

Preparing for Pushbutton War—

Gruelling Tests for New Planes Are Vital Part of Navy's Plan

Naval Pilots Simulate Carrier Takeoffs, Landings in Assembling Tactical Data

They may be new planes—but the Navy doesn't grab all it can get. Instead it orders two or three, tests them from every aspect, and only then orders them in quantity, modified by Navy findings. Max B. Cook, Scripps-Howard aviation editor, describes the process today in the last of his articles on Navy preparedness for the war which might come.

By MAX B. COOK, Scripps-Howard Aviation Editor

NAVAL AIR TEST CENTER, PATUXENT RIVER, Md. Apr. 10.—At this isolated 6800-acre base at the mouth of the Patuxent River, the Navy is proving, testing and evaluating everything it has that flies or is airborne.

It is a vital part of the Navy's plan to assure itself that every bit of equipment that would be used in a war that might come is the latest, best and most efficient tactically that can be produced.

It is the \$50,000,000 Naval Air Test Center—and it means just that.

This project answers why Navy has only two or three of several types of new aircraft.

When its test pilots, engineers, electronics experts and others finish with a war plane, the manufacturer usually has several scores or more specific modifications to make before production contracts are signed.

As an example, two of the latest fighters recently reached this center.

Fly 24 Hours a Day

One was immediately turned over to the Service Test Division. Its crack pilots began flying it 24 hours a day, simulating all missions and maneuvers performed in combat. Bombing, gunnery, catapult takeoffs and carrier landings were included.

It is estimated that the normal life of a carrier-type fighter is 450 hours. In actual operation, this is spread over a year. The Test Division cuts this to possibly three months on some planes.

The pilots then report how the fighter stood it; how its electronic devices, armament, landing gear, engine, instruments, controls and other equipment worked.

Test Equipment

The second fighter was turned over to the Flight Test Division. It was loaded with all sorts of testing equipment aimed to tell the story of the plane's flying characteristics.

While the first plane's endurance was tested, the second plane went through innumerable tests, including control and stability characteristics, performance, fuel consumption, engine cooling and others.

Meantime, the Electronics Test Division assays the workability of the plane's electronic and electrical equipment. And the Armament Test Division checks, tests and reports on the quality of its guns and cannon. But it is still far from being "through the wringer."

Given Tactical Test

Up comes the Tactical Test Division, which has to perform tactical air test (best possible and most efficient use in specific types of military operations).

How can this fighter best be utilized in action to accomplish the greatest results in fighting the enemy? That is the question. This division gets the answer after testing the plane out in projects assigned by the Bureau of Aeronautics.

The results of these combined tests should make the taxpayer happy. Hundreds of thousands of dollars are saved through finding weaknesses in construction and equipment which might have been found only—and fatally—in combat.

More is saved in being able to inform the manufacturer of modifications that must be made before

everywhere, in all altitudes, in heavy rainstorms, and could find none. We invited ice to send us down. A KLM (Royal Dutch Airline) pilot notified us that he had run into much ice off Nova Scotia. Up we went and couldn't find a trace.

"Finally, almost out of gas, we had to land in New England. At 2500 feet, as we were coming down, we took on ice. But we couldn't stick around to introduce ourselves."

Icing Not Too Serious

Later, some ice was found at Spartanburg, S. C.; but Cmdr. Martin and crew, at last reports, still are trying to find some real icing conditions.

Cmdr. Martin today voiced the thought that the icing bugaboo which has canceled out scores of regular airline flights every winter is not that serious at all.

"I do not want to say that icing conditions never develop," he added, "for they do. But I do say that, on our findings, icing is not found as extensively as we have been led to believe. It has been found that, even where ideal icing conditions are present, icing does not always exist."

Aid Commercial Aviation

Cmdr. Martin's findings—and other developments here which might aid commercial aviation—are made available to the airlines as well as to the military. Icing reports aid the manufacturer in planning what type of deicers to use.

With super high speeds in use, electronics have become one of the most vital phases of aerial combat, and Navy plans take this into consideration.

Here at Patuxent, some startling new developments have extended the scope of aerial fighting generally.

In addition, a new system of radio communications allows plane-to-plane, plane-to-carrier communication on many frequencies with no interference. It might best be described as a phone-dial system for it is just that easy for pilot control to utilize it. The pilot dials and gets his radio connection.

Cmdr. C. M. Greene, USN, head of the Electronics Division, also has assisted in the development and testing of a tiny airborne teletype with standard typewriter keys but less than one-third the size and weight of a typewriter.

Just as teletypes operate in today's offices, sending and receiving messages over telephone wire from tape, this airborne teletype sends the messages out through the air.

Test Pilot School

An airman, having pounded out a question, simply flips a switch and goes about his business. The reply comes in on a small tape and can be read at leisure. A test proved its efficiency between Patuxent and San Juan, 2000 miles away.

Something new has been added at this Naval Air Test Center—an innovation which may spread to other services. It is a new Test Pilot School, where twilight Navy pilots are thoroughly instructed and trained in test-pilot work.

The best pilots available now are attending six-month courses. They are thoroughly indoctrinated in theory and spend at least three months flying and reporting findings to add the practical touch.

Flying Boats Tested

This Naval Air Test Center has a shore line extending nine miles along Patuxent River and Chesapeake Bay. Every type of flying boat, including the huge Martin Mars, is tested here.

The Navy knows when it finishes an aircraft test that it has the latest, best and most efficient plane of its kind that can be obtained, equipped with the best armament and electronic devices. When it is ordered into production, it is not on the obsolescent list.

Shrine 6 Sets Installation Date



Emma Leppert Arch Everett

Archie J. Everett will be installed as watchman of the shrines and Emma Leppert as worthy high priestess of the Indianapolis Shrine No. 6 at ceremonies to be held at 8 p. m. Apr. 17 in the Claypool Hotel.

Others to be installed are: Noble prophetess, Edna Hollowell; associate watchman of shrines, Harry Goodpasture; worthy scribe, Allen Buchanan; worthy treasurer, Lucille Sweet; worthy chaplain, Pansy Wiles; worthy shepherdess, Minnie Crum; worthy guide, Gladys E. Clark; worthy herald, Rita Potts; first wise man, Mark H. Wiler; second wise man, Doris Purdy; third hand made, Esther Dunham; third hand made, Violet Rose; organist, Eva Morgan; worthy guardian, Ruth Riley; worthy guard, Nora Fiegel.

H. E. Richardson Dies at Home

Services for Herbert E. Richardson, who died today in his home at 3060 Ruckel St., will be held in the Flanner & Buchanan Mortuary but the time has not been set yet. He was 56.

A native of Richmond, Va., Mr. Richardson lived here 21 years and was employed by the Indianapolis Railways 20 years.

Survivors are his wife, Mrs. Theima Ann Richardson; a son, William F. Richardson, Indianapolis; his parents, Mr. and Mrs. H. E. Richardson, Richmond, Va.; and a brother, Earl A. Richardson, Norfolk, Va.

Smith to Take New Post in Ohio

Robert E. Smith will assume his duties Thursday as district manager of the new Indianapolis sales office of the National Litho Forms Co., Cleveland, O.

His office will be in the Security Trust Bldg. The company has been represented here by the Acme Forms Co. and manufacturing business forms.

Mr. Smith has been connected with the firm's home office.

ARRANGE LIKE SHINGLES

A butterfly's wings may be made up of more than a million tiny scales, arranged like the shingles on a roof.

Relieve Constipation Pleasantly!

Say "goodbye" to harsh, upsetting laxatives!

Next time you or your children need relief, take Ex-Lax—the pleasant, easy-acting laxative that many doctors use in their practice.

You can depend on Ex-Lax for gentle and thorough relief. It is biologically tested to assure effective action. Ex-Lax really tastes good—just like delicious chocolate.

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French Statesman

HORIZONTAL
1. Pictured
2. French finance minister
3. Capital of his country
4. Unenclosed
5. Encountered
6. End walls
7. Sack
8. Cereals
9. Employed
10. Facts
11. Skull skin
12. Russian union
13. Singing voice
14. Web-footed birds
15. Georgia (ab.)
16. Ballots
17. Gives out
18. Wrong
19. Forgive
20. Dispatched
21. Simpleton
22. Venture
23. Finish
24. Scorched
25. Jewel
26. Calm
27. Models
28. Scolds
29. Oceans

VERTICAL
1. Palm stem
2. Comparative suffix
3. Dress stone
4. Jacob's brother (Bib.)
5. Burrowing mammal
6. Imitated
7. Agent
8. Half an em
9. Refund
10. Tranquility
11. Fruits
12. Urn
13. Greatest
14. Bachelor of Science (ab.)
15. High wind
16. Most belated
17. Fancied
18. Urges
19. Earthwork
20. Urn
21. Inflammable
22. Reflections
23. Wearies
24. Stalk
25. Amerces
26. Units
27. Giant king of Bashan
28. Permits
29. Place
30. Color
31. Sun god
32. Parent

AYRES' DOWNSTAIRS STORE

Shop Early 5 Days a Week...

28th Birthday Sale

Shop Early Tomorrow

FAMOUS NAME BRANDS! IRREGULARS AND CLOSEOUTS... REDUCED!

You'll SAVE On These Grand Items!

- Famous Name Slips** \$2.88
Irregulars of a brand you'll recognize. Plenty of white in the group. Sizes 32 to 40.
- Famous Name Pajamas** \$4.88
Irregulars of rayon crepe pajamas from a famous maker. Tailored style, sizes 32 to 40.
- Women's Better Gowns** \$3.88
Rayon crepe and rayon satin gowns... tailored and lace trimmed in the group. Sizes 32 to 38.
- "Fruit-of-the-Loom" Slips** \$2.49
Rayon satin 3-length slips in short, medium and long lengths. Sizes 32 to 44 in the group.
- Greatly Reduced Petticoats** \$2.00
A group of better petticoats to wear under all your full skirts. Small, medium and large sizes.
- Women's Rayon French Crepe Slips** \$1.88
Beautiful, long wearing slips, many with lace trim. Sizes 32 to 42 in the group.
- Women's Cotton Crepe Gowns** \$2.00 to \$2.25
Famous "Fruit of the Loom" cotton crepe gowns at a special sale price.

3-Length Full-Fashioned NYLONS 79c Pr.

Famous name nylons, slight irregulars, in 3 lengths for your perfect fit. Beautifully sheer 45 gauge, 30 denier. Short (8 1/2 to 10), Medium (8 1/2 to 10 1/2) and Long (9 1/2 to 11).

BIRTHDAY SPECIAL! 16-RIB UMBRELLAS \$2.98 Ea.

Sturdy Gay Plaid Plains

Could you imagine a more stunning rayon umbrella than this at such a marvelously low sale price? Hurry to AYRES' Downstairs Store for your specially purchased 16-rib umbrella! Choose from plaids and plain colors with assorted plastic handles. They're bargains at \$2.98!

ACCESSORIES—Downstairs at AYRES'

NEW, NEW COFFEE!

IT'S THE IMPROVED CHASE & SANBORN...TASTE IT TODAY!

You'll call this glorious new Chase & Sanborn the "finest coffee money can buy!" Vacuum-packed! Get a pound today!



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Roman Cleanser is the favorite washing aid of over a million housewives. It makes dingy clothes snowy-white; removes fruit stains, beverage stains and many other stains.

Simple directions for removing various stains and for disinfecting in kitchen, bathroom and laundry are on Roman Cleanser label. Careful mothers use it freely every day.

MONDAY. Local Deaths Retired E Of Railro

Michael Funeral V

Services for former employe vania Railroad & yesterday at his Ave., will be he Wednesday at 2 funeral home an Our Lady of Bural will be tary. He was 74. Mr. Fox beg career as a mo for the Louisia and was transp portation depart He became a and later servec helper, engineer road foreman Nov. 30, 1943.

Born in He was born live in Jefferson here 23 year Mr. Fox was Association of Employees, Our Catholic Church Columbus.

Surviving are two daughters, Irlan and Mrs. both of Indian Charles and Mr. O.; Elmer, Wes Roy; eight grand great-grandchild

Mrs. Fern

Services for burg who died home at 2100 I were to be he today in the F an Mortuary Crown Hill, Sh

lifelong re apolis, she was verity Park C Survivors in Carl and How daughter, Mrs. of Roachdale; Thomas Miller, and Russell M sister, Mrs. Elz lywood, Cal., children.

TUESDAY

BAKED YOUNG EN...WHI...Half of serving.

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Schill

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Let Your N be an I

International 342 E.

Lemon Checks and Ar

If you suffer fr neuritis pain, h home recipe that a package of R supply, today, aid the juic of trouble all 3 tablespoons within 48 hour splendid result do not quickl better, return the will get you soe RU-EX is sol nerve-pain qu New used—proof

ARE be period which m HIGH-STR

Are you female fun ances which pain, feel a try Lydi Compound In a recce restlessly get some s Pinkham's for call a stand a woman's Lydia