

Deck General – Safety

Lifesaving Appliance Operation

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If the situation arose where it became necessary to tow a disabled vessel, which statement is TRUE concerning the towing line?

There should be a catenary so the line dips into the water.

Illustrations: TOW IN STEP

See REF305

A situation has occurred where it becomes necessary for you to be towed. What action should be taken to prevent your vessel from yawing?

Shift weight to the stern

Illustrations: PITCH_ROLL_YAW

See REF304

The vessel shown in illustration D025DG has broken down and you are going to take her in tow. The wind is coming from her starboard beam. You are making more leeway than she. Where should you position your vessel when you start running lines?

A

Illustrations: D025DG_WM_081318

The vessel shown in illustration D025DG has broken down and you are going to take her in tow. The wind is on her starboard beam. Both vessels are making the same amount of leeway. Where should you position your vessel when you start running lines?

C

Illustrations: D025DG_WM_081318

The vessel shown in illustration D025DG has broken down and you are going to take her in tow. The wind is on her starboard beam. She is making more leeway than you. Where should you position your vessel when you start running lines?

D

Illustrations: D025DG_WM_081318

In illustration D008SA below, what type of davits are displayed?

gravity davits

Illustrations: D008SA_WM_110518

The lever shown in illustration D013SA below is operated when a lifeboat is in which of the following positions?

waterborne

Illustrations: D013SA_WM_110818

In illustration D012SA below, what will be released when pulling on line number 5?

Tricing pendant

Illustrations: D012SA_WM_110618

In illustration D012SA below, what is the mechanism that will release the tricing pendant?

the McCluny hook

Illustrations: D012SA_WM_110618

When lowering lifeboats in heavy seas, a good practice is to rig frapping lines _____.
with a lead of about 45 degrees to the boat

Illustrations: D016SA_WM_110818

See REF293

In illustration D016SA below, the line indicated by number 4 is connected to which of the following?
McCluny hook

Illustrations: D016SA_WM_110818

See REF293

In illustration D016SA below, what number indicates the frapping line?
2

Illustrations: D016SA_WM_110818

See REF293

In launching a lifeboat, when should the tricing pendants be released?
After all people have been embarked

Illustrations: D016SA_WM_110818

See REF293

In illustration D011SA below, what does the item labeled number (1) operate?
Fleming gear

Illustrations: D011SA_WM_012914

See REF290

How should the lifeboat sea painter be rigged?
Secured to the inboard side of a forward thwart and led inboard of the falls

Illustrations: PHONETICALPHABET

Inflatable liferafts must be overhauled and inspected at a U.S. Coast Guard approved service facility every _____.
twelve months

See REF265

The service use of pyrotechnic distress signals measured from the date of manufacture shall be limited to a period of _____.
42 months

The vessel's Emergency Position Indicating Radio beacon (EPIRB) must be tested _____.
monthly

See REF112

Up to two thirds of a survival crafts required drinking water may be produced by a manually-powered reverse osmosis desalinator if it can be done in _____.
2 days

The searchlight on a survival craft must be capable of operating 3 hours continuously or 6 hours intermittently if operated in cycles of _____.
15 minutes on and 5 minutes off

Your 600 GT vessel must carry a line-throwing appliance if it is certificated for what type of service?
coastwise service

Lines passed around the falls to hold the boat while passengers are boarding are _____.
frapping lines
See REF289

In order to prevent galvanic corrosion, an aluminum boat must be insulated from the davits and gripes. Which of the following is acceptable as an insulator?
Hard rubber

Which item of lifeboat equipment would be most suitable for night signaling to a ship on the horizon?
A red parachute flare

Motor-propelled lifeboats are required to be fitted with which of the following?
Compartments for the storage of canned drinking water

The number 2 lifeboat on a tanker would be _____.
forwardmost on the port side
See REF296

During the towing of a survival craft, a lookout should be on station to _____.
release the towline in an emergency

Each open lifeboat carried on a vessel on an international voyage must have _____.
a davit span with at least 2 lifelines

What could be a result of insufficient lubrication of lifeboat winches and davits?
Moisture accumulation in winch motor damaging the electrical wiring
Corroding of sheaves on the davits so they will not rotate
Freezing of gears in cold weather
All of the above.

For the purpose of training and drills, if reasonable and practicable, how frequently should rescue boats be launched with their assigned crew?
once a month
See REF300

Which statement is TRUE concerning life preservers (Type I personal flotation devices)?
Life preservers are designed to turn an unconscious person's face clear of the water.
See REF286

Which statement concerning immersion suits is TRUE?
Immersion suits must have a PFD light attached to the front shoulder area.
See REF283

You have a large, broken-down vessel in tow with a wire rope and anchor cable towline. Both vessels have made provision for slipping the tow in an emergency; however, unless there are special circumstances _____.
the towing vessel should slip first

What is the maximum length of time that distress flares are approved for?
3 and 1/2 years

Each distress signal and self-activated smoke signal must be replaced not later than the marked date of expiration, or, from the date of manufacture, not later than _____.

42 months

See REF263

The capacity of any liferaft on board a vessel can be determined by _____.

examining the plate on the outside of the raft container

See REF273

If a lifeboat is stowed 40 feet above the light water draft and 200 feet from the bow, how long must the sea painter be?

80 feet

A drill must be conducted in the use of the line throwing appliance at least once in every _____.

3 months

Where should muster lists be posted?

In crew's accommodation spaces

In the engine room

On the navigating bridge

All of the above.

See REF284

Stretchers are fitted in lifeboats to provide a _____.

place for rowers to brace their feet

The painter which is to be attached to the thwart of a lifeboat should _____.

have a long eye splice at the end, and a hardwood toggle should be attached to the thwart with a lanyard

The engine in a covered lifeboat is fueled with _____.

diesel oil

When backing a motor propelled lifeboat (right-hand propeller) with the rudder amidships, the stern will back _____.

to port

See REF291

Before hydraulic starting of an engine on a covered lifeboat, what need NOT be checked?

Cold-spark voltage readings test lamp

Which type of davit is not considered to be a mechanical davit?

Radial

See REF294

According to the SOLAS regulations, lifeboat falls must be renewed at intervals of how many years?

5

When launching a lifeboat, when should frapping lines be rigged?

When the boat is at the embarkation deck

See REF294

According to the Lifesaving regulations in Subchapter W, fire and abandon ship drills must be held within 24 hours of leaving port if the percentage of the crew that has not participated in drills aboard that particular vessel in the prior month exceeds which percentage?

25 (%)

Which statement is TRUE concerning life preservers?

Kapok life preservers must have vinyl-covered pad inserts.

See REF286

How is the external flotation bladder of an immersion suit inflated?

It is inflated by blowing through an inflation tube.

See REF283

You are on a ship that has broken down and are preparing to be taken in tow. You will use your anchor cable as part of the towline. Which statement is TRUE?

The strain of the tow is taken by the riding pawl, chain stopper, and anchor windlass brake.

Inflatable liferafts are provided with _____.

a towing connection

How are lifelines attached to a life float?

Securely attached around the outside in bights no longer than three feet

According to the regulations, the capacity of a liferaft is required to be marked _____.

at the liferaft stowage location

When launching an open lifeboat by falls, the boathooks should be _____.

used for fending off

See REF245

Which vessel is NOT required to carry a rocket-type line throwing appliance?

An oceangoing vessel of 140 GT

If a passenger vessel navigating the Great Lakes is required to carry 8 life buoys, what is the allowable minimum number of these buoys that must have self-igniting lights attached?

4

See REF285

A right-handed propeller will cause the survival craft to _____.

walk the stern to port in reverse

See REF291

The grab rail of a metal lifeboat is normally located _____.

along the turn of the bilge

How is the sea painter is secured in an open lifeboat?

A turn around a forward thwart with a toggle pin thru the eye

What is NOT a function of the air supply of a covered lifeboat?

Pressurizes water spray system

Spreading oil on the open sea has the effect of _____.

preventing the wave crests from breaking

Why are lifeboats usually double-enders?

They are more seaworthy and less likely to be swamped or broach to.

The lifeboats on your vessel are stowed on cradles on deck and are handled by sheath-screw boom davits. Which of the following statements about launching a boat is TRUE?

The outboard section of the cradle must be released.

According to the regulations for lifeboat falls, which action must be taken at 30-month intervals?

End-for-ended

What is the best procedure for picking up a lifeboat at sea while utilizing the lifeboat's sea painter?

Place the lifeboat ahead and to leeward of your ship with the wind about broad on the bow of your ship.

Lifesaving regulations in Subchapter W require that a fire drill include _____.

checking arrangements for abandon ship

starting the fire pumps

checking the operation of watertight doors

All of the above.

See REF301

Which statement is TRUE concerning life jackets?

Life jackets are designed to turn an unconscious person's face clear of the water.

See REF286

The external flotation bladder of an immersion suit should be inflated _____.

upon entry into the water

See REF283

You are approaching a ship that is broken down and are preparing to take her in tow. BEFORE positioning your vessel to pass the towline, you must _____.

compare the rate of drift between the ships

The lights on the outside of the canopy on an inflatable liferaft operate _____.

automatically when the raft is inflated

The lifeline of a life float or buoyant apparatus shall _____.

be at least 3/8 inch diameter and properly secured around the sides and ends of the device

be festooned in bights not longer than three feet long

have a seine float in each bight unless the line is an inherently buoyant material

All of the above.

Inflatable liferafts shall be serviced at an approved servicing facility every 12 months or not later than the next vessel inspection for certification. However, the total elapsed time between servicing cannot exceed _____.

17 months

See REF265

The number of rowing oars that must be carried in a motor-propelled open lifeboat on a cargo vessel is _____.

specified by the manufacturer

Which statement is TRUE concerning the testing of the line-throwing appliance?

A drill in its use shall be held once in every 3 months.

See REF279

Great Lakes vessels, using liferafts, must have sufficient liferaft capacity on each side of the vessel to accommodate at least _____.

100% of the persons on board

A sea anchor is _____.

a cone shaped bag used to slow down the wind drift effect

See REF292

The purpose of air tanks in a lifeboat is to _____.
keep the boat afloat if flooded

In an open lifeboat, the lifeboat compass is usually _____.
placed in a fixed bracket when being used

With the air supply on, the air pressure in an enclosed lifeboat will be _____.
greater than outside air pressure

When a sea anchor is used in landing stern first in a heavy surf, sternway is checked by _____.
slacking the tripping line and towing the sea anchor by the holding line

The bottom row of plating next to the keel of a lifeboat is known as the _____.
garboard strake

A mechanical davit is designed to automatically _____.
lift the boat off the inboard chocks

The pivot pin at the base of a sheath-screw boom davit must be _____.
periodically removed for inspection and lubricated

When picking up a lifeboat at sea with way on the ship, the sea painter should be secured _____.
well forward in the lifeboat

What shall be conducted during a fire and boat drill?
All watertight doors in the vicinity of the drill shall be operated.
See REF302

What is the difference between a Type One PFD life jacket and a Type Five PFD work vest?
A work vest will not float an unconscious person face up
See REF286

An immersion suit must be equipped with a/an _____.
whistle, light and retroreflective material
See REF283

You are attempting to take a dead ship in tow. All lines have been passed and secured. How should you get underway?
Gradually apply power until catenary almost breaks the water, but keep the catenary in the water.
See REF305

What size bilge pump is required for a lifeboat which has a capacity of 675 cubic feet?
2
See REF266

A rigid lifesaving device designed to support survivors in the water is a _____.
life float
See REF269

Your cargo vessel's Certification of Inspection expires 30 April 2002. One of your inflatable liferafts was last serviced in January 2002. The raft must be reinspected no later than _____.
2003-01-01 00:00:00

A certificated lifeboatman assigned to command the lifeboat should _____.
have a list of the persons assigned to the lifeboat

Your vessel is required to have an impulse-projected line throwing appliance. The auxiliary line must _____.

have a breaking strength of 9000 lbs

See REF280

Great Lakes cargo vessels, having a liferaft stowed more than 100 meters from the bow or stern, must have at least how many liferafts?

Two

The sea painter is secured in the lifeboat by _____.

a turn around a forward thwart with a toggle pin thru the eye

See REF246

The tops of the thwarts, side benches, and the footings of a lifeboat are painted which color?

International orange

Where should Lifeboat hatchets be kept?

secured at each end of the boat with a lanyard

When operating the air supply system in a covered lifeboat the _____.

hatches, doors, and oar ports should be closed

You are in a lifeboat in a heavy sea. Your boat is dead in the water and unable to make way. To prevent broaching, you should _____.

put out the sea anchor

Your vessel is equipped with totally enclosed lifeboats. Which statement is TRUE when the boat is enveloped in flames?

An air tank will provide about ten minutes of air for the survivors and the engine.

Many sheath-screw davits have markings to indicate the maximum angle to which they should be cranked out. If the angle is exceeded, the davit _____.

screw may come out of the sheath

Which item is of the most use in getting a lifeboat away from a moving ship?

Sea painter

See REF297

In launching a covered lifeboat, what would safely lower the lifeboat from inside the lifeboat cabin?

Winch remote control wire

If passengers are on board when an abandon ship drill is carried out, they should _____.

take part

An immersion suit should be equipped with a/an _____.

whistle, strobe light and reflective tape

See REF283

An immersion suit must be equipped with a/an _____.

whistle, light and retroreflective material

See REF283

Motor-propelled lifeboats are required to have sufficient fuel to operate continuously at 6 knots for how many hours?

24

Which approved lifesaving device is required for each person on board a motor vessel carrying passengers?

Life jacket

If your vessel is equipped with inflatable liferafts, how should they be maintained?

Have them sent ashore to an approved maintenance facility annually.

See REF274

All lifeboats, rescue boats, and rigid-type liferafts shall be stripped, cleaned, and thoroughly overhauled at least once every _____.
year

What is NOT a requirement for testing the line throwing appliance on a vessel?

A regular service line must be used when it's fired.

Where, due to the arrangement of the vessel, lifejackets may become inaccessible, additional lifejackets shall be carried _____.

as determined by the OCM

The sea painter of a lifeboat should be secured _____.

to an inboard thwart in the forward one-third of the boat

See REF246

In painting a lifeboat following its overhaul, which parts must be painted bright red?

the releasing gear lever

Which represents the appropriate time for setting off distress flares and rockets?

Only when there is a chance of their being seen by rescue vessels

Most lifeboats are equipped with _____.

unbalanced rudders

In heavy seas the helmsman should steer the survival craft _____.

into the seas

Most enclosed lifeboats will right themselves after capsizing IF the _____.

passengers are strapped to their seats

Your vessel is equipped with mechanical davits. When stowing the lifeboat after a drill while underway, you should _____.

ensure the falls are taut

When hoisting a boat on gravity type davits using an electric motor driven winch, the davit arms should be brought up _____.

until just before they make contact with the limit switch, and then hand cranked to their final position

See REF034

When landing a lifeboat through heavy surf with a strong current running parallel to the beach (from right to left when facing from seaward) the recommended procedure is to _____.

rig a drogue with tripping line over the bow, back ashore with drogue tripped between breakers

All personnel on board a vessel should be familiar with the rescue boat's _____.

boarding and operating procedure

Which statement about immersion suits is TRUE?

The suit must, without assistance, turn an unconscious person's mouth clear of the water within 5 seconds.

See REF283

How is the external flotation bladder of an immersion suit inflated?

It is inflated by blowing through an inflation tube.

See REF283

A fully loaded motor-propelled lifeboat must be capable of attaining a speed of at least _____.

6 knots in smooth water

Which person may command a lifeboat in ocean service?

Credentialed deck officer

Able seaman

Certificated person

All of the above.

Inflatable liferafts carried on passenger vessels must be annually _____.

sent to a Coast Guard approved service facility

The Master of a cargo or tank vessel shall be responsible that each lifeboat, except those free-fall launched, is lowered to the water with crew and maneuvered at least once every _____.

three months

See REF277

What is a FALSE statement concerning the line throwing appliance on a vessel?

The auxiliary line must be of a light color.

A 750 foot passenger vessel operating on the Great Lakes, not subject to SOLAS regulations, is required to carry how many ring life buoys?

24

In order for the automatic lifeboat drain to operate properly _____.

the cage must be free of rubbish or the ball may not seat properly

When you are firing a pyrotechnic distress signal, it should be aimed at _____.

about 60 degrees above the horizon

The sprinkler system of an enclosed lifeboat is used to _____.

cool the craft in a fire

Steering a motor lifeboat broadside to the sea could cause it to _____.

capsize

You have been in-command of a lifeboat since abandoning ship three days prior and land has been sighted ahead. Under which circumstances would you attempt beaching your lifeboat through a heavy surf?

only under extreme emergency conditions

The boat is stowed on the davit rather than on a cradle with which type of davit?

Crescent

The sea painter of a lifeboat should be led _____.

forward and outside of all obstructions

See REF246

If you must land on a beach with an oar-propelled lifeboat through a heavy surf, the recommended method is to _____.

keep the bow into the seas with the sea anchor out over the bow, and row to meet the breaking waves

While steering by autopilot you notice that the vessel is deviating from the given course and there is no follow up with corrective rudder action to return to the proper heading. The emergency operating procedure should require you to immediately change operation from _____.

"gyro" to "hand"

Which statement about immersion suits is TRUE?

The suit must, without assistance, turn an unconscious person's mouth clear of the water within 5 seconds.

See REF283

The external inflation bladder on an immersion suit should be inflated _____.

after you enter the water

See REF283

Which statement is TRUE concerning a motor lifeboat?

It must be able to maintain a loaded speed of 6 knots.

What is the minimum number of deck officers, able seaman or certificated persons required to command each lifeboat on a vessel in ocean service?

Two

Who should inspect and test an inflatable liferaft?

An approved servicing facility

See REF275

If the OCMI has NOT granted an extension, free-fall lifeboats must be lowered into the water and launched with the assigned crew at least once every _____.

6 months

Coast Guard Regulations (46 CFR) require that life jackets shall be _____.

provided for each person onboard

provided for all personnel of watch

readily accessible to persons in the engine room

All of the above.

See REF281

Which statement is TRUE concerning lifeboat installations on Great Lakes vessels?

All lifelines shall be able to reach the water at the vessel's lightest draft with a 20° list.

See REF286

At a speed of 6 knots the fuel aboard a survival craft should last _____.

24 hours

A person referring to the stern sheets of a lifeboat is speaking of _____.

the aftermost seating

When the survival craft is supplied with bottles of compressed air, they are used for _____.

an air supply for personnel

The purpose of a water spray system on a covered lifeboat is to _____.

keep the lifeboat from reaching combustion temperature while operating in a fire

When using the lifeboat compass, you must be careful to _____.

apply the correction for compass error
set it on the centerline of the boat
keep metal objects away from it
All of the above.

What is the purpose of the limit switch on gravity davits?

To cut off the power when the davits are about 12 inches or more from the track safety stops
See REF034

What is the accepted standard for wire rope falls used in connection with the lifeboat gear?

Six by nineteen regular-lay filler wire rope

On a lifeboat equipped with Rottmer-type releasing gear, turning the releasing lever releases _____.

both falls at the same time even if the boat has not reached the water

You have abandoned ship and find yourself aboard a lifeboat in a heavy sea. Your boat is able to make way through the water. To prevent broaching, you should _____.

head the boat into the swells to take them at a 30 to 40 degree angle on either bow and run as slow as possible without losing steerage

Line throwing equipment should NOT be operated _____.

in an explosive atmosphere
See REF267

Which statement about immersion suits is TRUE?

The suit must, without assistance, turn an unconscious person's mouth clear of the water within 5 seconds.
See REF283

You are testing the external flotation bladder of an immersion suit and find it has a very slow leak. Which action should be taken?

Contact the manufacturer for repair instructions.
See REF283

When lifeboat winches with grooved drums are fitted on a vessel the lead sheaves to the drums shall be located to provide fleet angles of not more than _____.

8°

What is the required minimum length of the painter for a lifeboat in ocean service?

two times the distance from the boat deck to the light waterline or 50 feet whichever is greater
See REF270

Inflatable liferafts must be overhauled and inspected at a U.S. Coast Guard approved service facility every _____.

twelve months
See REF265

What is required by regulations concerning the stowage of lifeboats on cargo vessels?

Each lifeboat must have a launching appliance.

Lifejackets should be stowed in _____.

readily accessible spaces
See REF247

Enclosed lifeboats which have been afloat over a long period of time require _____.

regular checks of bilge levels

46 CFR 199.170 Line-throwing appliance. (c) Additional equipment. Each vessel must carry the following equipment for the line-throwing appliance- (1) The equipment on the list provided by the manufacturer with the approved appliance; and (2) An auxiliary line that (i) Is at least 450 meters (1,500 feet) long; (ii) Has a breaking strength of at least 40 kiloNewtons (9,000 pounds-force); and (iii) Is, if synthetic, of a dark color or certified by the manufacturer to be resistant to deterioration from ultraviolet light.

REF281

Coast Guard regulations require that a life jacket be provided for each person on board. In addition, a life jacket must be provided for each person on watch at his duty station. A life jacket must be readily accessible to each person in the engine room. A work vest may never be substituted for a life jacket during drills or in an actual emergency. Work vests must be stowed where they will not be confused with life jackets.

REF282

46 133.70(b)(1)(i)

REF283

46 CFR 108.580(C)(1), 46 CFR 133.80, 46 CFR 199

REF284

46 CFR 199.80(b)

REF285

Modified 138501-1 2-1388 If a passenger vessel navigating the Great Lakes is required to carry 8 life buoys, what is the allowable minimum number of these buoys that must have self-igniting lights attached? Note: Under Subpart F – Exemptions and Alternatives for Vessels Not Subject to SOLAS, table 199.610 (b) exempts passenger vessels that are considered non-SOLAS, in this instance vessels operating on the Great Lakes, from 199.211 (b) which required a minimum of six self-igniting lights on life buoys for all passenger vessels under 60 meters. A non-SOLAS passenger vessel is exempt from the requirements of 199.211 (b) when the vessels are under 60 meters and self-igniting lights are attached to at least one-half the required life buoys. A. 8 Incorrect: Under Subpart B – Requirements for All Vessels, 199.70 (a) (3) (ii) states at least one-half the total number of life buoys fitted on the vessel must have self-igniting lights. B. 6 Incorrect: Under Subpart C- Additional Requirements for Passenger Vessels, 199.211 (b) requires a minimum of six self-igniting lights on life buoys for all passenger vessels under 60 meters. C. 4 Correct: See Note. D. 2 Incorrect: Under Subpart B – Requirements for All Vessels, 199.70 (a) (3) (iii) states the numerical value of two (2) life buoys on a vessel must be fitted with self activating smoke signals, not self igniting lights.

REF286

46 CFR 160.006-2(b)

REF287

Life boat oar commands. Stand By the Oars Each crewmember clears oar, ships rowlock, places blade flat, on gunwale forward, inboard of person in front of them. Shove off Inboard bowman pushes off using boathook. When ordered bowman releases sea painter. Out oars Places oars in rowlocks directly from the boated position or from "Stand-By The Oars" Position. Oars horizontal, at right angles to keel, blades flat. Give way together Blades of oars are swung forward and dipped into the water. At the command, "Together", the stroke is started. At the end of the stroke, blades are feathered, swung forward, and another stroke is started. Hold water Complete the stroke, stop rowing, drop blade into water vertically, and gradually swing to a position at right angles to the keel, taking care not to overstress rowlock. Port (Starboard) Hold Water Used to turn boat more quickly. Ordered side completes stroke and holds water, other side continues to row. With boat stopped can be used with "Give Way" command to opposite side to turn boat while gathering minimal headway. Stern All When rowing ahead, complete the stroke, and then commence to backwater, gradually increasing the depth of the blades. Back Water Row in the astern direction Oars Complete the stroke, stop rowing, and bring the oars horizontal, at right angles to the keel, with the blades held flat. Trail oars Complete stroke and carefully allow oar to trail alongside, fore and aft. Bank oars Given from the "oars" position. Allows oarsmen to retrace when laying to. Oars drawn through the rowlock and rested on opposite gunwale. In Bows The bowmen complete the stroke, swing their oars forward, and boat them. They then stand by with boat hooks to fend off or receive a line. Way enough Given when approaching a landing. Complete stroke, toss oars to about 45 degrees and boat the oars, forward oars first, unship the rowlocks. Boat the oars From "Oars" or "Toss Oars", place the oars in the boat on side thwart, blades forward. Trail Oars The trim blades of the oars are brought alongside the boat and left trailing in the water in single banked boats fitted with swivel rowlocks. Toss Oars Complete the stroke, come to "Oars" position, raise the oars smartly to the vertical, rest

handles on the footing and trim blades fore-and-aft.

REF288

"Way enough" The command to stop rowing or, in some cases, whatever the rower is doing, whether it be walking with the boat overhead or rowing. ("Way" is a nautical term for the movement of a boat through water (as in headway and right-of-way). So the command "way enough", literally means enough moving the boat). Often pronounced way-nuf, wane-up or wane-off in the United States.

REF289

A tricing pendant is part of the rigging that allows lifeboats to be launched. The system to launch a lifeboat is complex and the tricing pendants play an essential role if the ship is heeling or laid over because of damage. To launch a lifeboat the boats must first be freed from the cradle straps called Gripes. Net small twin cranes called Davits are brought into launch/recovery position. Each Davit is equipped with a powerful winch and emergency manual brake. These Davits are fitted with hoisting lines called Falls which attach to the lifeboat harness which is in turn fastened to the gunwales on opposite sides at the fore and aft of the boat. Lines attached to the bow and stern of the lifeboat are called Frapping Lines and are used to control the movement of the boat as it is lowered or raised. An additional line is attached to the bow of the lifeboat to keep it near the ship after all other rigging has been released. This line is called a Sea Painter. Under the boat, usually attached to the keel, is a device called a McCluny Hook which allows lines attached under the boat to be released remotely. The lines attached to the McCluny Hook are routed to the Tricing Pendants which are an apparatus used to pull the lifeboat to the embarkation station when the ship is at an abnormal angle. If lifeboats were lowered while the vessel is heeling over from damage they will either slide down the side if they are on the high side or enter the water far away from the embarkation station if they are on the low side. It's very easy to be injured in a lifeboat. The Costa Concordia wreck off the coast of Italy is a prime example of the dangers of evacuating by lifeboat. At least two people died on the wreck because they attempted to swim to the rocky shore rather than risk the poorly deployed lifeboats. A tricing pendant is a device that is made up of three main components. The length of line or chain that is attached to the keel of the lifeboat via a McCluny Hook, a block and tackle system that increases mechanical force, and the lines and often winches that draw the lifeboat close enough for passengers to get aboard. Lifeboat Drills Under SOLAS There is an ongoing controversy surrounding SOLAS Conventions as they pertain to lifeboat training and drills. For safety reasons SOLAS compliant vessels cannot have occupied lifeboats during launch or recovery. Lowering manned lifeboats is very hazardous to everyone involved and there are many deaths and injuries from lifeboat drills. It's a very different experience to lower a lifeboat with operators than it is to lower a empty lifeboat. This is true for the crew who will ride down in an emergency situation and for the crew running the Davit winches above and tricing pendant gear at the embarkation station. SOLAS is probably right to try and limit training injuries, but without realistic training that is used for emergency evacuation of the vessel there is little hope for competent launch and recovery of lifeboats in an bad situation. Some ships continue to carry out lifeboat drills with a mi of skirting the rules and using allowed activities to replace prohibited training. This will result in some skills but not the best skills. To have the best training for your crew they must be exposed to the most realistic training available and that means manned lifeboat drills. If SOLAS is to be amended it will take many voices to overcome what is generally seen as a hindrance to safety training. Speak up directly to the IMO or email here and we will pass the comments along.

REF290

The fleming gear is a hand-operated propulsion system for the lifeboat, but does not have the ability to steer the craft.

REF291

Right-hand propellers turn clockwise when going ahead, when viewed from the stern. A solid propeller has its blades cast integral with its hub.

REF292

Sea Anchor - an anchor used to stabilize a boat in heavy weather or slow a boats movement, anchors not to the sea floor but to the water itself, as a kind of brake. Sea anchors are known by a number of names, such as drift anchor, drift sock, para-anchor, drogues, and boat brakes. Modern commercial sea anchors are usually made of cloth, shaped like a parachute or cone, and rigged so that the larger end is closest to the vessel. When deployed, this type of sea anchor floats just under the surface, and the water moving through the sea anchor keeps it filled and creates drag.

REF293

The frapping line are used to pull the lifeboat over to the embarkation deck along with the tricing pendent to be loaded. ... Lines used to initially pull the lifeboat over to the embarkation deck so that the Frapping lines can be connected. Falls. The wires which lift or lower the lifeboat are known as falls. Tricing pendant is used to avoid the swinging of the boat when the

ship is rolling or listed and bousing tackle is used to bring the boat near to the embarkation deck to allow the crew to embark safely.

REF294

Davit systems are most often used to lower an emergency lifeboat to the embarkation level to be boarded. Davits can also be used as man-overboard safety devices to retrieve personnel from the water. The lifeboat davit has falls (now made of wire, historically of manila rope) that are used to lower the lifeboat into the water.[2] "Davit" can also refer to a single mechanical arm with a winch for lowering and raising spare parts onto a vessel and for lowering any other equipment from the deck of a vessel or a pontoon to the water. The maintaining and operation of davits is all under jurisdiction of the International Maritime Organization. The regulations are enforced by the country's own Coast Guard. The development of the davit from its original "goose neck form" to the current devices advanced greatly when A.P. Schat patented a number of systems in 1926 that allowed the lifeboat to glide over obstructions on a ship's hull, known as the "Schat Skate". This was followed by a self-braking winch system that allowed the lifeboat to be lowered evenly. The standard became so common that shipyard specifications call for Schat-type davits which are available from various sources. Similar systems developed by Schat companies are used on offshore oil or gas rigs, being placed around the structure. Development of the davit has also been in terms of material. Traditionally davits have been made in aluminium or steel but recent advances in composite material have led to the manufacture of davits in carbon fibre which has an excellent power to weight ratio. This means davits can be stowed away when not in use and the same davit used in multiple deck sockets fitted permanently on deck.[3] Lifeboat davit types Davits are designed to fit into deck spaces that the naval architects deemed necessary:

- Radial (obsolete) – Hand powered davit. This type was used on the lifeboats of the RMS Lusitania. Each arm must be rotated out manually; uses manila rope falls. Goose-neck shape to the arm that is swung out.[4] Mechanical (obsolete) – This type is like the radial davit, but both arms are moved out at the same time using a screw system; uses manila rope falls. An example is the Welin Quadrant davit type used on RMS Titanic.[4] Gravity (industry standard) – There are multiple forms; one man can operate; uses wire falls.[4] Roller – Davit slides down a track, bringing the davit to the embarkation deck. Single pivot – One pivot point where the lifeboat is moved over the side of the craft. Multi pivot – Common on promenade decks of cruise ships. Useful where space is limited. Free fall – Lifeboat slides right off vessel. Lifeboat must be an enclosed type. Main type of Davit on merchant ships now. This type does not use falls. Fixed – Common on oil rigs. Lifeboat is hung above the water (at embarkation level) and lowered into the water. [5] Basic Parts Liferaft These can be Enclosed, partially enclosed, or open. (There are pictures of these on the page already so no description is added)

Frapping Lines These lines are used on all davits except the fixed and freefall davits. The frapping line are used to pull the lifeboat over to the embarkation deck along with the tricing pendent to be loaded. Gripes Ropes used to hold the Lifeboat in the stored position while underway. Tricing pendants Lines used to initially pull the lifeboat over to the embarkation deck so that the Frapping lines can be connected.[5] Falls The wires which lift or lower the lifeboat are known as falls. Releasing mechanisms There are 3 basic systems used to release the lifeboat from the davit. (Coast Guard Questions are for the Rottmer, On-Load releasing gear) [6] On-load: For this style of release mechanism, the lifeboat can be released at any point from the davit. This type of system allows a lifeboat to be released when it is not in the water, whether this is because of the emergency or an accident. Because of this, during an evacuation the release mechanism must be watched to make sure there is not an accidental activation. [7] Offload: This release mechanism requires the weight (load) of the lifeboat to not be on the hook when it is released. This includes the Titanic-era Monomony hook design that requires someone to remove the hook from the lifeboat by hand. But this type also includes the hydrostatic system many lifeboats use now. For this, a float is raised up and engages the release once the craft is in the water to the right depth.[7] Free Fall: This type of release mechanism is very basic. The (enclosed) lifeboat is on a ramp and slides down and off of the ship when engaged. This is done by pumping a lever that is inside the lifeboat by the pilot.[7] If there is not enough hydraulic pressure to release the stop fall, a pump on the inside must be rotated to build up the hydraulic pressure to release the lifeboats stopfall hook. Once the stopfall hook (hook attaching the lifeboat to the davit that holds it to the ship) is released the lifeboat will slide off the ramp and into the water. This type of lifeboat is more common due to its quick deployment and ease of operation

REF295

TABLE 199.175—SURVIVAL CRAFT EQUIPMENT

REF296

46 CFR §199.178 Vessels with several lifeboats have them numbered. All lifeboats on the starboard side have odd numbers, while those on the port side have even numbers. Numbering starts at forward end the bow and increases going aft.

REF297

Sea painter If the vessel has way on, the lifeboat will clear the side by riding on the sea painter, which can then be cast off when the boat is clear.

REF298

Tricing pendant is used to avoid the swinging of the boat when the ship is rolling or listed and bowsing tackle is used to bring the boat near to the embarkation deck to allow the crew to embark safely.

REF299

§ 108.550 Survival craft launching and recovery arrangements: General.

REF300

46 CFR 131.530 (7)

REF301

46 CFR § 199.180 - Training and drills

REF302

In accordance with 46 CFR 199.180(f)(2)(v), "Each fire drill must include—Checking the operation of watertight doors, fire doors, fire dampers, and main inlets and outlets of ventilation systems in the drill area.

REF303

Cork was the first material for these "modern" life preservers, followed by kapok fiber. Introduced in the early 20th century, kapok was subsequently banned for being flammable and losing buoyancy. Even so, it was reapproved in 1918; cork life preservers were heavy and bulky, and kapok could be added to watertight pockets for better flexibility and comfort. In 1928, Vestris, a British passenger steamer, sank, and many lives were lost. The following year an International Convention for Safety of Life at Sea convened, noting that many of the dead had been found floating face-down. Kapok was seen as superior because it kept the heads of unconscious victims above water.

REF304

A ship at sea moves in six degrees of motion: heave, sway, surge, roll, pitch and yaw. The first three are linear motions. Heaving is the linear motion along the vertical Z-axis, swaying is the motion along the transverse Y-axis, and surging is the motion along the longitudinal X-axis. Rolling is a rotation around a longitudinal axis, pitching is a rotation around the transverse axis and yawing is a rotation around the vertical axis. HEAVE: The alternate rising and falling of a vessel in a seaway. SWAY: A vessel's motion from side to side. SURGE: A vessel's transient motion along her fore and aft axis. ROLL : Motion of the ship from side to side, alternately raising and lowering each side of the deck. The oscillating motion of a vessel from side to side due to ground swell, heavy sea, or other causes. PITCHING: The alternate rising and falling motion of a vessel's bow in a nearly vertical plane as she meets the crests and troughs of the waves. YAWING: To turn from side to side on an uneven course.

REF305

A catenary is the curve or dip in a line caused either by the lines own weight or by weight attached to the line. If a towline is stretched taught between two vessels any shock loading is transmitted directly through to both vessels.