

ANTONOV AN-225 MRIYA HOLDS THE TITLE OF THE LARGEST CARGO PLANE EVER BUILT

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ABSTRACT

Six ZMKB Progress Lotarev D-18T turboprop jet engines formed the powerplant of this colossus, giving the AN-225 Mriya the ability to reach a maximum speed of 528mph at an altitude of 36,000ft.

KEYWORD:- Aircraft, Wings, Turboprop.

INTRODUCTION

This colossal aircraft was designed by the Antonov Design Bureau in Ukraine and first flew in 1988. It had a maximum takeoff weight of **640 tons** and could carry an unparalleled payload of up to **250,000 kg (551,150 lbs)**. Antonov AN-225 Mriya is (was) the Biggest Airplane in the world. Airbus A380 is the biggest passenger and

commercial airplane in the world and the only double-decker aircraft. It can carry more than 800 passengers. The Antonov An-225 Mriya (Ukrainian: Антонов Ан-225 Мрія, lit. 'dream' or 'inspiration'; NATO reporting name: Cossack) was a strategic airlift cargo aircraft designed and produced by the Antonov Design Bureau in the Soviet Union.



Figure 1: Antonov.

It was originally developed during the 1980s as an enlarged derivative of the Antonov An-124 airlifter for transporting Buran spacecraft. On 21 December 1988, the An-225 performed its maiden flight; only one aircraft was ever completed, although a second airframe with a slightly different configuration was partially built. After

a brief period of use in the Soviet space programme, the aircraft was mothballed during the early 1990s. Towards the turn of the century, it was decided to refurbish the An-225 and reintroduce it for commercial operations, carrying oversized payloads for the operator Antonov Airlines.



Figure 2: Antonov take off

The An-148 has a maximum range of 2,100–4,400 km (1,100–2,400 nmi; 1,300–2,700 mi) and is able to carry 68–85 passengers, depending on the configuration. The Antonov An-158 is a stretched fuselage version of the aircraft, accommodating up to 100 passengers. Multiple

announcements were made regarding the potential completion of the second airframe, though its construction largely remained on hold due to a lack of funding. By 2009, it had reportedly been brought up to 60–70% completion.



Figure 3: Antonov landing.

Type: Outsize cargo freight aircraft; National origin: Soviet Union; Designer: Antonov; Built by: Antonov Serial Production Plant; Status Destroyed: 27 February 2022 (2 years ago); Primary user: Antonov Airlines; Number built: 1 Manufactured: 1985; First flight: 21 December 1988

It was designed and built throughout the 1980s and took its maiden flight on 21st December 1988. A second AN-225 began production in the late 1980s but, in 2009 when the aircraft had still not yet been completed, production was abandoned. The AN-225 was destroyed in February 2022. Ukrainian aircraft manufacturer Antonov Company has completed all urgent restoration work on the An-225 Mriya, the world's largest aircraft, and will resume it after the end of hostilities." Antonov An-225 Mriya: The Heavyweight Champion: Wingspan: 290 feet, Length: 276.0 feet, Maximum Takeoff Weight: 1.41 million lbs, Payload Capacity: 559,580 lbs (approx), Role/Type: Cargo Aircraft, Introduction of Service: 1988, Current Status: Destroyed (2022), Production Numbers: 1. Cost: 250 Million USD- 300 Million USD.

Antonov An-225 Mriya: The World's Largest Aircraft Was Destroyed in Failed Russian Raid. In the early stages of Russia's unprovoked invasion of Ukraine in February 2022, the Kremlin mounted an attack on the Antonov Airport in Hostomel, outside the Ukrainian capital of Kyiv. The Antonov AN-225 Mriya was the largest cargo aircraft in the world and was the only aircraft that featured six turbofan engines. Produced in the 1980's, Antonov's AN-225 'Mriya' was the world's largest aircraft before it was destroyed following a missile attack on Hostomel Airfield, near Kyiv, in February 2022. The company that designed and manufactured the aircraft, Antonov Design Bureau, is a Ukrainian company. Oleg Konstantinovich Antonov (Russian: Олег Константинович Антонов, Ukrainian: Олег Костянтинівич Антонов, romanized: Oleh Kostiantynovych Antonov; 7 February 1906 – 4 April 1984) was a Soviet aeroplane designer, and the founder of the Antonov Design Bureau in Kyiv, Ukraine, named in his honour.

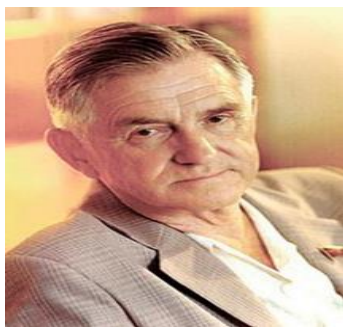


Figure 4: Antonov inventor.

The Antonov An-225 Мрія (Mriya—Dream in the Ukrainian language) took off from Kiev with the space shuttle Buran, enroute to the Paris Air Show. The total weight at takeoff was a 1,234,600 pounds (560,005 kilograms)—the greatest weight ever lifted by an aircraft. Six ZMKB Progress Lotarev D-18T turbofan jet

engines formed the powerplant of this colossus, giving the AN-225 Mriya the ability to reach a maximum speed of 528mph at an altitude of 36,000ft. The An-225 is powered by six Ivchenko Progress (Lotarev) D-18T turbofan engines producing 229,848 kilonewtons (51,672 pounds of thrust), each. The D-18T is a three-spool axial-flow high-bypass turbofan engine. The 15-stage compressor has a single-stage fan, 7 intermediate-pressure-, and 7 high-pressure stages).

Specification: Maximum speed: 850 km/h (530 mph, 460 kn), Cruise speed: 800 km/h (500 mph, 430 kn), Range: 15,400 km (9,600 mi, 8,300 nmi) with maximum fuel; range with 200 tonnes payload: 4,000 km (2,500 mi), Service ceiling: 11,000 m (36,000 ft), Wing loading: 662.9 kg/m² (135.8 lb/sq ft), Thrust/weight: 0.234.



Figure 5: Antonov inside flight.

The fuel consumption of all engines is about 18-22 tons (19.8 – 24.3 short tons) per hour of flight. After about 3.5 years of development, the final aircraft was finally introduced on December 1, 1988 at the Kiev-Gostomel Airport. Mriya carries a maximum fuel load of 300,000 kilograms (661,387 pounds, or 98,567 U.S. gallons, Jet

A-1), and has a practical range of 4,500 kilometers (2,796 miles). The An-225 Mriya can fly at a maximum speed of 850km/h. The cruise speed is 800km/h. The range of the aircraft varies between 4,000km and 15,400km. 551,150 lb [250000kg]

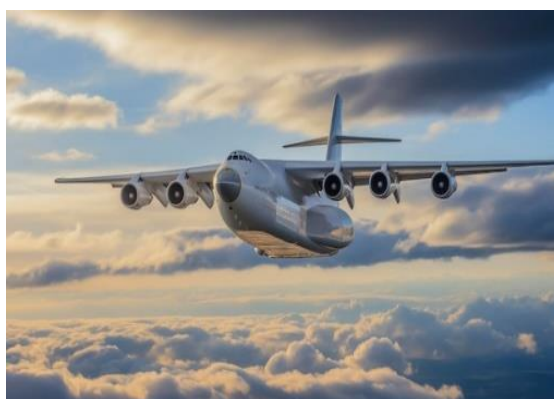


Figure 6: Antonov flying above clouds.

CONCLUSION

The ownership of Antonov changed to the country of Ukraine, and all assets were taken to Kyiv. It was modelled from the Antonov An-124 Ruslan. The

Antonov Serial Production Plant, formerly AVIANT (Ukrainian: ABIAHT), is an aircraft manufacturing company in Kyiv, Ukraine, the serial manufacturing division of the Antonov. Largest flight: This behemoth

stands as the undisputed champion, sadly destroyed during the conflict in Ukraine. With a staggering maximum takeoff weight of 640 tonnes (1,400,000 pounds) and a wingspan stretching 88.4 meters (290 feet), it truly lived up to its name, "Dream" in Ukrainian.

REFERENCE

1. https://en.wikipedia.org/wiki/Antonov_An-225_Mriya.