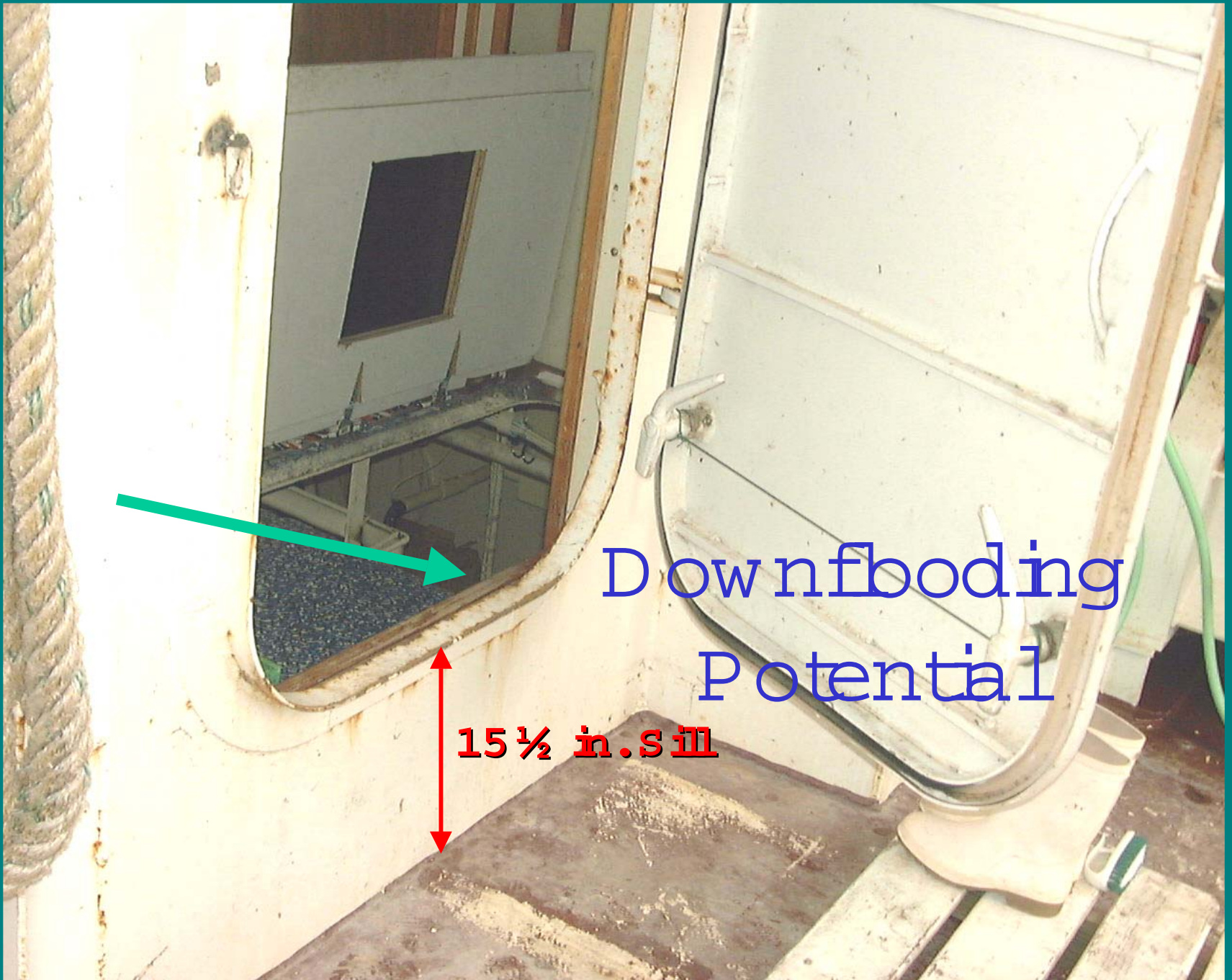


# 176a Stability / Watertight Integrity

## OPTION TWO

Install A Quick-Acting  
Watertight Closure  
Device





Downflooding  
Potential

15 1/2 in. sill

24 N. →

13 N. →

**SILL HEIGHT**

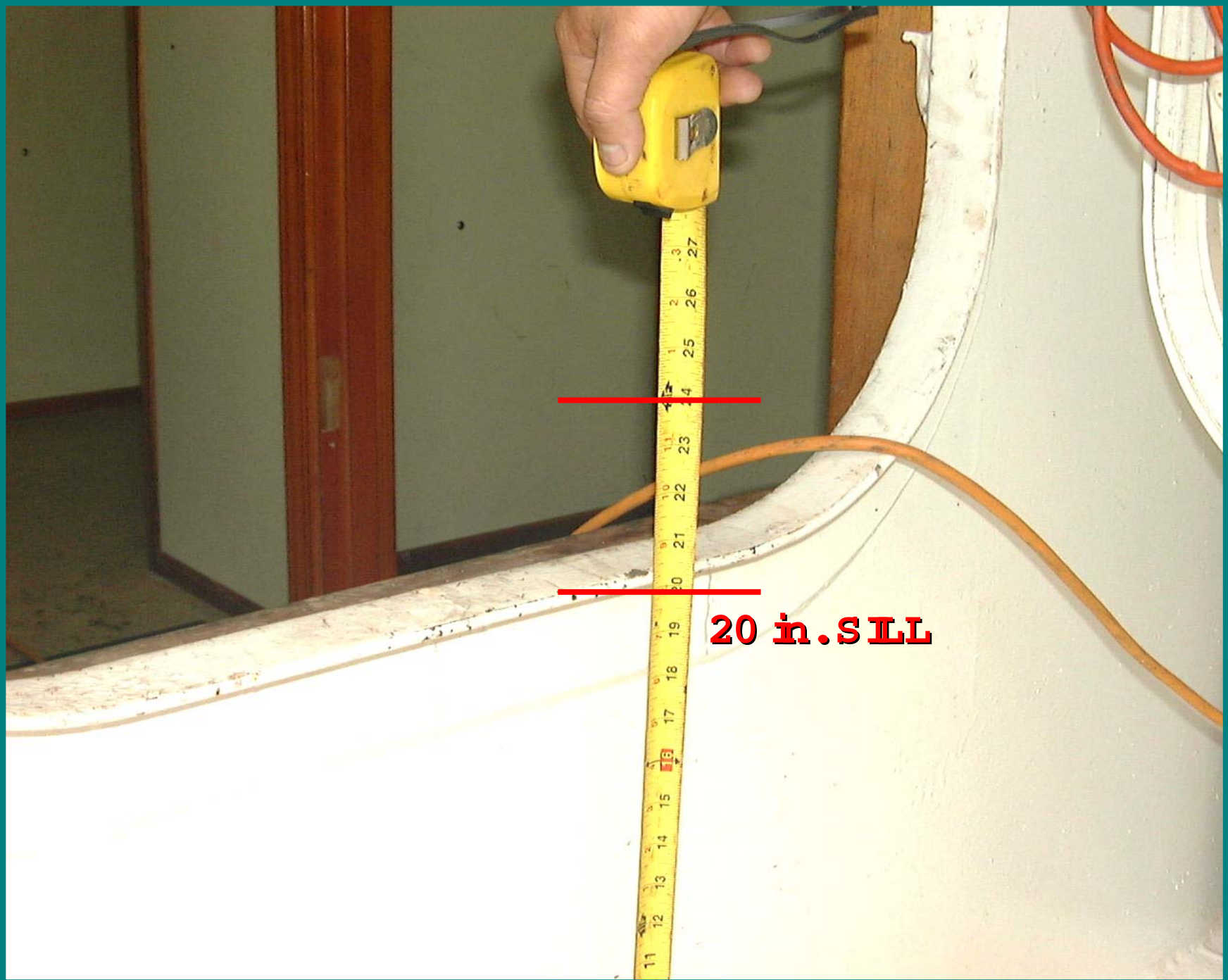




**13 in. SLL**



**15 1/2 in. SILL**



**20 in. SILL**







**Acceptable Repair Area**

**OR**

**Install QAW TD**



15 in.


New construction



**24 in. Hatch  
Combing**



**24 in. Hatch  
Combing**



**24 in. Hatch  
Combing**

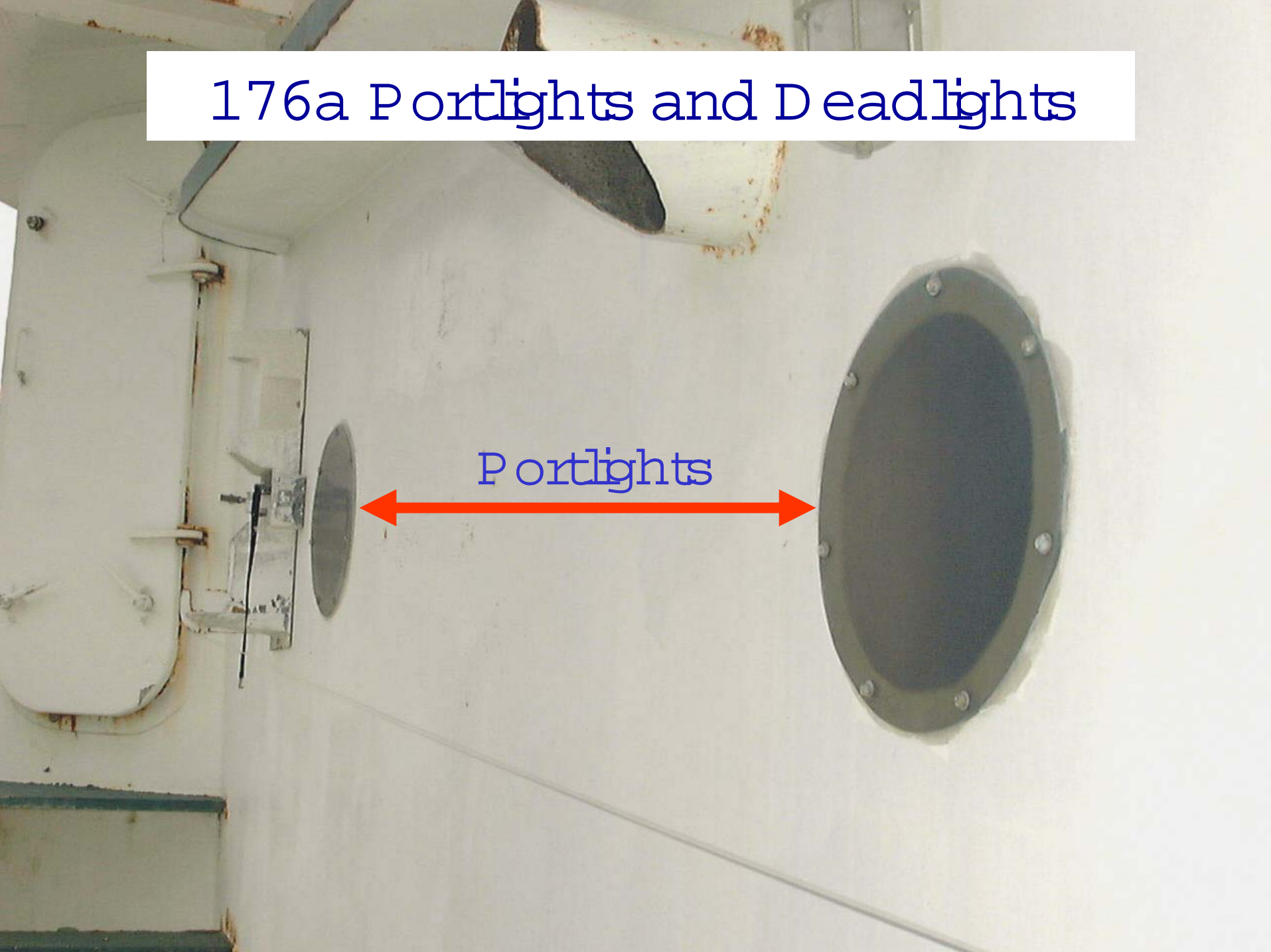
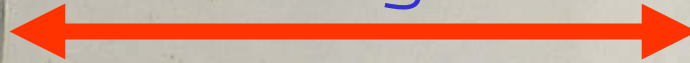


Corrected



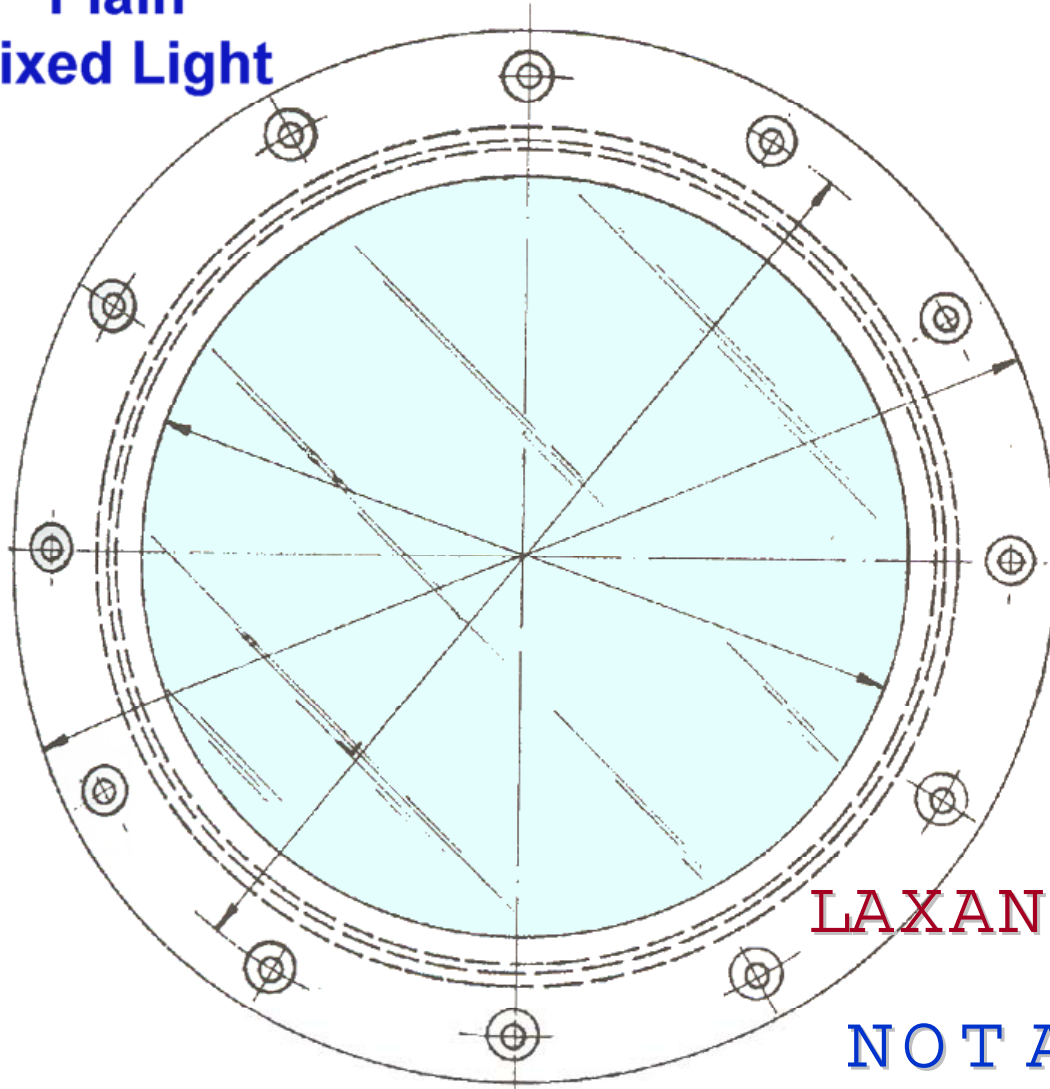
# 176a Portlights and Deadlights

Portlights



# 176a Portlights and Deadlights

**Plain  
Fixed Light**



**LAXAN and SEALANT**

**NOT ACCEPTABLE**

# 176a Portlights and Deadlights



# 176a Portlights and Deadlights



Deadlight Covers



**LAXAN Portlights**


**No Deadlight covers installed**



W e b d e d P o r t l i g h t s

**Galley Interior**





W e b d e d P o r t l i g h t s







# D8 TACNOTE 02-01

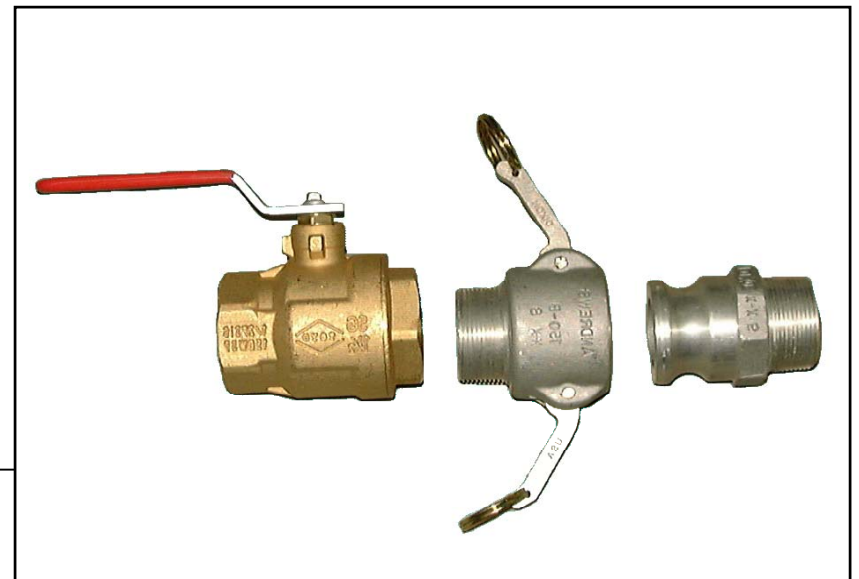
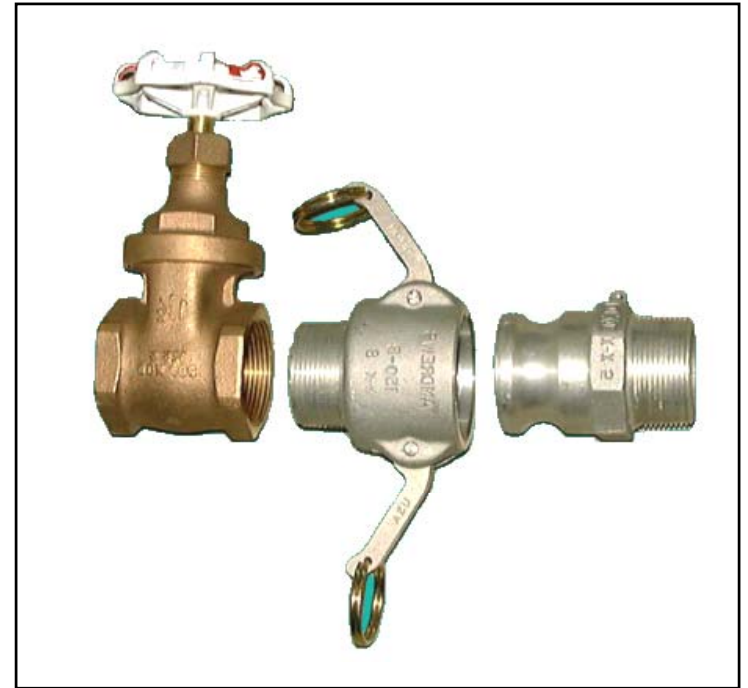
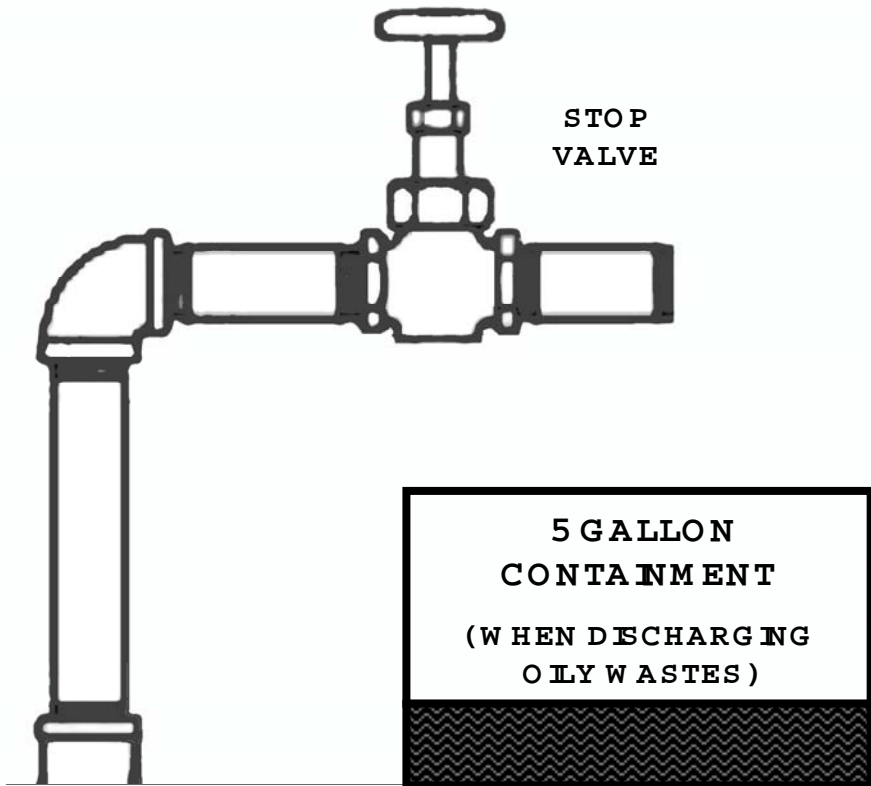
## 33 CFR 155.420 Pumping, Piping, and Discharge

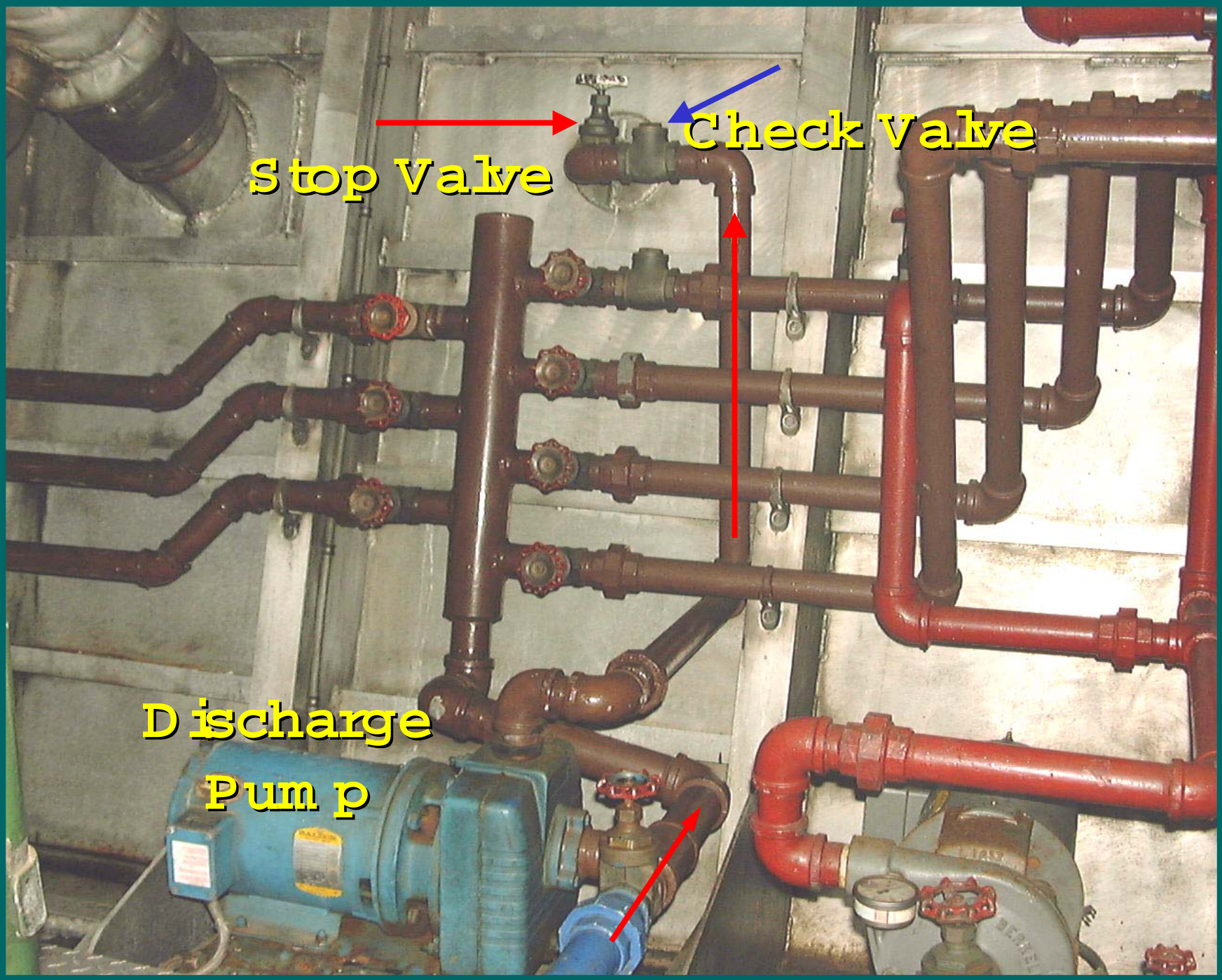
Commercial fishing vessels **100 gross tons** and greater (usually 65ft or more in length) that operate beyond territorial seas (3NM) must have a means to discharge oily waste through fixed deck piping.

- Should have at least one outlet accessible from the weather deck.
- A means on the weather deck near the discharge outlet **to stop each pump** used to discharge oily wastes.
- A **stop valve** installed for each outlet.

# 176a Pumping, Piping, and Discharge

33 CFR 155.420





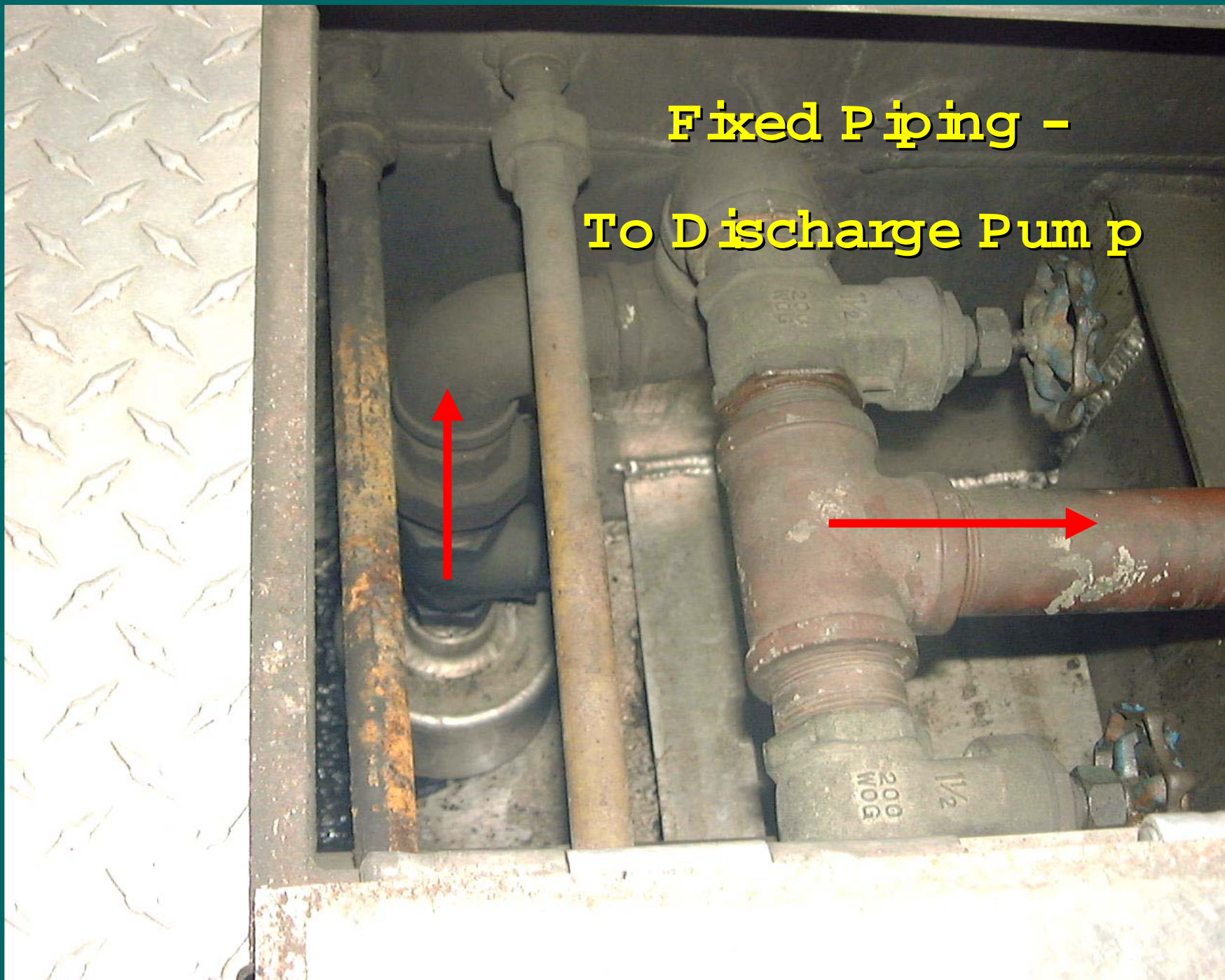
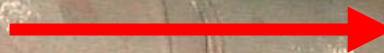
Stop Valve

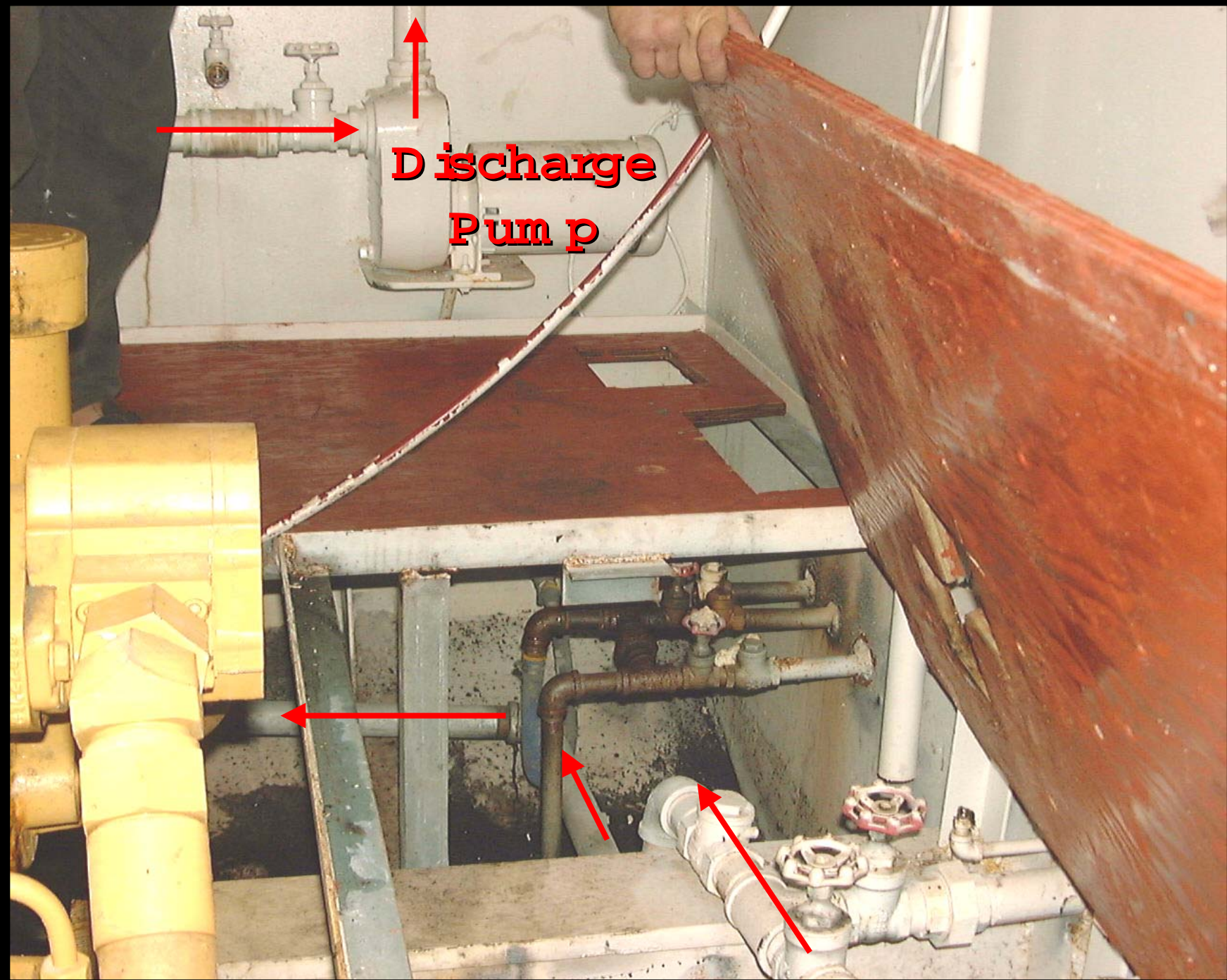
Check Valve

Discharge

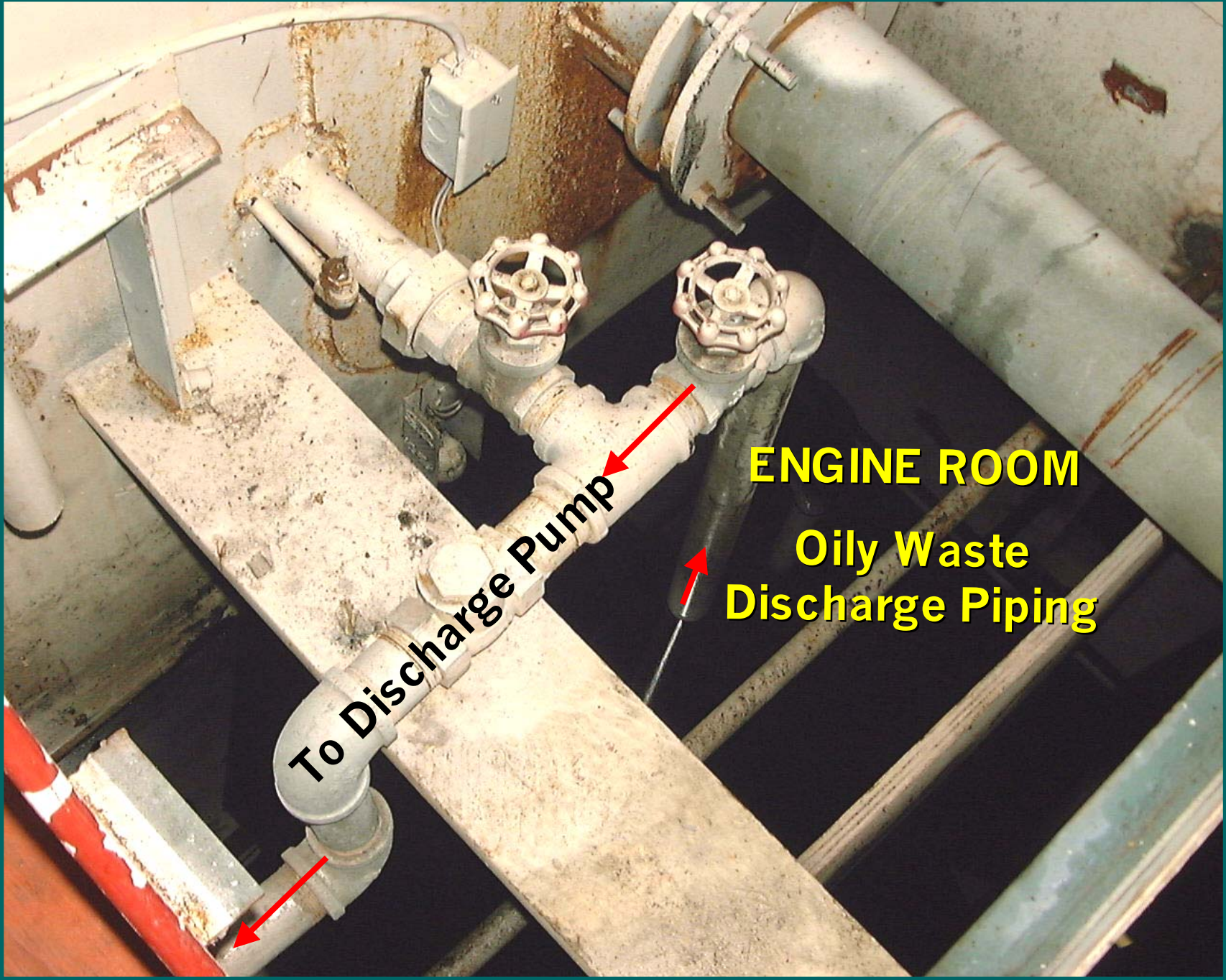
Pump

**Fixed Piping -  
To Discharge Pump**





**Discharge  
Pump**



**To Discharge Pump**

**ENGINE ROOM**

**Oily Waste  
Discharge Piping**



No Pump Stop On  
Weather Deck Near  
Discharge Outlet

No Stop Valves





**Vessel More Than  
100 Gross Tons**

**Pump Stop**

**Before**

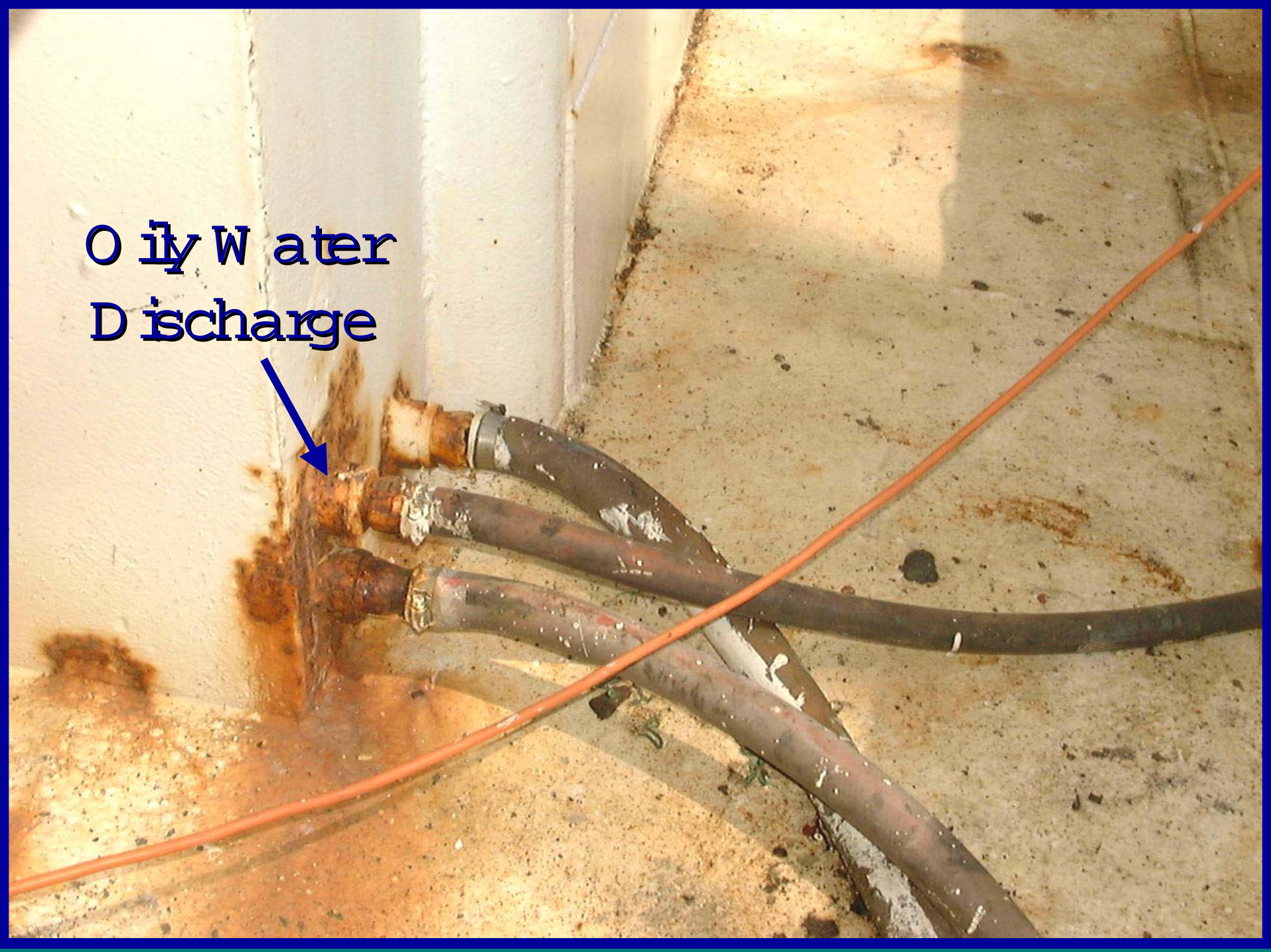
WASTE  
OIL  
PUMP  
STOP



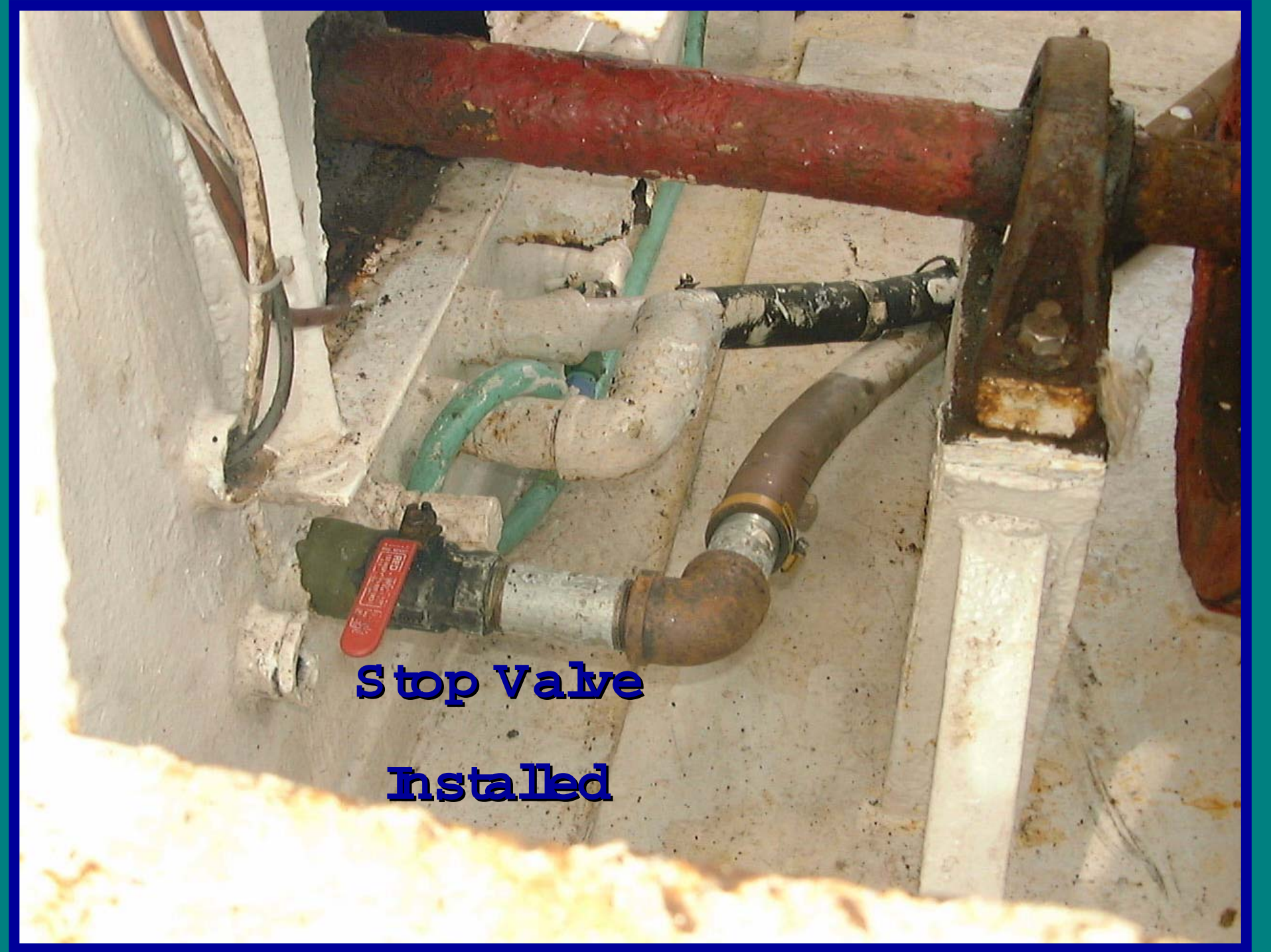
**Pum p Stop**

**A fter**

Oily Water  
Discharge



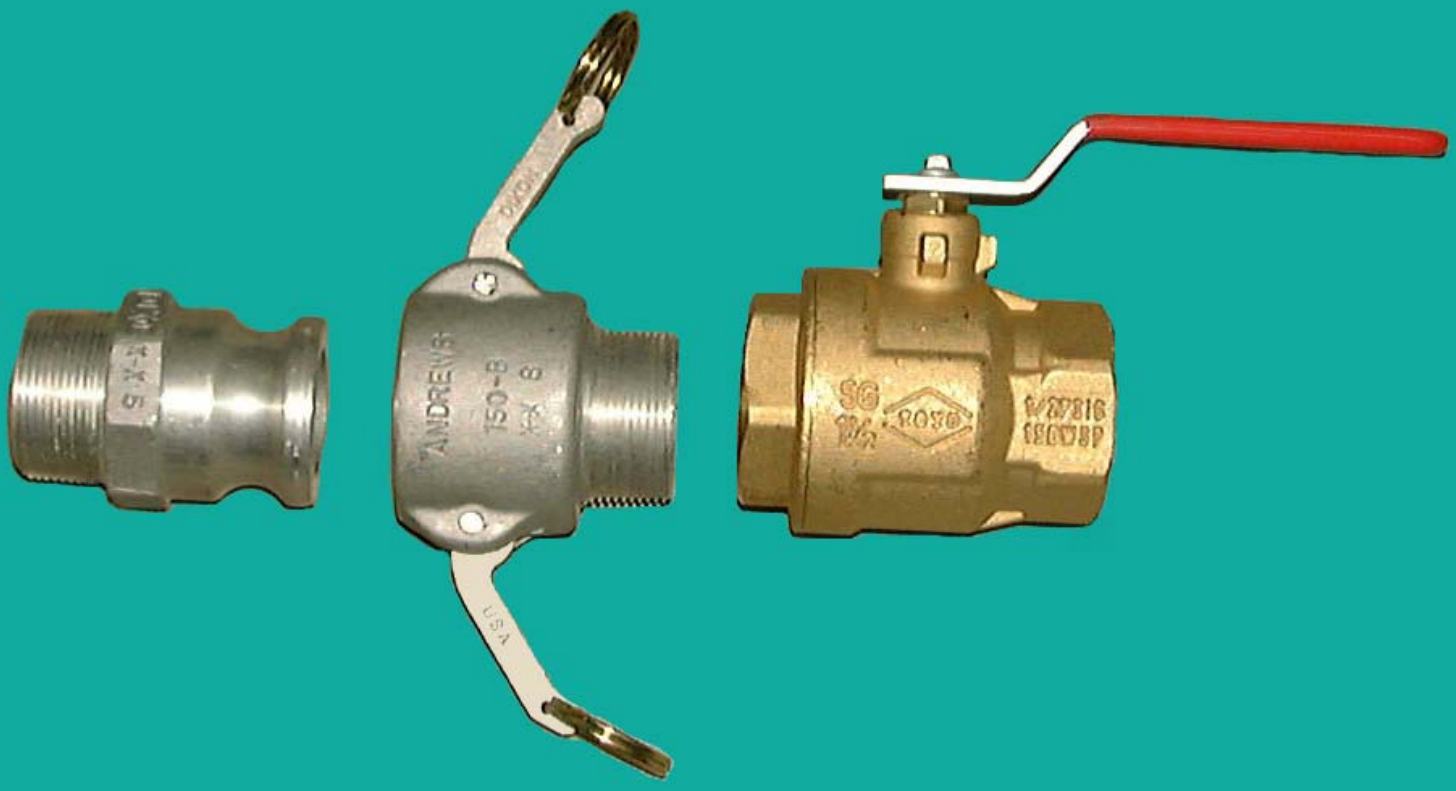




**Stop Valve**

**Installed**





9 X 1 1/2

ANDREWS  
150-B  
1 1/2 X 1 1/2

USA

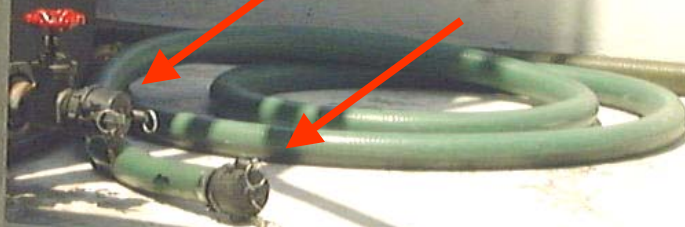
SG  
1/2  
150-B



# Oily Waste Reclamation Facility



Shore Facility  
connections



# D 8 TACNOTE

## ENFORCEMENT

The following enforcement policy is established for at-sea boardings:

- Check commercial fishing vessels over 79 feet that were built/modified after 15 Sept 91 for Stability Instructions IAW ref B.
- If the vessel does not have this information, the vessel is issued a citation
- The boarding officer will inform the master that he is in violation of the regulation and needs to become **Stability Instruction** compliant NLT October 01, 2002 and in compliance with **additional items (coaming heights, dead light covers, piping)** NLT March 1, 2003. If not compliant by these dates penalties will be assessed.

## ENFORCEMENT

- Docksider examiners will not issue CFVS decals to non-compliant vessels.

Penalty phase is scheduled to begin October 1, 2002.

Until further notice, boarding officers and docksider examiners will inspect the additional items in paragraph 6.

Boarding officers will document discrepancies on forms 4100F/4100S: **CIRCLE ITEM 176A** ON THE 4100F and write a brief summary on 4100S.

# ENFORCEMENT

- Boarding officers and dockside examiners are to check commercial fishing vessels 79ft and greater in length for:
  - A 24 inch (0.61 meter) coaming height (sill height) on each opening not equipped with a quick-acting watertight closure. (Note: a coaming (sill) height to a fish hold that is under constant attention when the closure is not in place need only be 6 inches (0.30 meters) in height).
  - Inside deadlights for each window and portlight located below the zero one (01) deck (*bridge deck*) that is hinged and arranged so that it can be effectively closed watertight.

Lexan is not an acceptable alternative.