Their late delivery may have delayed its first flight, but Soloviev's turbofans are performing well on the Tu-204

Tupolev Tu-204 beats fuel target

Flight tests of the Soviet
Union's Tupolev Tu-204
medium-haul airliner indicate
that it will be more fuel-efficient
than anticipated by several
percentage points.
In an interview with Flight,
Tupolev deputy chief commer-
cial aircraft designer Lev
Lanovski says that fuel-burn of
the 214-seater's two Soloviev
PS-90A high-bypass turbofans
is between 3 and 4 per cent
lower than estimated, at around
0-58kg/kg-thrust/hr.

This bonus extends the type's
range, currently specified in
Tupolev sales literature at
2,500km with a 20-tonne
payload, or 4,600km with a
13-tonne payload.
Lanovski says that Tu-204
flutter and stability and control
tests were "completely satis-
factory," and that performance
and handling is "excellent."
The Tu-204 is the Soviet
Union's second fly-by-wire
airliner after the Ilyushin
11-96-300, which flew a few
months ahead of the Tupolev
airliner last year, but is the first
without mechanical backup
flight control systems, accord-

ing to Lanovski. Instead, it
features analogue electrical
backups to the three digital fly-
by-wire channels.
The fly-by-wire system, used
from the first flight, has given
no problems in coping with the
relaxed levels of longitudinal
stability generated in flight by
pumping fuel to the rear of the
aircraft, Lanovski adds.

A second aircraft is to join the
flight-test programme within
the next two months, and there
are to be two static-test aircraft.

Aeroflot is expected to
acquire between 500 arid 600
Tu-204s to replace early-model
Tu-154 airliners, though the
latest Tu-154M variant remains
in production and will continue
in service. Operating costs will
be "substantially" lower than
those of aircraft the Tu-204 will
replace, Lanovski says.
Tupolev is studying an
extended-range variant of the
Tu-204 capable of flying
6,800km with the same
passenger load, perhaps in
mixed seating layouts, and a
version with new and more fuel-
efficient turbofans with bypass
ratios of around 18:1.

Bar codes improve baggage security

by Ian Dormer in Amsterdam
Computerised bar coding for
airline passengers, hand
baggage, and hold baggage will
avoid the need to disembark
passengers to identify their
luggage and isolate a stray
unaccompanied item, claims
Donprint Airline System.
Two European airlines are
studying Donprint's system to
put individual bar codes on
airline passenger tickets and
bags to increase security and
improve efficiency.
Scotland-based Donprint
claims to offer the first fully
integrated airline ticket and
baggage identification system.
Passengers, hand baggage, and
hold baggage can be computer
tracked throughout the entire
embarkation and disembarka-
tion process.
A passenger's ticket has a
unique bar code, which stays
with him throughout the jour-
ney, and which is on all of his
baggage. Running a laser scan-
ner across the bar code on
baggage before putting it into
the hold feeds information into
a computer, revealing where in
the hold the bag is, to whom it
belongs, and its destination.

Discrepancies between the
bags checked in, passengers
boarding, and baggage loaded
can be identified when the bar
code is scanned at each stage in
the process. If a discrepancy
occurs the computer can locate
the piece of luggage in the
aircraft's holds.

If an aircraft has been delayed
en route and a transit pas-
senger's baggage needs to be
speedily removed to make the
onward connection, the com-
puter can again locate the
pieces, according to Donprint

managing director Ray Kirk.
Most baggage losses occur with
transit passengers, he adds.
All tracking is in real time.
"You not only know where a
piece of luggage is, but when it
is in a particular place."
Donprint chairman Des
Donohoe believes that a trial
system will be working with an
airline within three months. He
claims that the system will pay
for itself within a year: a small
airline could buy the system for
about £300,000 and yet save up
to £1-5 million a year. The
system can be based on personal
computers or integrated into a
computer reservation system
such as Amadeus or Galileo.

Three major areas of saving
highlighted by Kirk are in lost
baggage, ticket fraud, and
advanced cash flow. The Inter-
national Air Transport Associ-
ation estimates that lost baggage
costs the industry about £800
million a year. A further £800
million is lost through ticket
fraud, which a hologram on the
Donprint tickets helps reduce.

The cost of delays in ticket
payments owing to slow
communication of ticket sales
and usage information is also
estimated at £80 million to £90
million a day. The computer-
ised system helps reduce this
figure, Donprint claims.
Donprint says that its system
is both cheaper to operate and
more effective than current
alternatives, including the
magnetic-strip technology
interesting some airlines.
Complete success of the
system requires airports and
airlines to work together, but
Kirk believes once the joint
benefits are realised, this will
not be a problem.

Bar codes progress from bean tins to baggage tags

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