



## **NH90: THE SECOND PROTOTYPE (PT2) FLIGHTS WITH FLIGHT-BY-WIRE CONTROL SYSTEM**

Aix-en-Provence, 3 July 1997.

The second prototype of the NH90 (PT2) was successfully flown on 2 July 1997 with the Fly-By-Wire Primary Control System (PFCS): the NH90 Programme, which represents a landmark programme for Europe's aircraft industry, has taken another important step forward.

NHI Industries, prime contractor for the quadrinational NH90 helicopter Programme (launched by France, Italy, Germany and The Netherlands) is pleased to say that the crew Guy Dabadie (Flight Test Chief Pilot), Philippe Boutry (Flight Test Pilot), Denis Trivier (Flight Test Engineer), Jean Claude Rabany (Flight Test Mechanic) and the engineers present at the flight trial confirmed their overall satisfaction for the first flight of this innovative NH90 prototype dedicated to the qualification of Fly-By-Wire control system.

The trial started at 5.30 p.m. and for the next 20 minutes the NH90 PT2 was flown checking the global functioning of the systems and then the overall helicopter behaviour. During the flight, the helicopter has reached a speed of 90 kts and performed turns with 30° of bank.

The Fly-By-Wire solution allows the optimisation of the handling qualities in the complete flight envelope, reduction in weight and complexity of the control system (control rods, mixing units,...), reduction of vulnerability and augmentation of safety (high redundancy); furthermore it allows the evolution of the control laws enabling to consider future operational needs.

This technological innovation has the precise task to reduce drastically the pilot workload in any operational environment to let him concentrate on the mission he is called to perform.

A preliminary validation campaign for the NH90 Flight-By-Wire system has been already carried out, on a test bench research helicopter, during a twenty month work including definition, simulation and experimentation.

During the NH90 Development phase, a total of 5 prototypes, plus the Ground Test Vehicle (Iron Bird) will be employed to demonstrate design compliance and to validate overall system performance. Qualification is further supported by a number of laboratory and ground tests, simulators and integration facilities.

Presently the first NH90 prototype (PT1) (maiden flight 18 December 95) has logged 150 flight hours while the Ground Test Vehicle has logged 300 hours.

The NH90 Programme represents an obliged and exciting step in the view of pursuing common defence means, common strategies and of reinforcing the European aeronautical co-operation with the aim of sharing costs, workload and technology to produce a competitive helicopter.

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