tanks, the twin weapons carrier and the CSILS200 have been checked and 300hr of flight testing have been com-pleted. Total test-flying commitment is 664 nights, including 222 for armament trials, 100 for avionics and 200 for flutter tests. A real-time flight data reduction system is in use at Turin.

Aeritalia has also been responsible for a good deal of simulator and rig testing, particularly the analysis of lateral-directional flight characteristics during terrain-following and at low speeds. Systems company SIA has made the Stage 2 rig for the avionics produced in Italy, and Aeritalia the Stage 4 flight back-up rig to support Italian flight testing. Aeritalia's avionics department has con-tributed to the development of the radome, aerials and ECM systems and has developed a computer-controlled rig for the optimisation of production radomes.

Aeritalia has now completed 14 of the 29 pairs of wings ordered so far. Production rate, now four a month, will reach a maximum of ten. The company's production invest-ment is virtually complete. Its total development com-mitment is 5,000,000 man-hours, half of it in software.
The production programme calls for delivery of 23 wing sets this year, 59 in 1979 and 85 in 1980. The radome pro-gramme requires one this year, 27 next and 33 in 1980. On the other hand, flap production is being transferred from Aeritalia to IAM in a work-share adjustment, and Aeritalia will make 14 sets this year and six in 1979.
Fiat Aviazione has a 20 per cent share in the Turbo-Union RB.199 engine and is responsible for the develop-ment, testing and production of the two-stage low-pressure turbine and its shaft, the exhaust diffuser and the variables area nozzle and its control system. As sub-contractor, Alfa Romeo is producing the blades and discs of the turbine and former Fiat subsidiary Nuovai Saca is producing the variable-area nozzle.

Boeing 767 Aeritalia and Boeing announced on August 14 that the Italian company is to design and manufacture approximately 15 per cent of the Boeing 767 as a risk-sharing partner. The Italian Government has undertaken to provide a loan of L150,000 million (about £92 million) over the next few years. The point at which repayment of the loan is to start and the interest, if any, have not been stated. Aeritalia is to design and manufacture the slats, ailerons, spoilers, flaps, elevators, fin, rudders and radome of the 767. More than 120 Aeritalia people are in Seattle participating in initial design, and the company has already manufactured a carbon-fibre aileron, continuing the basic structural research programme which it has been conduct-ing for Boeing for some years.

While participating in the succession of Boeing designs since 1971, including QSH and 7X7, Aeritalia first bought technology worth L12,000 million (about £7-3 million) from the US company and then made important design contributions. These included the building and testing of a complete trailing-edge section for the 7X7, manufacture and test of carbon-fibre control surfaces, and develop-ment of the honeycomb radome for the 767. The design office at Pomigliano d'Arco grew from this work, and a new testing facility is now being added. The 767 will very

probably have carbon-fibre ailerons and spoilers. Aeritalia will have to install two or three large new autoclaves for bonding and 59 more numerically controlled machine tools at Pomigliano. A large automatic riveting machine recently put into service for making fuselage panels will also be used on the 767 programme. The focus of Aeritalia design work on the 767 is expected to shift back to Pomigliano when the design is 25 per cent complete.

Boeing 727/747 Aeritalia in Naples is producing 134 sets of 14 spoiler panels for the 727 at the rate of ten sets a month and is machining flap-track components for the 747 from billets obtained by Boeing in Germany. The spoiler order is worth L4,400 million (about £2-7 million).

Douglas DC-9/DC-10 Aeritalia has made more than 730 sets of fuselage panels for all versions of the DC-9 since 1966, and won an order to make 300 sets for the DC-9 Super 80 in August. The initial 21 sets are worth 1,2,900 million (about £1-7 million). The first panels were shipped a month early and production is increasing from the present four sets a month to around eight a month next year. Aeritalia has had to cope not only with fluctuations in the rate of production, but also with a great variety of fuselage configurations.

Aeritalia has designed and tested Boeing 767 assemblies above and made the first fuselage panel for the Douglas DC-9 Super 80 below