RUSSIAN SURVIVOR

Tupolev is aiming its Tu-134 replacement, the Tu-334, at the Western market as well as its home market of Russia and the new CIS states.

Paul Duffy looks at the programme.

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Tupolev TU-334

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erhaps the most surprising thing
about the Tupolev Tu-334 is that
the project has survived Russia's
political and economic upheaval.
Design work on the Tu-334 — intended as a replacement for the Tu-134, of which there are more than 600 in service, including some 450 in Russia — began in 1989. Seven years was the accepted norm for a programme, from design stage to certification, during the Soviet era.
The first flight of the Tu-334 was scheduled originally for late 1992 but, because of the industry's enormous finan-cial problems, the Russian Government-funded project has been delayed. This is due in part to the Government making its promised contribution in the fourth quar-ter of each fiscal year and, with inflation running at perhaps 10% each week, the funds are of little value when they eventu-ally arrive. The first flight is now expected by December 1993.
The Tu-134 entered service in 1967 as a 66- to 78-seater, with a full-payload range of 2,000km (l,100nm). Designed at a time when the Soviet Government paid little attention to economics, the aircraft appeared inexpensive to buy because of artificially low prices. As a result, it has a service life of only 30,000h and a cruise fuel-burn of 3t/fhght hour.
The design team, headed by Igor Kalygin, was aware of the Tu-134's short-comings as it began work on the replace-ment. However, the high military content of the design bureau's work has enabled the team to access developments in mate-rials and avionics technology, including carbonfibre composites.
Kalygin began work by setting out parameters for the new short-haul passen-ger and cargo aircraft. These included operation from a 2,200m (7,200ft) run-way; a two-crew cockpit; a 102-passenger interior in a one-class layout with a seat pitch of 780mm; Category Ilia operations; noise levels to Stage 2 initially, with Stage 3 later; utilisation of up to 2,600h a year; and a fuel burn of 2t/cruise hour.

Kalygin aimed to use advanced light-weight materials as much as practicable, and claims to have achieved this on about 20% of the surface area, including wing mechanisms and tailplane, where glass-fibre is used, and air intakes and the rear of the engine, which feature noise-absorption materials.
The Tu-334 has a cabin width of 3.57m, allowing for a conventional six-abreast seating arrangement, and a 470mm-wide aisle. The first-class cabin offers two 1.37m rails of two seats with an aisle width of 730mm.

The aircraft also offers 2m-long over-
head lockers and oxygen masks as stan-
dard. The cabin overwing emergency exits
are omitted in the -100 model, but will be
a fixture in the -200 model.

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