
The requirements for these missions were brought to the Proving Ground Command. All factors were considered and simulated combat missions were scheduled

As nearly as possible, these flights were flown in the United States in the same manner as they would be later in China. Terrain over the route to and from the target was considered; during the flights the gunners were alerted and constantly practiced tracking with the central fire control system; in the target area, ammunition was fired to simulate defense against attack by fighters; and at the simulated-target area, the bomb load was dropped and retirement made at high speed, using evasive tactics. A number of these flights were made and the data secured was sent directly to the theater of operations. Recommendations for airplane changes were made as the flights progressed and were incorporated into planes then in production.

The data available on high gross weight operation at the time was also limited. After operation of the airplane at gross weights beginning at 100,000 pounds, a recommendation was ultimately made to limit the gross weight at take-off to 135,000 pounds for operational flying—a figure far above the original design gross weight. Data resulting from these tests concerning minimum air-drome requirements was relayed to the construction agencies in the theater. After it was conclusively proved that one airplane could complete a given flight, the same flight was attempted with a formation of three airplanes. By application of experience gained on previous single aircraft flights, this procedure proved successful. Here again, greatly needed information was given to the combat theater, and Proving Ground Command's data on formation flying characteristics and fuel consumption was used on the first daylight mission to Japan.

Further Development of the ATC

Our Air Transport Command has pioneered in intercontinental transportation, and the aid of the commercial airlines in this work, particularly in its earlier phases, has been acknowledged with appreciation many times. There is no substitute for the day-to-day experience and operational "know-how" which is gained by large scale operations.

It can now be stated that the Air Transport Command has delivered a total of 40,000 planes overseas up to 1 January 1945. In 1942 it was flying 4,800,000 miles a month in ferrying operations, by 1943 the rate was 12,500,000 a month, and in 1944 through November it was 21,872,000 miles a month. ATC flew 28,000,000 miles a month in transport operations in 1944, or 340,000,000 miles for the year. Totalling ferrying and transport operations, the ATC flies about 51,000,000 miles a month, or approximately 70 times around the world at the equator each 24 hours.

In 1944 some 560,000 tons of high priority passengers, cargo, and mail were carried by ATC and most of 1,200,000 passengers flew over foreign routes. Some 80,000,000 pounds of mail, or more than 3,500,000,000 letters were included in this total.

The ATC network of routes now totals 161,000 miles of which 118,900 is beyond the continental United States. A plane is crossing the Atlantic every 13 minutes, carrying whole blood for the wounded, along with vital personnel and cargo, and bringing back casualties. In 1944 the ATC carried an estimated 130,000 patients, from the Ground, Service, Air Forces, Navy, and Allies.

Thousands of pounds of military cargo are flown by ATC over

the Hump from India to China each month. During one 24-hour period some 2,500,000 pounds of freight were flown, or one flight every 2 1/2 minutes. From foreign countries the planes have brought back vital war materials for domestic production such as tungsten for armor, shells, and filaments; mercury for detonators; tin: industrial diamonds; mica, and many other cargoes. The above are regular cargoes.

Here are some emergency ones: In January 1944 the Navy required additional engine parts on short notice for landing craft in the Pacific. Within 24 hours the ATC flew 5 tons of the parts to Hawaii. In May 1944 the ATC diverted 11 planes to carry an emergency cargo of 55,000 pounds of mine-cutting equipment to the United Kingdom for use on D-Day. In June 1944 the WPB said there was only enough of a certain critical material on hand to keep radio-radar production going for 2 weeks. The ATC diverted three C-46s from the Central African Division to lift 23,000 pounds of the material in India, and the first lots reached Miami 4 days later. As fast as they could be manufactured at Edgewood Arsenal, Air Transport Command rushed mortar propellant charges to Paris to help check the German breakthrough in December-January. Seventy thousand pounds of this vital cargo was delivered in the European theater 2 days after it left the factory.

Civilians in the AAF

The AAF is greatly indebted to its 422,000 civilians, who have made many contributions to the war effort. In the past 15 months, 43,830 suggestions to save time, labor, and material were submitted by AAF personnel, mostly by its civilians. More than 10 percent were adopted, with \$170,000 paid for them. It is estimated that they have resulted in annual monetary savings of \$12,000,000.

Sixty-eight AAF civilians have been awarded the emblem of Meritorious Civilian Service and 21 the emblem for Exceptional Civilian Service. One civilian technician invented and licensed to the Government without royalty the sliding bomb bay doors with which B-24 Liberators and Navy PB4Y's are equipped. Two other civilians working as a team invented a propeller straightening machine with which more than 25,000 propellers have been repaired in all theaters of war at an estimated saving to the AAF of \$1,300,000. While these contributions are perhaps more dramatic than the daily performance of the average AAF civilian, they typify the earnest effort of all AAF civilian employees.

At this point, it might be added that the excellent records of civilian employees in the aircraft factories are so well recorded in the newspapers that they require no further commendation here.

New Planes

It is the policy of the AAF not to announce any new planes until they have been put to combat. However, since mention in the newspapers has been made of the B-35 B-36, and B-42, it seems right to announce that these are bombers which we expect to be more powerful and capable than those now in operation.

Developments in Aviation Medicine

The contribution of medical service to tactical success is not only proper care for the sick and wounded, but also includes measures to protect and improve the efficiency of combat airmen and to prevent casualties from occurring.