

THE ALAN MARSH AWARD, 1958

Reflections on my Helicopter Course at

Air Service Training Ltd ,

by K F TOPP

Although I had been flying in helicopters measuring all sorts of vibrations at many different conditions before commencing my college epoch, I never really thought about the pilot's difficulties in maintaining the conditions asked for in the schedules. The course that I have just completed at Air Service Training Ltd , Hamble, which was sponsored by the Alan Marsh Memorial Fund, has made me conscious now of these and some of the other problems encountered in this particular mode of flight.

The weather on my arrival at Hamble was typical of this summer, so that during my first conversation with the Chief Flying Instructor Sq Ldr G Webb, he was able to hand me a copy of the flight manual of the Hiller 12 C, knowing that I should be able to spend the rest of that day digesting its contents and familiarising myself with the general layout of the aircraft.

My initial flight in the Hiller was preceded by the first of the series of lectures given by Mr Stephens. In these lectures he dealt clearly and explicitly with the fundamental characteristics of most of the helicopter configurations designed to date before specialising on the particular type in which the flying instruction was given. It was particularly encouraging to hear some of the mathematical theories explained in this simple manner as it is often "difficult to see the wood for the trees".

During the first period of instruction I used each control separately in forward flight, concentrating largely on keeping the machine on "approximately" the same course. Following this attempt I did not see how I could ever manage all three controls together, although, my instructor, Mr W Anderson, tried to assure me that I would soon do so and that even pilots with many hundreds of hours fixed wing flying were often equally depressed at this stage. However, the energy used during one hour of such concentration compares with a day's work, for with one eye glued on the instruments and one on the aircraft attitude, I was perspiring freely even when flying with one of the aircraft's doors removed for added ventilation.

One fixed-wing pilot with whom I did some test flying a few months ago declared that although he had only flown a few minutes in a helicopter he was sure there was no need for a rotor tachometer for he could estimate the rotor r p m by the sensations experienced by his "seat". Without entering into the subject of vibrations, I wish to suggest that any prospective student pilot of rotorcraft should develop this uncanny method of computation to a high degree of accuracy for after early attempts at changing the power settings or the flight conditions, I left the aircraft with the instructor's voice re-echoing in my ears—"Revs, Revs, Revs!"

During the preceding flights I managed to master the art of forward flight reasonably, although my tendencies to over correct were not really apparent to me until I tried hovering. When "following through" with the instructor on the dual control system, hovering seemed so simple, but when I was given entire control, the aircraft seemed to become completely unstable beginning to move backwards or side to side in divergent motions.

So that I should get a maximum time at the controls, some of the manoeuvres peculiar to the helicopter, such as flying with simulated loss of tail rotor or autorotation with various forward speeds to control the length of the glide-path, were demonstrated to me whilst flying as passenger with another student pilot under instruction. Thus the five hours which I had at my disposal were used in concentrated efforts to fly the machine which I feel I mastered quite well during the last hour or so.

It is quite impossible for me to list all the benefits I have gained by this short stay at Hamble, but I am sure now that I know from experience most of the limits that must be imposed in flight and this knowledge will assist me in my work of substantiating, and increasing by developments, the safe fatigue lives of various components in some of the larger helicopters.

Finally, I wish to express my appreciation to Air Service Training Ltd , for the instruction and the hospitality that I received, and also to the Alan Marsh Memorial Trust Fund Committee for granting me this opportunity to experience a little of the pilot's environment.

Since completing this course, the directors of Westland Aircraft Limited have kindly supplemented it with an hour of instruction in the Widgeon I would like to take this chance to thank them for this unique experience that has, above all, enabled me to compare the difference between manual and servo-operated control systems

THE HELICOPTER ASSOCIATION OF GREAT BRITAIN TWELFTH ANNUAL DINNER

Over 500 members and their guests attended the Association's Twelfth Annual Dinner which was held at the Dorchester Hotel, W 1, on Thursday, September 4th

The Association's guests, who were welcomed by our President, Mr Eric Mansforth, included Mr Igor Sikorsky, Vice Admiral Sir Manley Power, Fifth Sea Lord, and Lady Power, Sir Cyril Musgrave, Permanent Secretary of the Ministry of Supply, Sir Arnold Hall, President of the Royal Aeronautical Society, and Lady Hall, Mr A F Burke, President of the Society of British Aircraft Constructors, and Mrs Burke and Mr and Mrs J G Weir

A short resume of the speeches given by Mr Sikorsky, Sir Cyril Musgrave and our President will be reported in the next issue of the Journal

HONORARY SECRETARY

It is with regret that we have to record the resignation of Dr H Roberts from the position of Honorary Secretary The Council wishes to express its appreciation to Dr Roberts for his untiring efforts on behalf of the Association during his term of office and the many years he served on the Council

Mr R H Whitby, Performance and Analysis Manager of British European Airways, has now been appointed as the Association's Honorary Secretary



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