

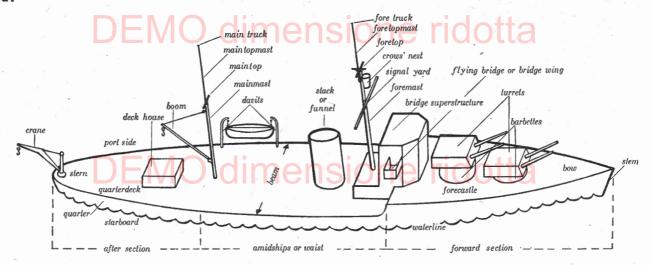
Combatants in the present war have consistantly bombed and shot at their own ships and those of their allies. A large body of opinion maintains that the Italians, for instance, would be obliging enough to eliminate their fleet from the Mediterranean if left to their own devices.

While the objective of all seagoing personnel should be to recognize important ships or types at a glance, familiarity with the details of naval design illustrated in the following pages may prove of value to the student of ship identification. Determination of a ship's type must constitute a primary step in identification in combat areas. Since accurate estimation of a ship's size is extremely difficult at sea, an observer may have occasion to resort to certain rules of thumb to differentiate various types of fighting ships. A discussion of the factors that may be employed to distinguish these types, and of the common variants that occur within the types themselves, will be found in this section of O. N. I. 223.

Of all fighting ships, the old *Monitor* must have been about the easiest to identify. She had a single turret and a single stack on a wide flat hull, and that was all that could be said about her. Modern warships have become a good deal more complex. In fact there are very few warships in the world that look precisely alike. An expert can tell even sister ships apart by minor

differences in their masts or superstructures. All ships share in some degree the essential characteristics of their type, and as one becomes familiar with ships one also becomes increasingly aware of the peculiar *national* character that distinguishes ships of the world's navies.

"Spot" identification of ships at sea is not always possible. The appearance of individual warships is constantly undergoing alteration in time of war and consideration must be given, for purposes of identification, to elements of structure that are least subject to change, such as main armament and hull proportions. "Progressive" identification, or identification through observation of detail, will often constitute the basis for a more dependable check on a ship's identity than the general impression of an observer. For this reason, variations in structural elements that appear in all fighting ships are illustrated in this section, as well as those which serve to differentiate types, with terms commonly applied to them. The progressive method is considered especially well suited to descriptive reporting of ships' appearance. A method of reporting such data appears in O. N. I. 223-K, Warships in Code, recently published by the Division of Naval Intelligence.



NOTE: Terms later defined in the text of this section have been omitted in the following list.

ABAFT... behind; toward stern from.
ABEAM... at right angles to the keel.

AMIDSHIPS. the middle portion of a vessel.

ARMOR. steel plating designed to defeat shells, bombs, or underwater explosion.

ARMOR BELT. band of armor extending along a ship's sides above and below water-line.

ATHWART. across; from side to side; transversely. BEAM. extreme width of ship.

BILGE.. curved part of ship's hull where sides and flat bottom meet.

BLISTER... a bulge built on a ship's side as a protection against torpedoes.

BOOM... a free-swinging spar used to secure boats or to handle cargo, boats or aircraft.

BREAK.. the point at which upper decks are discontinued.

BRIDGE. raised forward platform from which ship is conned and navigated.

BULKHEAD... transverse or longitudinal partitions subdividing the interior of a ship.

BULWARKS... light plating or wooden extension of ship's sides above upper deck.

CASEMATE.. armored gun port built into the sides or superstructure of a ship.

CLASS... vessels of the same type built to a common basic design.

COMBINED OPERATIONS.. joint operations conducted by nonhomogeneous forces or forces of different services and/or nationalities.

COMPANIONWAY.. hatchway providing access from one deck to another.

COMPARTMENTATION.. subdivision of a ship's hull by means of transverse and/or longitudinal bulkheads.

CONNING TOWER... armored ship control station.
In submarines, the main deck structure.

COUNTER... vessels quarter abaft stern post. COWL... a smoke baffle located on top of a funnel; opening of a ventilator.

DAMAGE CONTROL.. comprehensive term for all means of mitigating or offsetting effects of damage aboard ship.

DEPTH CHARGE.. explosive device projected or dropped from air or surface craft; detonated at predetermined depths by a hydrostatic mechanism.

DISPLACEMENT.. the weight of water displaced by a ship.

FANTAIL. after section of the main deck abaft stern post.

FORE.. that part of a ship lying between bow and midship section.

FORE AND AFT. lengthwise of a ship.

FORECASTLE. deck; a forward upper deck extending to bow.

FREEBOARD.. height of a ship's sides from waterline to a weather deck.

FLYING BRIDGE. a light self-supporting structure extending from side of ship's bridge.

GUN HOUSE... a lightly protected, rotating mount for guns of lesser calibre.

GUN SHIELD... any protection for gun crews which does not completely enclose mount.

GUNWALE. upper edge of a vessel's or boat's side. HALYARDS. light lines used in hoisting signals, flags, etc.

HATCH... opening in a deck.

HAWSE PIPES.. tubes leading anchor chains from deck down and forward through bow plating.

HELM.. the mechanism for steering a ship; wheel or tiller.

HULL. main body of a vessel exclusive of elements of superstructure.

ISLAND. a free-standing section of a ship's superstructure. On aircraft carriers, the ship's superstructure.

KEEL.. center line strength member running fore and aft along the bottom of a ship.

KNOT... a unit of speed, equalling one nautical mile (6,080.20 feet) per hour.

LIST. transverse inclination of a vessel.

MAIN BATTERY... the heaviest calibre gun armament carried by a naval vessel.

MAIN DECK.. a ship's highest continuous deck.

MINE.. a device containing high explosive charge,

MINE... a device containing high explosive charge, free-floating or anchored at fixed depth, or resting on bottom: detonated by contact, or by electrical or magnetic impulse.

MULTIPLE MAST.. an exposed mast having one or more supporting elements.

PEAK (fore and aft)... compartment at the extreme bow or stern of vessel below decks—usually a tank. PORT... left hand side of a vessel when looking towards bow; an opening.

QUARTER... that portion of a vessel's side near the stern.

QUARTER DECK. part of upper deck reserved for officers; also the deck near the stern.

RADIO DIRECTION FINDER. device for determining direction of source of radio impulses.

RAKE.. fore and aft inclination from vertical.
RANGEFINDER.. optical instrument for determining distance to a target or other object.

RECIPROCATING ENGINE... a steam actuated piston engine as distinguished from a turbine.

RIGGING.. collective term for ropes and chains employed to support masts, yards, and booms of vessel.

SECONDARY BATTERY., the gun armament next in calibre to main battery.

SHEER.. longitudinal upward or downward curvature of deck or gunwhale.

SHEER LINE.. line formed by intersection of deck and sides of a ship.

SPLINTER SCREEN.... light armor shields for protection of crew.

STACK.. exposed uptake from ship's boilers; funnel.

STARBOARD.. the right hand side of a vessel when looking towards bow.

STEM__ extreme forward line of bow.

STERN POST.. the main vertical post in the stern frame upon which the rudder is hung.

SUPERSTRUCTURE... structure built above a ship's hull.

TASK FORCE. a naval force organized to carry out a specific mission.

TURRET ... a rotating mount enclosed by armor for guns of large calibre.

TWIN TURRET __ a turret housing two guns.

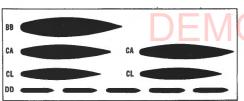
TYPE... all vessels built or converted for the same purpose.

WEATHER DECK .. any deck exposed to weather.

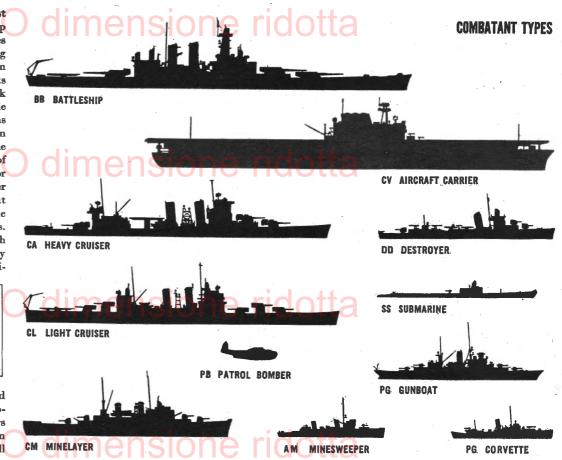
WELL. a depressed section of a ship's hull one or more decks in depth.

SHIPS OF THE FLEET

The student of ship identification should first of all familiarize himself with the types of ship that make up a modern fleet. On these pages appear the more important types of fighting ship that make up the United States Navy. On this page are shown the major combatant units that form the Battle Fleet or make up the task forces that have assumed such an important role in the Pacific area. Each of these ships has been designed to play an aggressive role in combat. Each has its place and function in the disposition of the Fleet when at sea. Not all of these ships, however, are intended solely for operation with others. A cruiser or lighter vessel may execute an independent combat mission, preying upon commerce or clearing the sea of raiders and other enemy naval units. Generally speaking, the number of ships of each type in a well-balanced navy will vary inversely with size. Thus, for every battleship, approxi-



mately two heavy cruisers, two light cruisers and five destroyers will be built. The relative proportion of our existing carriers or of carriers building or contemplated cannot be expressed in similar terms and is therefore omitted. It will



SHIPS OF THE FLEET

PT MOTOR TORPEDO BOAT PY YACHT PC SUB CHASER ACV AUXILIARY AIRCRAFT CARRIER REPAIR. SUPPLY AND TRANSPORT AD DESTROYER TENDER AV SEAPLANE TENDER AO OILER AR REPAIR SHIP AK CARGO SHIP LC LANDING CRAFT AP TRANSPORT AH HOSPITAL SHIP

suffice to say that the proportion of ships of this type in our Navy will be greatly increased over the pre-war level.

For every ship that is built to meet an opponent in battle, a dozen are built to perform prosaic but necessary jobs for the maintenance, supply, and protection of the Fleet and its shore establishments. Many types of repair, supply and transport vessels are constantly engaged in serving and maintaining our two-ocean fleet. Extended naval operations would often be impossible without these ships. In waters where adequate docking, repair and fuel facilities do not exist, the crippling of an enemy repair ship or oiler may require modification or abandonment of an important operation. The destruction of an enemy's auxiliaries must, therefore, be regarded as an objective of major importance.

Identification of such units is important. An observer must be able to distinguish enemy ships of these types from corresponding vessels of his own navy and of his allies'. Accurate reporting of minor enemy ship types present in an operating area is an important factor in anticipating an opponent's plans and in the formation of strategic as well as tactical decisions. It is not enough, therefore, simply to know your own and the enemy's major combatant ships. Fliers especially should become familiar with such minor vessels in order to report accurately the types of the many ships that will be observed in theaters of war.

Most large warships are now designed with raking or clipper bows and cruiser sterns, although the transom sterns of U.S. and French cruisers are notable exceptions, as are the characteristic "hooked" bows of Japanese warships. Ram bows are survivals of an older school of naval design and invariably indicate ships built at least twenty years' ago. Larger and newer U. S. ships are usually designed with characteristic blunted clipper bows, often YARROW **DESTROYER** difficult to distinguish from the raked type common in lighter units. 0 0 MERCHANT CRUISER CRUISER CRUISER MINELAYER

IDENTIFICATION OF A FIGHTING SHIP

Here is a ship.

Q. What are the proportions of her hull?

A. Seen from above she has a broad hull, with continuous curve from stem to stern.

Probably a battleship.

Q. What type of hull in profile?

A. A flush hull.

Q. What type of superstructure?

A. A single island superstructure.

Q. What is her main battery disposition?

A. Superimposed turrets forward, one turret aft, or 2-A-1.

Q. How many stacks has she and of what type?

A. Two high, straight, singlepipe stacks.

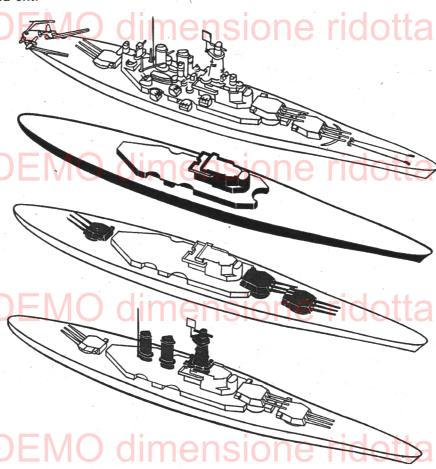
Q. What is her mast-stack arrangement?

A. Mast, stack, stack mast, or 1-F-F-1.

Q. What type of masts has she?

A. A high, simple tower foremast and a stick mainmast.

Q. What type of bow and stern?



A. Her how is of the *clipper* type, her stern of the *cruiser* type.

Besides these elements you will notice the large and relatively low turrets along this ship's centerline, which will confirm your conclusion as to her type. You will note the long run of deck forward of her bridge, with marked sheer line curving up toward the bow. The prominent housings of her secondary batteries are also notable, as are the high, cylindrical range finders on her bridge and after deck house. If your know your ships, a glance will tell you that she is the U.S.S. North Carolina.

However, since most of us have not learned to identify all the world's warships at a glance, remember that these are the elements that must be observed and noticed in the process of identifying a ship. Learn to associate their variants with the types and individual ships of our own Navy and the navies of our enemies.

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