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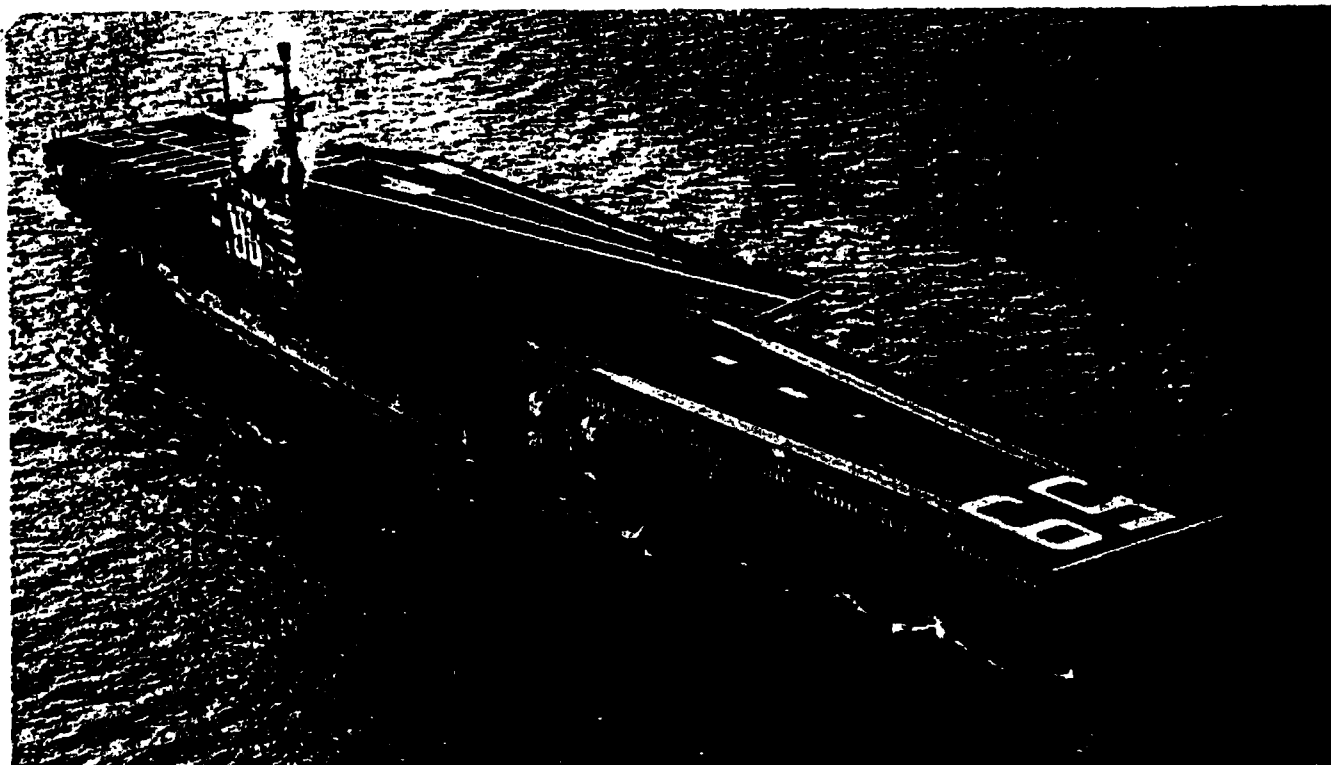
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View of Forrestal as she headed out to sea on first series of trials

USS Forrestal Joins Fleet

Overcoming early Congressional adversity, hurricanes and a "bug" in lube system, the world's mightiest warship is commissioned at Portsmouth

The USS *Forrestal* (CVA-59), lead ship of a new class of super aircraft carriers and the world's mightiest warship, joined the fleet October 1 in an impressive commissioning ceremony at the Norfolk Naval Shipyard, Portsmouth, Va.

Built by the Newport News Shipbuilding and Dry Dock Company, the 1036-ft-long, 59,900-ton vessel reflects our military's emphasis on the need for mobile air bases from which retaliatory atomic bombardment can be visited upon the attacking enemy. Three additional Forrestal-class carriers currently are under construction, including the USS *Saratoga* (see page 37). Bids for a fifth were scheduled to be received last month (October 14). The Navy's projected plans contemplate a total of 12 of these carriers. Current thinking is that one or several will have nuclear propulsion.

Trial Runs

The *Forrestal* completed her acceptance trials September 23, but had to "prove her salt" the hard way. It required two sets of sea trials, 6 days in all, before she got the Navy stamp of approval.

She first embarked on her trials August 29 and was scheduled to complete them September 2. After completing her 4-hr economy-test runs successfully on August 30,

speed was gradually increased in preparation for full-power speed trials. It is reported that the vessel had attained 30 knots when the main thrust bearing on the No. 3 engine wiped. The engine was secured, and speed reduced. While running on three engines, similar overheating was discovered on another main thrust and the

Main Particulars of Forrestal

Length over-all	1036 ft
Length between perpendiculars	990 ft
Beam at main deck	129 ft 4 in.
Beam at flight deck	252 ft
Depth at centerline flight deck	97 ft 4 in.
Standard displacement, tons	59,650
Horsepower	over 200,000
Speed, knots	over 30
Crew	3500
Cost, including ordnance	over \$200 million
Keel laid	July 14, 1952
Delivery	Oct. 1, 1955

The vessel is equipped with a 400-line fully automatic dial-telephone system, developed and built by Automatic Electric Company. The system provides rapid, automatic telephone communication between various points on board the vessel. The installation can accommodate 800 telephones on a two-party line basis (with selective party-

line ringing) and is equipped with a special "right-of-way" feature so that urgent or high-priority calls can be cut in immediately on any existing conversation.

Acoustical properties of the telephones have been further perfected to give higher voice fidelity and other-wise make conversation more intelligible in noisy areas.

Major Suppliers of Equipment Aboard USS Forrestal

American Machine and Foundry—Automatic dispensers for mess gear.
American Roller Bearing—Roller bearings.
American Sterilizer—Sterilizers.
Andale—Strainers.
Armstrong Cork—Adhesives, linoleums and cork pipe covering.
Arnot Jamestown—Furniture.
Arrow Hart and Hegeman Electric—Wiring devices.
John B. Astell—Steel tubing.
Atwood and Morrill—Valves.
Aerco—Heat exchangers, valves.
Allis Chalmers—Centrifugal pumps, transformers.
Aluminum Company of America—Aluminum tubing, plates, sheets, shapes, bars, castings, extrusions and rivets.
Amco—Gasoline hose and nozzles.
American Brass—Brass, copper and copper-nickel alloy tubing and expansion joints, nuts.
American Car and Foundry—Lubricated plug valves, cocks.
American Engineering—Pumps for jet-blast deflector.
American Locomotive—Springs.
Auth Electric—Annunciators.
Automatic Electric Sales—Telephones.
Automatic Sprinkler—Sprinkler equipment.
Automatic Temperature Control Co.—Regulating valves.
American Chain and Cable—Hoists.
Anaconda Wire and Cable—Degaussing equipment.
Arbol Manufacturing—Adhesive cement.
Arma Corp.—Ship control and ordnance equipment.
Armco Steel Corp.—Stainless steel.
Atlas Valve—Pump governors and reducing valves.
Bendix Aviation—Electronics equipment.
Babcock & Wilcox—Boilers and steel tubing and refractories, fire brick, mortar, cement, etc.
Badger Manufacturing—Expansion fittings.
Bailey Meter—Boiler combustion and feed water controls.
Baldwin Lima Hamilton—Propellers.
M. L. Bayard—Airplane crane, pumps.
Bethlehem Steel—Pine, plates, shapes, sheets, bars, forgings, bolts and nuts.
Betts and Betts—Lighting fixtures and wiring appliances.
Blackmer Pump—Gasoline pumps.
Blaw Knox—Steam accumulators.
S. Blickman—Service sinks and galley equipment.
Bogue Electric—Generators.
Borden Metal Products—Gratings.
Bridgeport Brass—Copper and brass tubing.
Buffalo Forge—Fans.
Buffalo Meter—Oil and water meters.
Burndy Engineering—Electrical connectors.
A. M. Byers—Wrought-iron pipe, plate and sheet.
James G. Biddle—Electrical instruments.
Boston A-to Gage—Tank gages.
Brooks Equipment—Universal joints.
Burgess Manning—Telephone hoods.
C O Two Fire Equipment Co.—Fire-fighting equipment.
Camden Forge—Forgings.
G. O. Carlson Incorporated—Stainless plate.
Carrier Corporation—Air conditioning and refrigeration equipment.
The Chapman Valve Manufacturing Company—Gate valves.
Chase Brass and Copper Company, Inc.—Brass, copper and copper-nickel alloy tubing.
Cleveland Diesel Engine Division—Generators.
The Cleveland Pneumatic Tool—Screw jacks.
Cochrane Corporation—Heat exchangers.
Colorado Fuel and Iron—Wire rope, steel plates.
Columbia Machine Works—Pipe blinds, gaskets and parts.
Commercial Engineering—Lube-oil purifiers.
Control Instrument Co.—Telephones.
Copes Vulcan Division—Desuperheaters.
Cox & Company—Radiant heaters.
Crane Company—Plumbing fixtures—valves, main steam, throttling, catapult steam, miscellaneous, gasoline reducing valves, hangar sprinkling valves, for foam valves.
Crane Packing Co.—Packing.
Crucible Steel Co. of America—Alloy and stainless bars and magnets.
Cutter Hammer, Inc.—Electrical control equipment.

Central Iron & Steel—Steel plates.
Corbin Cabinet Lock Division—Hardware.
Corbin Craft, Inc.—Boats.
Cusco Engineering—Strainers.
Daystrom Electric—I.C. equipment.
De Laval Separator—Oil purifiers.
Deming Co.—Pumps.
Detroit Controls Corp.—Control apparatus.
Davis Engineering—Heat exchangers.
L. C. Doane—Lighting fixtures.
Dravo Corporation—Pumps, speed reducers.
Eastern Stainless Steel Corp.—Stainless sheets.
Elkhart Brass Manufacturing—Hosefitting and monitors.
Ellison Bronze Co.—Balanced doors.
Frie Forge & Steel Corp.—Forgings.
E. I. du Pont de Nemours—Paint for furniture.
Electric Storage Battery—Storage batteries.
Electroline Co.—Marine hardware.
Federal Telephone & Radio—Electronic equipment.
Flexonics Corp.—Expansion joints.
Friez Instrument Co.—Wind direction and speed indicator system.
Falk Corporation—Gear and speed reducers.
Stanley G. Flagg & Co.—Flanges, bronze.
Fog Nozzle International—Fog nozzles.
Formica Company—Plastics.
Foster Engineering—Temperature regulating and pressure reducing valves.
Fulton Sulphon Division—Packless valves.
General Electric—Generators, circuit breakers, cable, switchgear equipment, instruments.
H. S. Getty & Co.—Locks, hinges and door hardware.
B. F. Goodrich—Hose.
Grinnell Company—Pipe hangers and sprinkler heads.
Griscom Russell—Heat exchangers and distilling plant.
C. C. Galbraith & Son—Radiant heaters.
Garlock Packing—Packing.
Glass Fibers, Inc.—Acoustical blankets.
Gould—Storage batteries.
Graybar Electric—Electrical fittings.
Hays Corp.—Draft gages.
Hobart—Food chopping and mixing machines.
Hale Fire Pump—Fire-fighting equipment.
Heints Manufacturing—Stair and ladder treads, and quick-acting watertight doors.
Hendrick Manufacturing—Perforated sheets and gratings.
Henschel Corporation—Electrical and mechanical telegraphs.
Hyde Windlass—Steering gear control and control valves.
I.T.E. Circuit Breaker Co.—Circuit breakers, transformers.
Ingervoll Rand—Pumps.
Ingram Richardson Manufacturing—Porcelain enameled bulkheads, plumbing partitions.
Insinger Machine Co.—Dish-washing machinery and potato peelers.
D. O. James Gear Manufacturing—Speed reducers.
Jamestown Metal—Metal joiner doors.
Jenkins Brothers—Control stations, pumps.
Johns Manville—Magnesia, packing, asbestos cloth, gaskets, and asbestos millboard.
Jones & Laughlin Steel—Steel pipe and shapes.
Jorgensen—Liquid level indicators.
Johnson Service—Pneumatic controls.
K&M Products—Welding studs.
G. M. Ketcham Manufacturing—Wiring appliances.
Kewanee-Ross—Heat exchangers.
Kling Gage Co.—Tank gages.
Kingsbury Machine Works—Thrust bearings for propeller shaft.
Leslie Co.—Temperature regulating and pressure-reducing valves.
Liquidometer Corporation—Tank gages.
Loeffelholz Company—Air outlet terminals and valves.
J. E. Lonergan—Safety valves.
Lovell Dressel—Lighting fixtures and wiring appliances.
Lukens Steel—Steel plates.
Lafayette Engineering—Fuel at sea winches.
R. G. Le Tourneau—Crane.
Lunkenheimer—Valves.
Marlo Coil Co.—Cooling coils, unit coolers, gravity coils.
Madeco Tackle Block—Blocks.
McQuay, Inc.—Duct heaters.
Modell Instrument Co.—Thermometers.

Manning, Maxwell and Moore, Inc.—Pressure and vacuum gages and safety valves.
Midvale Company—Forgings.
Minneapolis Honeywell Regulator—Air-conditioning controls.
Lucian Q. Moffitt—Cutless rubber-lined bearings.
National Tube Division—Steel tubing, flasks.
Nelson Stud Welding—Welding studs.
Okonite Company—Electric wire and cable.
Owens Corning Fiberglass Corp.—Fiberglass insulation.
Palmer Electric & Manufacturing—Lighting fixtures and wiring appliances.
Pharos Dodge Copper Products—Electric wire and cable.
Philadelphia Gear Works—Speed reducers and gears and motor operators for valves.
Philco Corporation—Electronic equipment.
Pilot Marine Corp.—Signal equipment and switchboards.
Parker Appliance—Nozzles.
Penn. Flexible Metallic Tubing—Flexible hose.
Piero Manufacturing—Universal joints.
Pitometer Log Corp.—Revolution indicator system.
Radio Corp. of America—Electronic equipment.
Raybestos Manhattan—Asbestos cloth.
Republic Steel—Steel pipe.
Roebling Wire Rope Corp.—Wire rope.
Ruggles-Klingemann—Valves.
Ica. T. Rverson & Son—Alloy steel.
Reliance Electric & Engineering—Electric motors and controls.
Revere Copper and Brass—Brass, copper and copper-nickel tubing—aluminum extensions.
Reynolds Metals Co.—Aluminum sheets and shapes and vapor-proof insulation.
Rockbestos Products Corp.—Electric wire and cable.
Sandusky Foundry & Machine—Shaft sleeves.
Sarco Company—Strainers and stop-check valves.
Schutte and Koerting—Heat exchangers and exchangers.
Sier Bath Gear & Pump—Rotary pumps.
Stow Manufacturing—Flexible shafts.
Superdraulic Corporation—Control valves.
SKF Industries—Roller bearings.
Shenango-Penn Mold—Brass castings.
Sherwin-Williams—Paint.
Sig-Trans—Anchor and propeller order systems.
Simco Co.—Lighting fixtures.
Sperry—Ship control equipment.
Syntron—Sealing rings.
Taylor Instrument—Thermometers.
Teleflex—Rudder angle indicator.
Thomas Flexible Coupling Co.—Flexible couplings.
Trumbull Components Department—Electrical switches.
U. S. Rubber Company—Rubber packing and gaskets and shaft covering.
U. S. Steel Corporation—Steel pipe and tubing.
STS plates, plates, shapes, bars and forgings.
Uebeling Instrument Co.—Tank level gages.
Union Asbestos & Rubber—Insulation.
U. S. Instrument Corp.—Call signal stations, rotary switches.
Vellumold Co.—Gaskets.
Vellan Engineering—Steam traps.
Vickers, Inc.—Pumps and hydraulic equipment.
Vulcan Radiator Company—Finned tubing.
Walworth Company—Flanges, valves, fireman and miscellaneous plug cocks, fittings.
Ward Leonard Electric—Electrical control equipment.
Waterbury Tool—Pumps for steering gear and elevators.
Welin Davit and Boat Division—Davits and winches for boats.
Westinghouse Electric—Propelling machinery, airplane elevators, motors, transformer fans, blowers, and rectifiers, etc.
C. H. Wheeler Manufacturing—Anchor windlass, special elevators and air ejectors for condensers, pumps.
Worthington Corporation—Pumps and compressors.
Wing Manufacturing, L. I.—Vent fans.
Alan Wood Steel Co.—Floor plates.
Wright-Austin—Steam traps.
Young Radiator Co.—Convectors.
Yale & Towne Manufacturing—Hoists and winches.
Youngstown Welding & Engineering—Copper-nickel alloy tubing.