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THIS IS UNEVALUATED INFORMATION

SOURCE Die Zeit; Inter-Avia.

USSR AIR POWER ESTIMATED

Two divergent estimates of Soviet air power appeared recently in foreign publications, one in the Hamburg newspaper, Die Zeit, on 2 March 1950, and the other in the November 1949 issue of the Swiss periodical, Inter-Avia. The former article, by Nikolaus Eck, is summarized below, while the more significant statistics from the latter are included for purposes of comparison.

The Soviet Air Force, although numerically strong in World War II, was backward in technical and navigational development. At the end of the war, the Soviet high command, therefore, set up five projects for the equipment and development of the Air Force. These were (1) development of faster fighters and bombers and their conversion to jet and rocket propulsion; (2) development of new types of aircraft; (3) production of modern radio and electrical equipment for aircraft, airfields, and air defense; (4) requisite reorganization and expansion of the entire aircraft industry and enterprises which supply it; and (5) revision of flight and technical radio training for air and ground personnel. The most decisive measure, however, was the appointment of General-polkovnik Shtemenko as chief of staff of all three branches of the Armed Forces.

In November 1948, Shtemenko, a specialist in modern warfare, began to coordinate and modernize the operational and technical plans of the three branches of the Armed Forces. He set up a Special Bureau for the Study of Modern Warfare consisting of an elite staff of about 100 officers. He extended the scope of the Ministry of Aviation Industry to such an extent that it now has immediate influence over all industrial enterprises producing air frames, engines, and all types of accessories. This ministry is headed by Air Force General Khrunichev, a very active and powerful man.

Die Zeit's estimate of Soviet air power, as of the beginning of 1950 (left column), is compared below with Inter-Avia's estimate for mid-1949 (right column).

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I. NUMERICAL STRENGTH

600,000 men (in Eastern and
and Western air fleets)

550,000 men

6,400 first-line fighters,
including 50 percent jets and a
smaller percentage of rocket air-
craft25,000 first-line operational
combat aircraft, including 10,000
jet fighters, over 2,000 long-range
bombers, and 18,000 piston-engine
wartime aircraft in second-line re-
serve

4,800 second-line fighters

II. TYPES OF AIRCRAFT

A. Piston-Engine Fighters

Yak-9 -- 2,400 first-line
fighters; resemble German Me-
109; top speed 600 km/hrYak-9, Yak-11 -- in small num-
bersLa-7, La-9 -- 1,100 first-
line fighters; resemble German
FW-190La-9, La-11 -- in large num-
bers; La-11 is probably latest pis-
ton fighter to be adopted.These three types are
proved but obsolete.

B. Jet Fighters

2,500 gas turbine jet
fightersMig-9 twin-engine type consti-
tutes bulk of jet fighter strength;
now supplanted by considerable num-
bers of Yak-21 rocket fighters.Yak-15, Mig-9 -- top speed
1,000 km/hr; developed from Ger-
man Turbojaeger; both have proved
successful.Yak-15 -- built in large num-
bers; still is first-line aircraft,
but used largely for trainingYak-17 -- 600 jet fighters;
unsuccessful: crash frequently,
unable to glide, and tend to crash
when landing speed drops below 200
km/hr; four crashed in Dec 1949
near Zerbst airfield.Yak-17 has been issued to some
squadrons.La-15 -- twin engines; will
soon be issued to squadrons

C. Rocket Fighters

R-5 -- 100 rocket fighters,
top speed 1,000 km/hr; patterned
after German Me-263

Yak-21 [see above]

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D. Fighter Reserves

All older models, chiefly
Yak-9

E. Bombers

About 5,700 light bombers and
ground-attack aircraft, including
2,600 first-line and 3,100 second
line

First Line:

700 Tu-2 twin-engine bombers; re-
semble old German Do-19 in performance
and appearance

Pe-2 -- resemble earlier German
He-111; top speed 600 km/hr; bomb load
2,000 kilograms; radius of action 1,400
kilometers

Il-10 -- 900 single-engine ground-
attack aircraft; top speed 600-700
km/hr

Tu-4 -- 200 twin-engine jet bomb-
ers; top speed 800 km/hr

450 heavy four-engine bombers
of which less than 10 percent are
jets:

Tu-70 -- 420; top speed 500 km/hr;
bomb load 4,000 kilograms; radius of ac-
tion 5,000 kilometers; copied from Ameri-
can B-29

Ilr-1 -- 30 four-engine jet bomb-
ers; top speed 800 km/hr; radius of
action 6,000 kilometers; bomb load
4,000 kilograms

Experimental jet bombers:

Pe-16 -- four gas-turbine engines;
radius of action 7,000 kilometers;
bomb load 3,000 kilograms; developed
from German Ju-287

Il-24-X -- swept-back wings;
twin gas-turbine engines; top speed
1,300 km/hr; approaches performance
of most modern US and British
fighters; can be used either as
fighter or bomber and can carry atom
bomb; developed from DFS-8-346; has
been referred to as new Soviet super-
sonic fighter

Tu-2 twin-engine bombers are
in use in large numbers

Pe-2, Il-2, Yak-4 -- large num-
bers still in service

Yer-2 -- second-line attack
aircraft

Il-10 -- mainstay of ground-
attack forces

New twin-engine jet attack
bomber developed by Tupolev

Tu-70 -- increasing numbers of
these four-engine bombers will be
supplied to the Long-Range Air Force;
copied from Super-Fortress.

Il-16 -- four-engine jet bomber
about to reach operational stage

Bomber version of Il-18 trans-
port reported, but not yet issued
to squadrons

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Bombers (Contd.)

Il-12 -- widely used as para-
troop and cargo transports

Tu-70, Pe-8 -- also used as
transports

Trainers: two-seated version
of La-7 piston-engine fighter, Yak-
20 advanced, Yak-18 basic, Ut-2
primary trainers



III. ORGANIZATION

Four air fleets:

Western and Eastern -- subor-
dinate to Army high command

Arctic Air Fleet -- subordinate
to Main Administration of Northern
Sea Route

Strategic Long-Range Bomber
Fleet -- directly subordinate to
Armed Forces high command

Western and Eastern air fleets,
with total of 600,000 men, are
divided into air divisions of two
to four regiments each -- there are
180 divisions made up of 500 regi-
ments; each regiment has 40 aircraft
including trainers and may be composed
entirely of ground attack planes,
fighters, bombers, reconnaissance
planes, or a mixture of these

Air signal troops are a part of
the air regiments, while antiaircraft
is subordinate to artillery and tank
troops of the Army.

15 air armies with somewhat
more than 1,000 operational air-
craft each; account for over 60
percent of air strength; subor-
dinate to ground armies or army-
group commanders

One division of Long-Range
Bomber Force trained especially
for Arctic regions; there are a
number of large bomber and fighter
bases and 81 air weather observa-
tion posts in the Arctic

In addition to 15 air armies,
there is a Long-Range Bomber Force
and Fighter Arm of Air Defense
Force

15 air armies are made up of
about 350 air regiments with about
40 aircraft each.

Airborne strength (Jan 1949):

3,000 transport aircraft in
service 150,000 trained parachutists

The Western Air Fleet is made up of five air groups located in the Ukraine,
the Caucasus, central USSR, Belorussia, and in the north (the Baltic area and
Finland). Air Force units stationed in Poland, Eastern Germany, and Czecho-
slovakia belong to the forward group of Belorussian group. Thus, the Air Force
units are widely and loosely dispersed. They are concentrated around the

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most important industrial, government, and transport centers. The chief armament centers are protected by the newest Yak-17 jet fighters and a few R-5 rocket fighters.

Even the military air fields, with few exceptions, are not modern installations. There are only a few concrete runways, and the fields lack modern radar equipment as well as necessary radio installations. There is also a great scarcity of gasoline trucks, fire-fighting equipment, and snow plows.

The Soviet Air Force also suffers from lack of technically trained ground personnel. It is significant that at most only 11 men are available for maintenance of each plane, although the usual number is 20 men per aircraft. An air operation such as the Berlin airlift would at present be impossible for the Soviet Air Force in spite of its significant transport capacity. Such an attempt by the Soviets would without doubt result in a pile of wreckage in the middle of the home airfields within half an hour.

The Eastern Air Fleet is composed of two large groups, which are distributed throughout western, central, and eastern Siberia and in Central Asia, and which have the mission of protecting the most important industrial, and government centers. An especially heavy concentration of modern fighters is to be expected at the chief centers of the Soviet atomic industry: Atomgrad I and II, near the southwest border of Siberia, the southeast border of European Russia, and the northwest border of Central Asia.

The Arctic Air Fleet's mission is very important. It contributes to navigation science and navigation training in the Arctic, helps to determine the shortest air distance over the North Pole toward the American continent, and helps to defend the great Arctic sea route, naval bases, and new economic and government centers in the Arctic. Almost all torpedo aircraft are subordinate to the Main Administration of the Northern Sea Route and are within its area of command, except for about 100 aircraft on the Black Sea.

The present strength of the Red Air Force in Eastern Germany is usually very highly overrated. There are a total of 860 fighters available including 520 Yak-9s, 180 La-1s and La-9s and only 160 jet fighters. Of the latter, 40 are Yak-15s, 70 Yak-17s, and 50 Mig-9s. The Soviet Air Force has in Soviet Zone Germany a total of 200 bombers, all piston-driven twin-engine Tu-2s and Pe-2s. Although they are entirely obsolete, the Soviet Air Force still uses 100 old biplane fighters for training purposes. The air fields in the Soviet Zone are also in poor condition since the Soviets, after taking over such installations from the Germans, either dismantled them prematurely or employed them as quarters for armored troops. A large-scale construction program was begun in early 1949 by the Soviet-German construction organization, KETSCH, and should normally be concluded by early 1952. At present there are four air fields for jet fighters: at Zerbst and Koethen in Anhalt, where existing runways were lengthened, and at Rechlin and at Parchim in Mecklenburg, which were newly constructed. The completion of six more fields, at Hagenow, Waren, and Neubrandenburg in Mecklenburg, at Staken near Berlin, and at Kochstedt and Dessau in Anhalt, is planned in 1950. Only about 15 percent of the airfields in the Soviet Zone have radar equipment.

Since air fields in Poland and Czechoslovakia, as well as those in the Soviet Zone of Germany, belong to the forward group of the Belorussia air group, they have a rather large complement of aircraft. On the other hand, the number of aircraft maintained in the Balkans is very low and serves only a connecting link.

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The best defense of the USSR against air attack is undoubtedly the tremendous expanse of its area. There is in addition, of course, very good Soviet anti-aircraft artillery. However, its value in modern air warfare should not be exaggerated since its effect is somewhat dependent upon the necessity for massing it in tremendous concentrations and limited by the extreme altitudes at which modern bombers are able to fly. Even such modern anti-aircraft weapons as the German Wasserfall, which was developed further by the Soviets, and which automatically follows the flying target, can be effective only under certain conditions. The value of radar in air defense was recognized late in World War II by both the Soviets and Germans. Therefore, in comparison with western developments, the radar air-warning system, as well as the radar installations on airfields, are still highly inadequate. In Austria, Czechoslovakia, Poland, and Soviet Zone Germany, only a few airfields have radar installations. The Soviet radar net begins 60 kilometers east of Brest-Litovsk and extends in a great crescent from Liyepaya on the Baltic as far as Astrakhan' on the Caspian Sea; a branch of the net includes the Black Sea coasts and the Caucasus. The equipment of fighters and ground-attack planes, as well as bombers and transports with radar apparatus, is still relatively below western standards. As a consequence, navigation developments (blind flying, landing, and take-off by instruments) are adversely affected. Even such modern planes as the Yak-17, the R-5, and Tu-4 light bombers have not been fully equipped as yet.

Navigation and radio-engineering training of flight and ground personnel, in spite of much progress, remains inferior to that of the western powers. The training period of pilots, for example, is only 1 1/4 years, while German Air Force pilot training lasted 2 years. The 9 months' training received by radio engineers of the Red Air Force in the air and on the ground is also far less than that afforded such personnel in western nations.

A great deal is being done, however, for future airmen. The Chkalov Central Air Club, under General-polkovnik of Aviation Gromov, is a part of Osoaviakhim DOSAV. It trained 100,000 members as aircraft and glider pilots, and as parachutists and model plane builders during the year preceding the war. In addition to this pre-military and flight training, the Air Force itself has four advanced flying schools and institutes and numerous flying schools.

The Soviet aircraft industry was greatly strengthened as a result of the dismantling of German East Zone plants of the aircraft engine, frame, and equipment industries, as well as from such imports from the west as the eighty 1947 - 1948 model Rolls-Royce Nene gas-turbine engines. The materiel of the Berlin-Adlershof Aircraft Experimental Station, which fell intact into Soviet hands, was also a considerable contribution. Such important enterprises as Junkers-Dessau and Telefunken-Erfurt were removed and reconstructed in Kuybyshev and Voronezh.

Die Zeit's estimate of current Soviet aircraft production capabilities (left column) is compared below with Inter Avia's estimate for 1949 (right column).

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I. AIR FRAME AND ENGINE PRODUCTION

Main part of aircraft industry is located in Volga basin; certain plants with proving facilities were moved underground in Siberia:

70 air-frame plants

50 aircraft-engine plants

Larger number of accessories plants

Number of aircraft-industry personnel may well approach one million

Main part of air-frame industry is in European USSR, chiefly in Volga valley:

At least 25 major air-frame plants with 350,000 employees

12 major aircraft-engine plants with 90,000 workers

II. PRESENT CAPABILITIES

Top production attainable at present:

7,000 fighters

4,000 light and ground-attack bombers

1,000 heavy bombers

4,000 transport and training planes

1949 production estimate:

25,000 aircraft including -

5,000 jet fighters,

2,500 conventional fighters

5,000 light bombers

3,000 heavy bombers

2,500 transports

7,000 utility aircraft, trainers, sports aircraft, and gliders

The high degree of standardization in the Soviet aircraft industry, is noteworthy in comparison with the British and US industries. Advantages in the Soviet system are the possibilities for significant mass production and the ease of exchanging all parts. But the disadvantages are just as obvious: a certain inflexibility, limitation of progress, and imitation of western technical developments. Measured in numbers alone, the Soviet Air Force is the equal of the US, but in striking power the US is far superior. The number of Soviet jet fighters approaches the estimated strength of the British and US air forces in this category. The number of Soviet jet bombers, however, is very small. Five years ago, at the end of the war, the Tu-70 heavy bomber was considered outmoded, whereas in modern atomic air warfare, a large fleet of atom bombers might well be decisive.

The Soviet Air Force at present constitutes no long-distance threat. It might best be employed defensively as well-balanced fighter interception and offensively with ground-attack and light bombers in support of ground troops.

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[Note: Current Soviet air power and aircraft production are never mentioned in the available Soviet press. The most recent aircraft production statistics available from overt sources are those for the war years. A typical statement, taken from an article by Marshal of Aviation F. A. Astakhov in Slayvane, No 8, August 1947, revealed that "during the last 3 years of the war, the Soviet aviation industry produced about 40,000 planes annually."]]

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