
Postgraduate Certificate in Marine Salvage Operations

Marine Salvage Engineering and Design

Aerial Photography: photography from aircraft, used in marine salvage operations to assess damage and plan salvage operations, related terms include remote sensing, photogrammetry, and geographic information systems, it is an essential tool for gathering data on the salvage site, and can be used to create detailed maps and models of the area, examples include using aerial photography to assess the damage to a ship after a collision, or to identify potential hazards in the salvage area, practical applications include using aerial photography to plan the placement of salvage equipment, and to monitor the progress of salvage operations.

Articulated Tug Barge: A type of vessel used in marine salvage operations, consisting of a tugboat and a barge connected by a hinge, related terms include tugboat, barge, and towing, it is commonly used for salvage operations in shallow waters, and can be used to transport salvage equipment and personnel, examples include using an articulated tug barge to transport a crane to a salvage site, or to tow a damaged ship to a repair facility, practical applications include using an articulated tug barge to support salvage operations in remote areas, and to provide a stable platform for salvage equipment.

Beach Gear: Equipment used to secure a vessel to a beach or shore, related terms include anchor, mooring, and towline, it is used to stabilize the vessel and prevent it from drifting or sinking, examples include using beach gear to secure a damaged ship to a beach, or to stabilize a vessel during salvage operations, practical applications include using beach gear to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Buoyancy: The ability of an object to float or rise in a fluid, related terms include density, buoyancy force, and flotation, it is an essential concept in marine salvage operations, as it is used to calculate the weight and stability of vessels and salvage equipment, examples include using buoyancy to calculate the weight of a sunken ship, or to determine the stability of a salvage vessel, practical applications include using buoyancy to design salvage equipment, and to predict the behavior of vessels and salvage equipment in different environments.

Caisson: A large, watertight chamber used in marine salvage operations to repair or construct vessels, related terms include dry dock, shipyard, and construction, it is used to provide a dry and stable environment for salvage operations, and can be used to repair or replace damaged components of a vessel, examples include using a caisson to repair a damaged ship, or to construct a new vessel, practical applications include using a caisson to support salvage operations in remote areas, and to provide a safe and stable environment for salvage personnel.

Cathodic Protection: A technique used to prevent corrosion on metal surfaces, related terms include corrosion, anode, and cathode, it is used to protect vessels and salvage equipment from corrosion, and can be used to extend the lifespan of metal components, examples include using cathodic protection to protect a vessel from corrosion, or to prevent corrosion on salvage equipment, practical applications include using

cathodic protection to support salvage operations in harsh environments, and to reduce the risk of corrosion-related failures.

Chain Locker: A compartment on a vessel used to store anchor chains, related terms include anchor, mooring, and towing, it is used to store and manage anchor chains, and can be used to support salvage operations, examples include using a chain locker to store anchor chains, or to manage the deployment of anchor chains during salvage operations, practical applications include using a chain locker to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Coastal Engineering: The application of engineering principles to the design and construction of coastal structures, related terms include coastal zone, shoreline, and oceanography, it is used to design and construct coastal structures, such as seawalls and jetties, and can be used to support salvage operations, examples include using coastal engineering to design a seawall, or to construct a jetty, practical applications include using coastal engineering to support salvage operations in coastal areas, and to provide a safe and stable environment for salvage personnel.

Collision: A collision between two or more vessels, related terms include accident, damage, and salvage, it is a common cause of damage to vessels, and can result in the need for salvage operations, examples include a collision between two ships, or a collision between a ship and a fixed object, practical applications include using salvage operations to respond to collisions, and to minimize the risk of further damage or environmental harm.

Conservation: The practice of preserving and protecting the environment, related terms include environmental impact, pollution, and sustainability, it is an essential consideration in marine salvage operations, as salvage operations can have a significant impact on the environment, examples include using conservation practices to minimize the environmental impact of salvage operations, or to prevent pollution during salvage operations, practical applications include using conservation practices to support salvage operations in sensitive environments, and to reduce the risk of environmental harm.

Crane Barge: A type of vessel used in marine salvage operations, equipped with a crane for lifting and moving heavy objects, related terms include crane, barge, and towing, it is commonly used for salvage operations in shallow waters, and can be used to transport salvage equipment and personnel, examples include using a crane barge to lift a damaged ship, or to move heavy salvage equipment, practical applications include using a crane barge to support salvage operations in remote areas, and to provide a stable platform for salvage equipment.

Damage Control: The practice of minimizing and repairing damage to a vessel, related terms include damage assessment, repair, and maintenance, it is an essential consideration in marine salvage operations, as damage control can help to minimize the risk of further damage or environmental harm, examples include using damage control to minimize the damage to a vessel after a collision, or to repair a damaged vessel, practical applications include using damage control to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Davit: A device used to lift and move heavy objects, related terms include crane, winch, and hoist, it is

commonly used in marine salvage operations to lift and move salvage equipment, examples include using a davit to lift a salvage pump, or to move a heavy salvage component, practical applications include using a davit to support salvage operations in remote areas, and to provide a stable platform for salvage equipment.

Deck Crane: A type of crane mounted on a vessel, used for lifting and moving heavy objects, related terms include crane, hoist, and winch, it is commonly used in marine salvage operations to lift and move salvage equipment, examples include using a deck crane to lift a salvage pump, or to move a heavy salvage component, practical applications include using a deck crane to support salvage operations in shallow waters, and to provide a stable platform for salvage equipment.

Dredge: A vessel used to remove sediment and debris from a body of water, related terms include dredging, excavation, and sedimentation, it is commonly used in marine salvage operations to remove debris and sediment from the salvage site, examples include using a dredge to remove sediment from a harbor, or to excavate a channel, practical applications include using a dredge to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Dry Dock: A type of dock used to repair and maintain vessels, related terms include caisson, shipyard, and construction, it is used to provide a dry and stable environment for salvage operations, and can be used to repair or replace damaged components of a vessel, examples include using a dry dock to repair a damaged ship, or to construct a new vessel, practical applications include using a dry dock to support salvage operations in remote areas, and to provide a safe and stable environment for salvage personnel.

Echo Sounder: A device used to measure the depth of water, related terms include sonar, depth sounding, and bathymetry, it is commonly used in marine salvage operations to measure the depth of water and to identify potential hazards, examples include using an echo sounder to measure the depth of water in a harbor, or to identify a sunken ship, practical applications include using an echo sounder to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Environmental Impact: The effect of human activities on the environment, related terms include conservation, pollution, and sustainability, it is an essential consideration in marine salvage operations, as salvage operations can have a significant impact on the environment, examples include using environmental impact assessments to minimize the environmental impact of salvage operations, or to prevent pollution during salvage operations, practical applications include using environmental impact assessments to support salvage operations in sensitive environments, and to reduce the risk of environmental harm.

Fire Resistance: The ability of a material to resist fire and heat, related terms include fire protection, fire safety, and materials science, it is an essential consideration in marine salvage operations, as fires can occur during salvage operations, examples include using fire-resistant materials to construct salvage equipment, or to protect vessels from fire, practical applications include using fire-resistant materials to support salvage operations in harsh environments, and to reduce the risk of fire-related failures.

Flotation: The ability of an object to float or rise in a fluid, related terms include buoyancy, density, and stability, it is an essential concept in marine salvage operations, as flotation is used to calculate the weight

and stability of vessels and salvage equipment, examples include using flotation to calculate the weight of a sunken ship, or to determine the stability of a salvage vessel, practical applications include using flotation to design salvage equipment, and to predict the behavior of vessels and salvage equipment in different environments.

Geographic Information Systems: A type of software used to analyze and display geographic data, related terms include GIS, mapping, and spatial analysis, it is commonly used in marine salvage operations to analyze and display data on the salvage site, examples include using geographic information systems to create maps of the salvage site, or to analyze data on the environmental impact of salvage operations, practical applications include using geographic information systems to support salvage operations in remote areas, and to provide a safe and stable environment for salvage personnel.

Hydraulic System: A system used to transmit power and motion through fluids, related terms include hydraulics, pump, and motor, it is commonly used in marine salvage operations to power salvage equipment, examples include using a hydraulic system to power a salvage pump, or to operate a crane, practical applications include using hydraulic systems to support salvage operations in harsh environments, and to reduce the risk of mechanical failures.

Inert Gas: A type of gas that is inert and non-reactive, related terms include inert gas system, fire protection, and safety, it is commonly used in marine salvage operations to prevent fires and explosions, examples include using inert gas to prevent fires in a vessel, or to protect salvage equipment from fire, practical applications include using inert gas to support salvage operations in harsh environments, and to reduce the risk of fire-related failures.

Inspection: The process of examining and evaluating the condition of a vessel or salvage equipment, related terms include survey, examination, and testing, it is an essential consideration in marine salvage operations, as inspections can help to identify potential hazards and minimize the risk of accidents, examples include using inspections to evaluate the condition of a vessel, or to identify potential hazards in salvage equipment, practical applications include using inspections to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Life Raft: A type of emergency vessel used to evacuate personnel from a vessel in distress, related terms include life saving appliance, emergency beacon, and survival equipment, it is commonly used in marine salvage operations to evacuate personnel from a vessel in distress, examples include using a life raft to evacuate personnel from a sinking ship, or to provide emergency shelter and support, practical applications include using life rafts to support salvage operations in remote areas, and to provide a safe and stable environment for salvage personnel.

Marine Growth: The accumulation of marine organisms on a vessel or salvage equipment, related terms include biofouling, corrosion, and maintenance, it is an essential consideration in marine salvage operations, as marine growth can affect the performance and stability of vessels and salvage equipment, examples include using marine growth prevention systems to prevent the accumulation of marine organisms, or to clean and maintain vessels and salvage equipment, practical applications include using marine growth prevention systems to support salvage operations in shallow waters, and to provide a safe and stable

environment for salvage personnel.

Mooring: The process of securing a vessel to a fixed object, related terms include anchor, towline, and docking, it is commonly used in marine salvage operations to secure vessels and salvage equipment, examples include using mooring lines to secure a vessel to a dock, or to tow a vessel to a repair facility, practical applications include using mooring systems to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Navigation: The process of plotting and following a course, related terms include chart, compass, and GPS, it is an essential consideration in marine salvage operations, as navigation can help to minimize the risk of accidents and ensure the safe and efficient completion of salvage operations, examples include using navigation systems to plot a course, or to follow a salvage plan, practical applications include using navigation systems to support salvage operations in remote areas, and to provide a safe and stable environment for salvage personnel.

Oceanography: The study of the ocean and its properties, related terms include ocean currents, tides, and waves, it is an essential consideration in marine salvage operations, as oceanography can help to predict the behavior of vessels and salvage equipment in different environments, examples include using oceanography to predict the tides and currents in a salvage area, or to identify potential hazards such as waves and storms, practical applications include using oceanography to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Offshore: A term used to describe operations or activities that take place in the ocean or sea, related terms include offshore platform, offshore construction, and offshore salvage, it is commonly used in marine salvage operations to describe operations that take place in the ocean or sea, examples include using offshore platforms to support salvage operations, or to construct offshore structures, practical applications include using offshore platforms to support salvage operations in harsh environments, and to reduce the risk of accidents and environmental harm.

Pneumatic System: A system used to transmit power and motion through compressed air, related terms include pneumatics, compressor, and valve, it is commonly used in marine salvage operations to power salvage equipment, examples include using a pneumatic system to power a salvage pump, or to operate a crane, practical applications include using pneumatic systems to support salvage operations in harsh environments, and to reduce the risk of mechanical failures.

Pollution: The release of harmful substances into the environment, related terms include environmental impact, conservation, and sustainability, it is an essential consideration in marine salvage operations, as pollution can have a significant impact on the environment and human health, examples include using pollution prevention systems to minimize the release of harmful substances, or to clean up spills and leaks, practical applications include using pollution prevention systems to support salvage operations in sensitive environments, and to reduce the risk of environmental harm.

Positioning: The process of determining and maintaining the position of a vessel or salvage equipment, related terms include GPS, navigation, and tracking, it is an essential consideration in marine salvage

operations, as positioning can help to minimize the risk of accidents and ensure the safe and efficient completion of salvage operations, examples include using positioning systems to determine the position of a vessel, or to track the movement of salvage equipment, practical applications include using positioning systems to support salvage operations in remote areas, and to provide a safe and stable environment for salvage personnel.

Pumping System: A system used to transfer fluids, related terms include pump, piping, and valve, it is commonly used in marine salvage operations to transfer fluids such as water and fuel, examples include using a pumping system to transfer water from a vessel, or to pump fuel to a salvage vessel, practical applications include using pumping systems to support salvage operations in harsh environments, and to reduce the risk of mechanical failures.

Recovery: The process of retrieving and restoring a vessel or salvage equipment, related terms include salvage, repair, and maintenance, it is an essential consideration in marine salvage operations, as recovery can help to minimize the risk of accidents and ensure the safe and efficient completion of salvage operations, examples include using recovery systems to retrieve a sunken vessel, or to restore a damaged vessel, practical applications include using recovery systems to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Remotely Operated Vehicle: A type of underwater vehicle used to inspect and repair vessels and salvage equipment, related terms include ROV, underwater inspection, and repair, it is commonly used in marine salvage operations to inspect and repair vessels and salvage equipment, examples include using a remotely operated vehicle to inspect a sunken vessel, or to repair a damaged pipeline, practical applications include using remotely operated vehicles to support salvage operations in remote areas, and to provide a safe and stable environment for salvage personnel.

Salvage: The process of recovering and restoring a vessel or salvage equipment, related terms include recovery, repair, and maintenance, it is an essential consideration in marine salvage operations, as salvage can help to minimize the risk of accidents and ensure the safe and efficient completion of salvage operations, examples include using salvage operations to recover a sunken vessel, or to restore a damaged vessel, practical applications include using salvage operations to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Shipyards: A facility used to construct, repair, and maintain vessels, related terms include dry dock, caisson, and construction, it is commonly used in marine salvage operations to repair and maintain vessels, examples include using a shipyard to repair a damaged vessel, or to construct a new vessel, practical applications include using shipyards to support salvage operations in remote areas, and to provide a safe and stable environment for salvage personnel.

Sonar: A device used to detect and locate objects underwater, related terms include echo sounder, underwater inspection, and navigation, it is commonly used in marine salvage operations to detect and locate objects underwater, examples include using sonar to detect a sunken vessel, or to locate a damaged pipeline, practical applications include using sonar to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Stability: The ability of a vessel or salvage equipment to resist capsizing or sinking, related terms include buoyancy, flotation, and ballast, it is an essential consideration in marine salvage operations, as stability can help to minimize the risk of accidents and ensure the safe and efficient completion of salvage operations, examples include using stability calculations to determine the stability of a vessel, or to predict the behavior of salvage equipment in different environments, practical applications include using stability calculations to support salvage operations in harsh environments, and to reduce the risk of accidents and environmental harm.

Subsea: A term used to describe operations or activities that take place underwater, related terms include subsea construction, subsea inspection, and subsea repair, it is commonly used in marine salvage operations to describe operations that take place underwater, examples include using subsea platforms to support salvage operations, or to construct subsea structures, practical applications include using subsea platforms to support salvage operations in harsh environments, and to reduce the risk of accidents and environmental harm.

Survey: The process of examining and evaluating the condition of a vessel or salvage equipment, related terms include inspection, examination, and testing, it is an essential consideration in marine salvage operations, as surveys can help to identify potential hazards and minimize the risk of accidents, examples include using surveys to evaluate the condition of a vessel, or to identify potential hazards in salvage equipment, practical applications include using surveys to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Towing: The process of pulling or towing a vessel or salvage equipment, related terms include tug, towline, and towing vessel, it is commonly used in marine salvage operations to tow vessels and salvage equipment, examples include using towing vessels to tow a damaged vessel, or to pull a sunken vessel to the surface, practical applications include using towing vessels to support salvage operations in harsh environments, and to reduce the risk of accidents and environmental harm.

Tug: A type of vessel used to tow or pull other vessels or salvage equipment, related terms include towing, towline, and towing vessel, it is commonly used in marine salvage operations to tow vessels and salvage equipment, examples include using a tug to tow a damaged vessel, or to pull a sunken vessel to the surface, practical applications include using tugs to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.

Underwater Inspection: The process of examining and evaluating the condition of a vessel or salvage equipment underwater, related terms include sonar, remotely operated vehicle, and underwater survey, it is commonly used in marine salvage operations to inspect and evaluate the condition of vessels and salvage equipment underwater, examples include using underwater inspection systems to inspect a sunken vessel, or to evaluate the condition of a damaged pipeline, practical applications include using underwater inspection systems to support salvage operations in remote areas, and to provide a safe and stable environment for salvage personnel.

Valve: A device used to control the flow of fluids, related terms include pump, piping, and fluid dynamics, it is commonly used in marine salvage operations to control the flow of fluids such as water and fuel,

examples include using valves to control the flow of water from a vessel, or to regulate the pressure of a fluid system, practical applications include using valves to support salvage operations in harsh environments, and to reduce the risk of mechanical failures.

Winch: A device used to lift and move heavy objects, related terms include crane, hoist, and davit, it is commonly used in marine salvage operations to lift and move salvage equipment, examples include using a winch to lift a salvage pump, or to move a heavy salvage component, practical applications include using winches to support salvage operations in remote areas, and to provide a stable platform for salvage equipment.

Wreck: A vessel that has been damaged or destroyed, related terms include salvage, recovery, and repair, it is an essential consideration in marine salvage operations, as wrecks can pose a hazard to navigation and the environment, examples include using salvage operations to recover a wrecked vessel, or to repair a damaged vessel, practical applications include using salvage operations to support salvage operations in shallow waters, and to provide a safe and stable environment for salvage personnel.