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A davit is a type of metal structure, found most commonly on boats, with an arm that extends over the side of the craft so that it can lower items to the deck below. It can also be used in building construction. The term may also be used to describe a metal arm with a winch that mechanically raises and lowers items from one place to another. Davits are most commonly used to move boats, though they can also lift cargo and anchors. They can also be used to lower a maintenance trapeze over the side of the boat. There are four common types of davit: mechanical quadrantal, single pivot gravity, gravity roller track, and free fall. Single pivot gravity davits are one of the most popular types of davit. They tend to have a simple design and few parts, which makes them easier to adapt to different tasks. This type can also accommodate a wide array of deck types and sizes. The gravity roller track davit is most frequently used with promenade decks, which typically consist of port-to-stern open walkways on both sides of the ship. They usually have two arms and tend to be lighter than other kinds of davits. Mechanical quadrantals are the oldest style of davit. They were usually cranked by hand and depended on pulleys and balance to function properly. Though they are no longer the dominant type of davit, mechanical quadrantals are still used in modern times. Free fall davits are among the newest designs. They have fast-acting mechanisms that allow items to fall into the water while staying clear of the side of the boat. These are used almost exclusively to drop lifeboats into the water. A similar purpose is served by ramps which extend from the end of the boat and may occasionally replace davits on a craft There are several other varieties of more specialized davits. The stored power style has an independent energy source which can be useful in areas where power outages commonly occur. A-frame styles have a metal structure that extends around the sides of the item being moved. Cantilever davits have a simple, boxy shape which extends from the deck of the ship and over the dock. The overhead style looks similar to the cantilever, but works via a more complex telescopic mechanism. There are also crane davits which have an extended reach that works well with larger loads and craft. WikiMotors is dedicated to providing accurate and trustworthy information. We carefully select reputable sources and employ a rigorous fact-checking process to maintain the highest standards. To learn more about our commitment to accuracy, read our editorial process. By K.C. Bruning Kendahl Cruver Bruning, a versatile writer and editor, creates engaging content for a wide range of publications and platforms, including WikiMotors. With a degree in English, she crafts compelling blog posts, web copy, resumes, and articles that resonate with readers. Bruning also showcases her passion for writing and learning through her own review site and podcast, offering unique perspectives on various topics. Davit Launched Liferaft Operation Manual 25 Person Davit Launched Liferaft 1. Pull up the shackle and steady line from the container’s window.2. Lift out off the side of the ship by the davit through the shackle.3. Pull on the inflating line(painter) and then inflate.4. Connect the life-raft and the ship by the steady line and the rope of boarding-cloth.5. The persons get into the life-raft across the boarding-cloth in order and seat evenly.6. Pull on the operating line and unhook, after the life-raft is launched down to the surface of water.7. Cut off the painter by the knife. For other Liferafts and Lifeboat, pls check Liferafts and Lifeboat Share — copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt — remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution — You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. Remove ship’s hand rail or gate. Unlash the container for launch, REMEMBER INBOARD mark should be ship side Lower davit hook and make it lock with lifting shackle. Secure canister or container lines outboard. Secure bowsing line. Pull out approx 5-6 meter of painter line. Secure painter line. Now pull full length of painter. Now lift the life raft canister upto some height. Now pull the painter and give sharp pull to inflate life raft. Make sure the opening of canopy means access should be ship side. Now secure the life raft. Embark the life raft and seat evenly. Now release bowsing line and pass to raft. Check launching area is clear. Lower the raft using brake release. You can operate hook release 1 m above the water or allow the raft to touch the water and load will reduce from hook and it will release itself. Now cut painter and use sea anchor or paddle to clear the area immediately. Make sure to carry SART and EPIRB. Life raftThere are three different method to release liferaft. 1) Auto release with Hydrostatic Release Unit (HRU).2) Manually launching- throw it into water .3) Launching by Davit.Auto Release with Hydrostatic Release Unit (HRU)The HRU plays an important role when it comes to saving a life during an abandon ship situation. SOLAS 74 clearly specify the requirements for construction and positioning of the HRU at the life raft.The Working of HRU:-HRU acts as a connecting media between life raft container and ship deck, where it is stored.-The HRU comes in action under the pressure of water exerted on HRU when the ship sinks below 4m of water level.1-The HRU consists of a sharp knife or chisel which is used to cut the strap lashed over the container carrying life raft, but it still holds the painter at the weak link.2-The HRU is connected to the container through a lashing arrangement which can be disengaged quickly by means of slip hook when launching the raft manually.3-The HRU is connected to a strong point on deck through a weak link.4-When vessel sinks, the HRU cuts the rope and the container floats to the surface of water.5-As vessel sinks further, the tension in the painter causes the life raft to inflate out of the container.6-The tension acting on the weak link will cause it to break making the life raft free from the ship.7-When vessel sinks, the HRU cuts the rope and the container floats to the surface of waterManually Launching1-Check that one end of the painter of the raft is well secured to a strong point on ship’s deck or structure.2-Remove the lashing from the container of the raft and open the way to portable rail if available.3-Check the ship side where the raft to be launched is clear.4-Two people should lift the container from both sides horizontally and throw the container.5-Make sure the painter is still fixed at a strong point so that the raft should not be waved away by waters.6-Pull the painter with a hard jerk to fire the gas bottle to inflate the raft.7-The life raft will take 20-30 sec to inflate.8-Board the life raft one by one using ladder or rope.9-Avoid sharp objects like knives, shoes and other sharp objects etc which may damage the raft surface.10-When everybody is aboard, after a headcount, cut the painter with a sharp knife.If the life raft inflates and it is upside down, the raft has a righting strap which is capable of stabilizing it. Climb onto the CO2 cylinder and pull it in the same direction as the wind to do so.Launching Liferaft by a Davit:1-Open the lashing and remove the raft container from HRU by opening the manual slip hook or bottle screw arrangement.2-Tie up the one end of the painter of raft into a strong point at deck.3-Keep the container in the open and attach the davit hook to the given eye in the canister/ container4-Take up the raft load by davit and keep the container hanging at embarkation deck area.5-Pull the painter and inflate the raft. Have a thorough check on the inflated raft.6-Start boarding the raft without the shoes and other sharp object.7-After the boarding is completed, check the bottom is clear and release the securing lines, if any.8-Someone inside the raft will detach the hook of the davit from the raft when tha raft is just above the water.9-The davit operating person will board the raft either by jumping in to the sea, raft or by other boarding means if provided.10-Cut the painter and cast away the raft from ship. Important Requirements for Liferafts and Carrying CapacityThe liferaft of any ship needs to follow the regulations mentioned in SOLAS. Some of the important points regarding liferafts are:The lift raft should be capable of withstanding exposure for 30 days afloat in all sea conditions.When dropped into the water from a height of 18 metres, the life raft and all equipment in it will operate satisfactorily.The floating life raft should be capable of withstanding repeated jumps on it from a height of at least 4.5 metres above its floor, both with and without the canopy erected.It can be towed at 3 knots with its full equipment, compliment of persons and one anchor streaming.Canopy to provide insulation and protection against heat and cold by two layers of material separated by an air gap.Interior to be of a non-discomforting colour.It shall admit sufficient air for the occupants at all times, even when the entrance is closed.It shall be provided with at least one viewing port.It shall be provided with a means of collecting rainwater.It shall be provided with a means to mount a survival craft radar transponder (SART) at the height of at least 1 meter above the sea level.It shall have sufficient headroom for the sitting occupants under all parts of the canopy.Minimum carrying capacity must be at least 6 persons.The maximum weight of its container, as well as the equipment, should not exceed 185 kilos.The life raft shall be fitted with an efficient painter of length equal to the minimum of 10 metres plus the distance from the stowed position to the waterline in the lightest seagoing condition or 15 metres, whichever is greater.A manually controlled lamp shall be fitted on the top of the canopy, and the light shall be white, and it must operate for at least 12 hours with a luminous intensity of not less than 4.3 candela.If the flashlight is fitted, it shall flash at a rate of not less than 50 flashes and not more than 70 flashes per minute for the 12 hours that it burns.A manually controlled lamp shall be fitted inside the life raft capable of continuous operation for a period of at least 12 hours.When the liferaft is loaded with a full complement of persons and equipment, it should be capable of withstanding a lateral impact against the ship side at an impact velocity of not less than 3.5m/s and also drop into the water from a height of not less than 3 metres without damage.Inflation is done by CO2 with a small quantity of N2, which acts as an anti-freezing element. Also, CO2 is non-flammable and also weighs more than air hence adds buoyancy to the raft. The freezing point of CO2 is -78 degrees so that it can inflate life rafts at really low temperatures.Location on a ship:1– Forward2– At embarkation stations on both port and starboard sides.The painter breaking strength should be:1– 15kN for 25 people and more2– 10 kN for 9 to 24 people3– 7.5 kN Rest (6-9)Important Liferaft EquipmentAll liferafts on ships are fitted with the following equipment:Rescue quoits with minimum 30-metre linesNon-folding knife with a buoyant handle. If the life raft holds more than 13 persons, then a second knifeFor 12 persons or less, 1 bailer. For more than 13 persons, 2 bailers should be kept2 sponges2 buoyant paddles3 tin openers2 sea anchors1 pair of scissors1 first aid waterproof kit1 whistle1 waterproof torch for communicating morse code with 1 spare set of batteries and bulb1 signalling mirror/heliograph1 radar reflector1 life-saving signals waterproof card1 fishing tackleFood ration totalling not less than 10000 kJ for each personWater ration- 1.5 litres of fresh water for each personOne rustproof graduated drinking vesselAnti seasickness medicine is sufficient for at least 48 hours and one seasickness bag for each person.Instructions on how to survive (Survival booklet)Instructions on immediate actionTPA is sufficient for 10% of the number of persons or two, whichever is greaterMarking shall be SOLAS ‘A’ Pack6 Hand Flares4 Rocket Parachute Flares2 Buoyant Smoke SignalsMarkings on a Liferaft ContainerImportant markings provided on a liferaft container are:Maker’s name and trademarkSerial numberName of authorityNumber of persons carriedSOLAS emergency pack enclosedDate of the last serviceLength of painterMaximum height of stowageLaunching instructions°Markings on an inflatable LiferaftImportant markings provided on an inflatable type of liferaft are:Maker’s name and trademarkSerial NumberDate of manufactureName of approving authorityName and place of the last serviceNumber of persons permitted. Thanks For reading This article , if you have any questions pls do comments below , we Happy to give rply for your questions. If you think anything is wrong in this article pls also comments and tell us we will update it..Thanks again,.Credit to Respected Capt. Hytham Nouni. Re updated and makeup overing by Ashok Kumar (Navy Dept.) Published By Shiva Rana (Marine Engineer and Marine Job Advisor .Disclaimer:- copyright © 2018 All Content resrverd Under section 2018@2021 August 01 2023 We will take you through the step-by-step process of launching a liferaft, emphasizing the importance of preparedness and safety. Launching a liferaft is a critical procedure that can mean the difference between life and death in emergency situations at sea. Ensuring that you and your crew are well-versed in the liferaft launching procedure is essential for maritime safety. In this comprehensive guide, we will take you through the step-by-step process of launching a liferaft, emphasizing the importance of preparedness and safety.Understanding the Importance of Liferafts and Liferaft Launching ProceduresLiferafts are an indispensable part of a ship's safety equipment. They are designed to provide a safe haven for crew members in the event of a vessel abandonment, such as during a fire, collision, or sinking. Properly launching a liferaft ensures that it inflates correctly, remains stable in the water, and can be used effectively as a means of survival until rescue arrives.Let’s look at the launching procedures of two different kinds of liferafts, namely the Throw Overboard type and the Davit launched type. Throw Overboard Liferaft Launching ProcedureThrow overboard liferafts are designed to be thrown overboard and automatically inflate when they come into contact with water. Here's a step-by-step guide for launching a throw overboard liferaft:Before launching a throw overboard liferaft, it is crucial to ensure that all crew members are accounted for and are wearing appropriate safety gear, including life jackets and immersion suits. The pre-launch checklist includes:Crew Accountability: Confirm that every crew member is present and accounted for.Safety Gear: Ensure that everyone is wearing life jackets and immersion suits to protect against exposure to cold water.Communication: Establish clear communication among crew members and assign roles for the launch procedure.Grab Bag: Prepare a grab bag containing essential items such as flares, first-aid kits, and emergency rations.Identify the location of the throw overboard liferaft on the vessel. Ensure that the liferaft is easily accessible and ready for deployment. Verify that the liferaft's painter line (the line connecting the liferaft to the ship) is clear of any obstructions.DeploymentThe throw overboard liferaft will automatically inflate upon contact with water. Follow these steps:Remove any securing straps or covers to allow the liferaft to float freely.Ensure that the liferaft is thrown overboard on the windward side of the vessel to prevent entanglement.Once the throw overboard liferaft is fully inflated and a safe distance from the vessel, crew members should board the liferaft carefully:Use the boarding ladder or designated entry point to climb into the liferaft.Assist fellow crew members, especially those who may require assistance due to injuries or distress.Ensure that everyone is safely aboard before proceeding.Inside the throw overboard liferaft, safety and survival become top priorities:Designate specific roles for crew members, such as a leader, radio operator, and lookout.Check the grab bag for essential emergency equipment and supplies. Use distress signals, flares, and communication devices to signal for help.Keep the liferaft afloat and stable. Avoid unnecessary movement to prevent capsizing.Attend to any injured or seasick crew members and administer first aid as necessary.While in the liferaft, maintain regular communication with authorities and nearby vessels to inform them of your location and status. Follow the instructions of search and rescue teams for a safe and timely rescue:Use flares, whistles, and other signaling devices to attract the attention of potential rescuers.Stay calm and composed, as panic can be detrimental in emergency situations.Conserve food and water to ensure supplies last until rescue arrives.Davit Launched Liferaft Launching ProcedureDavit launched liferafts are deployed using onboard equipment known as davits. Here's a step-by-step guide for launching a davit launched liferaft:Confirm that all crew members are present and wearing appropriate safety gear, including life jackets and immersion suits.Establish clear communication among crew members and assign roles for the launch procedure.Prepare a grab bag with essential items such as flares, first-aid kits, and emergency rations.Identify the location of the davit launched liferaft on the vessel.Ensure that the liferaft's painter line is clear of obstructions and ready for deployment.Activate the davit system to lower the liferaft into the water.Climb into the liferaft using the boarding ladder or designated entry point.Assist fellow crew members as needed.Designate specific roles for crew members within the liferaft.Check the grab bag for essential emergency equipment and supplies.Keep the liferaft stable and afloat.Maintain communication with authorities and nearby vessels.Use signaling devices to attract attention.Stay calm and conserve resources.ConclusionThe liferaft launching procedure is a vital skill that every crew member should be familiar with. It is a key element of maritime safety that can save lives in emergency situations. Proper preparation, communication, and execution of the liferaft launch ensure a higher likelihood of survival when unforeseen events occur at sea.At Marinetech Safety & Shipping Corporation, we understand the critical role of liferafts in maritime safety. We offer comprehensive life raft inspection and servicing to ensure that your liferafts are in optimal condition and ready for deployment when needed. Your safety at sea is our top priority, and we are committed to providing the highest quality services and equipment to safeguard lives in the maritime industry. 0 ratings0% found this document useful (0 votes)21 viewsThe document outlines the steps for launching a liferaft using a davit, starting with checking the painter line connection and releasing the container lashing. It details the process of lift... 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Copyright 2003 - 2025 Conjecture Corporation Privacy Policy Terms and Conditions WikiMotors, in your inbox The mariner’s attention is drawn to the following guidelines for launching Davit Launched Life Rafts. The text should only be accepted in a general form as the methods of launch will vary depending on the size and manufactured type of raft/davit. It is also pointed out that different manufacturers have a wide range of fitments which are not necessarily carried on all rafts, and may be described by different names. 1.(In the case of the first raft to be launched) transfer the life raft to a position under the davit head, so that the fall plumbs the raft container. 2.Walk back the fall and secure the release hook to the shackle/ring, extracted to protrude from the life raft container. Check that the release hook is locked and armed. 3.Remove any side rails and check that the overside surface area is clear of obstructions. 4.Pull out the painter line/lines and secure to a strong point. 5.Pull out the bowsing lines and secure to a strong point. 6.Pull out left and right container restraining lines, if fitted, and secure to the mother ship. (Valise type life rafts do not have these lines.) 7.Hoist the life raft on the fall to inflation height and slew the davit overside to the stop position. 8.Inflate the raft by pulling out the full length of painter. 9.Take up any slack on the bowsing lines to hold the raft alongside and secure any boarding flap. 10.Check that the raft has no defects and that it is well ventilated. 11.Check that personnel have no sharp objects on their person, then board the raft keeping it stable. 12.Release the boarding flap and the bowsing lines and throw them into the entrance of the raft. 13.Check the overside is still clear and lower the life raft. 14.Cock the release hook by means of the operating lanyard when the life raft is close to the water surface (within about 10 feet). 15.The raft should be automatically released once the raft becomes waterborne and its weight is removed from the bearing surface of the hook by the buoyancy effects on the raft. 16.The painter should be cut or released and the life raft quickly manoeuvred away from the ship’s side. Once clear of the immediate area life rafts should be joined together with about a 10 m length between to avoid snatching in a seaway. No. Operation Guide Schematic Diagram 1 Prepare transceivers, and confirm the communication condition. 2 Connect the push-button switch for recovering to the receptacle. 3 Turn on the power switch of start panel. 4 Don life jackets. No. Operation Guide Schematic Diagram 1 Confirm the connection of the painter on the painter release device of the lifeboat. 2 Confirm the connection of the painter as far forward as practicable inboard of the falls but outboard of everything else. No. Operation Guide Schematic Diagram 1 Pull out the safety pin (if fitted). Go up to the platform of the davit system (platform for boarding the lifeboat). No. Operation Guide Schematic Diagram 1 Wind the boat fall manually to take off the slack. Pull out the safety pin of the davit arm stop, if fitted. Note: Safety pins are generally intended only for use during maintenance or in port. 2 Release the davit arm stop by operating the handle. No. Operation Guide Schematic Diagram 1 Confirm that the remote control wire is drawn into the lifeboat. 2 Open the lifeboat boarding door and board the lifeboat. and 3 Ensure the bottom plug is fitted and tight. 4 Turn on the power supply switch. 5 Open the fuel oil valve. 6 Confirm that the cooling seawater valve is open. 7 Close the drain valve on exhaust pipe. 8 Fasten seatbelt. No. Operation Guide Schematic Diagram 1 Confirm that all crew boarded in the lifeboat are seated and their seatbelts are fastened. 2 Start engine. 3 Pull down the winch remote control wire. 3.7.1 Releasing procedure A flow chart of the off-load and on-load releasing procedures is shown in the following figure. 3.7.2 Off-load release This operation is the normal method of launch and release and is conducted when the lifeboat is fully waterborne. No. Operation Guide Schematic Diagram 1 Confirm that the lifeboat is waterborne. 2 Pull out the release handle safety pin. 3 Pull the release handle to the fully open position by one action. No. Operation Guide Schematic Diagram 3.7.3 On-load release This operation is conducted when the lifeboat is not fully waterborne. No. Operation Guide Schematic Diagram 1 Confirm that the lifeboat is as close as possible to the water surface, but that the hydrostatic interlock is not triggered. 2 Pull out the release handle safety pin. 3 Open the hydrostatic interlock cover. 4 Lift the hydrostatic interlock lever fully and hold it. 5 Pull the release handle to the fully open position by one action. No. Operation Guide Schematic Diagram 1 Release the painter. 2 Lifeboat operation Ahead, astern, turning, spray, lighting of interior light and canopy light, and other performances.