TECHNICAL: AI R TRANSPOR T

Rolls-Royce/Snecma SST engine
A

joint survey agreement
covering a second-genera-
tion supersonic transport (SST)
has been signed between Rolls-
Royce and Snecma.
The two-year study will iden-
tify the market and lay the
foundations for detailed en-
quiries into possible technology.
The two companies are confident
that by putting themselves in
place now they can exploit the
engine need as it arises.
Rolls-Royce and Snecma will
be talking to potential cus-
tomers—airlines and airframe
manufacturers—including orga-
nisations from Japan and the
Soviet Union, both of whom
have plans for collaborative ven-
tures on SST programmes.
Rolls-Royce discussions with
the Soviet Union have so far been
in support of a proposed
Gulfstream/Sukhoi supersonic
business jet of up to 50 seats. The
company has also been working
closely with MITI of Japan
on a high-speed propulsion
programme.
The survey will decide ul-
timately the concept to be
adopted for an efficient SST
propulsion system. Engine
companies are conducting stud-
ies into a number of principles,
including the variable-cycle
engine (VCE) and the aft fan
engine.
The VCE would be designed to
operate as a turbofan for sub-
sonic operation and a turbojet in
supersonic mode, whereas the aft
fan engine would utilise a vari-
able expansion ratio across the
turbine giving both low and high
power and flow.
Rolls-Royce believes that the
cost of an SST project, whether
for a 50-seat business jet or a
four-engine long-range trans-
port, would preclude develop-
ment by any one counry and
that international collaboration
would probably exceed the Con-
corde two-country joint venture.
Both manufacturers are
conducting studies into VCE, but
Rolls-Royce says that a more fo-
cused development plan is not
advisable until the direction is
identified as either towards the
small business aircraft or the
long-range transport. •

Olympus: a descendant may be variable-cycle

PW125B deal

for Netherlands

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he Netherlands has been
chosen for the assembly and
testing of the Pratt & Whitney
PW125B turboprop engine, se-
lected for the Fokker 50.
Under a joint agreement be-
tween RMO-Werkspoor Services
and turbine overhaul and power
plant support (TOPPS), up to 70
engines a year will be assembled
starting early this year. The work
will take place at TOPPS' new
site in Tilburg, Netherlands
opened and fitted out at a total
cost of FI25 million ($12.8
million).
TOPPS was set up in 1988 as a
joint venture between KLM and
Turbine Support Europa. •

Soviets block funding for hydrogen-fuel engine I

n a further blow to the pros-
pects for a switch to ecologi-
cally friendly fuel, the Soviet
Government is denying funds to
engine and airframe designers
seeking to develop a liquefied-
gas-fuelled airliner.
Nikolai Kuznetsov, head of the
Kuznetsov bureau which devel-
oped the. NK-88 engines
powering the experimental
hydrogen-fuelled Tupolev
Tu-155, says Soviet bureaucrats
refuse to fund development of an
aircraft despite years of lobbying.
Kuznetsov's comments come

as West Germany's MBB admits
funding problems and delays in
its efforts to study the use of

hydrogen fuel in an Airbus air-
craft (Flight, 13-19 December).
Kuznetsov complains: "For all
these years we have been knock-
ing on various ministerial doors
trying to convince them that the
engine is needed not for our-
selves but for everyone. They
nod, agree with us, but still
refuse us funds. We have been
beating our heads against this
ministerial wall for years but it
remains solid."
He believes that Soviet bureau-
cratic inertia will give away the
Soviet lead in the technology and
that a Western firm will start
developing an aircraft within ten
years. "Then the Ministry of Civil

Aviation will start hastily invest-
ing large sums, rushing and
trying to catch up with whoever
does it first," Kuznetsov predicts.
The engine designer believes
that Soviet industry should start
by converting several Tu-154 air-
craft with the NK-88 hydrogen-
burning engines over the next
four years and then develop a
new aircraft and engine specifi-
cally for the new cryogenic fuel.
A dual-fuel engine is also needed
by Kuznetsov.
Talks between MBB and the
Soviets on co-operation have
been unsuccessful.
Hydrogen, a rocket propellant,
burns with little pollution. •

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he British Aerospace Airbus
division has opened a new
technical centre at Filton, near
Bristol.
The centre represents an
investment of more than £15
million and will support the larg-
est civil-aircraft design and
computing capability in the UK
with a total of 2,900
workstations around BAe. The
centre has the prime responsibil-
ity for the design of the wings for
all Airbus airliners.
The centre will ••also provide
technical support for existing air-
craft such as the BAC One-
Eleven and Concorde and will
carry out design studies into
projects such as advanced super-
sonic transport aircraft. •

BAe opens Airbus technical centre

Computer-generated A320 from the new BAe technical centre at Filton

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