



An-38 assembly at Novosibirsk: feeders will flow where Sukhoi fighters were built

# Antonov ascending

**The An-38 marks the comeback of one of the oldest aircraft manufacturers in the CIS. Will it survive in the modern world?**

PAUL DUFFY/NOVOSIBIRSK

**A**S ONE of the major Soviet aviation design bureaux, and the only one based outside Russia, Antonov has developed two specialities in its just over 50 years of existence – cargo aircraft and regional airliners. Its latest model to be certificated is the An-38, a 27-passenger twin turboprop, which received its Russian approval in April.

Normally, Antonov's regional aircraft are built in Ukraine, but, when the An-38 programme began, the two Ukrainian production factories were busy. Kiev was making the An-32, still seen as having potential for export, and Kharkov continues to build the An-74. So the Chkalov Aircraft Production Factory in Novosibirsk (NAPO) was chosen to produce the new aircraft.

Work began in April 1989, when Antonov general designer Piotr Balabuev appointed Kmitri Kiva as chief designer of a project to stretch and update the 17-passenger An-28 to meet a need for a larger regional airliner. Although the An-38 bears a family resemblance to the An-28, the work involved so many alterations and improvements that the designers and the maker regard it as a totally new type.

As the Soviet Union fell apart, and Ukraine became autonomous, additional choices be-

came available to Kiva and his team. Because of delays in the design and manufacture of the intended engine, the OMKB TVD-20, when the AlliedSignal TPE331-14GR powerplant and Hartzell propeller, plus Western avionics and interiors, were offered, they were adopted.

In the early 1990s, military budgets were cut drastically in Russia and other CIS republics, and factories producing combat aircraft began to realise that lean times were ahead. NAPO was building the Su-24 – it had been building

Sukhoi designs almost exclusively since the early 1960s. Earlier, however, it had been one of the first builders of the An-2, and still maintained contact with Antonov. NAPO general director Aleksander Bobryslav approached the design bureau, and came away with the An-38.

Unusually for Soviet aviation, it was decided to build the prototype at the production factory.

The first prototype was completed early in 1994. On 24 June of that year, it had its first flight, with a crew of three, including a test engineer. The first pilot, Aleksei Khrustitski, described the flight as "normal, uneventful – no problems".

Funding shortages slowed the test programme, but few snags were encountered in certification trials. GosNII GA (the State Research Institute of Civil Aviation) chief test pilot Aleksander Akimenkov, describes the An-38 as "...very good at picking up momentum in manoeuvres. It has an excellent thrust-to-weight ratio, which will make it suitable for short airfields and mountainous regions."

Thus, although the aircraft is recommended for runways of 900m (3,000ft), its take-off run with full load is only 375m, and the An-38 reaches a cruising altitude of 13,000ft in just 12min. Cruise speed is about 200kt (370km/h).

The An-38 had its first public appearance during the *Flight International/Aviaexport* Conference in Moscow in April 1995 at Zhukovski aerodrome, to which the first prototype had been flown from Novosibirsk. The second was shown at the Paris air show in June this year.

The aircraft was certificated on 25 April this year to AP-25, the Soviet/Russian equivalent of US Federal Aviation Regulations (FAR) Part ▶



General director of NAPO, Aleksander Bobryslav, with the Minister of Transportation, Nikolai Tsak