

S.M.A.C. DIGEST

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EDITORIAL.

The reception of our first number was distinctly encouraging. While we anticipated that members would feel that the journal was too small for its purpose, it appears to have been generally appreciated that the number of our pages must be dictated by economic necessity. This being so we must aim to use our limited space to the best advantage and to cultivate the, not so easy, virtue of brevity. In the current issue we are fortunate to have the use of an additional page. This cost of this was kindly donated by Mr. A. Millard.

For the biographical note on Ronald Walton we are indebted to Mrs. E. V. Walton of 140, Romsey Road, Shirley, to whom we proffer our deepest respects.

We particularly welcome the excellent article "What Price Theory?" by Mr. Churchill, our Competition Secretary, and trust that this may be the forerunner of many such contributions from Club members.

For the printing of the coloured Title we are indebted to Mr. Brian Joyce who has also kindly undertaken to distribute the journal among members of the Club.

It will be seen that if we are short of space we are not short of helpers.

RONALD WALTON.

Ronald Walton was born in Ontario, Canada, on 23rd November, 1923. At a very early age he was sent to England by his parents and was brought up by his grandmother, Mrs. E. V. Walton, at Southampton. He received his early education at Freemantle School. In May 1939 he returned to the New World - to New York - where he re-joined his parents and continued his studies.

The war came and Walton, although not eighteen years of age, returned to England to volunteer for service. He enlisted in the R.A.F. in December 1939 and eventually became a navigator.

On the night of 3rd/4th November, 1943, Walton was a member of the pathfinder crew of a Halifax bomber engaged in a raid on Dusseldorf. The plane did not return and the crew were reported missing. Later it was established that the plane had crashed in

Holland with the loss of all eight members of the crew. - Walton lies buried with his companions at Eindhoven-Woensel, Noora Brabant, Holland.

He had not quite reached the age of twenty-one.

On 6th April, 1947, there will be flown at Blackdown, the first contest in the new Club, Competition to be known as the Walton Memorial Competition. There will be awarded two trophies (Open and Junior) which have been purchased from Club funds and which will be competed for annually.

In this humble way, Walton's friends, and those of us who were not privileged to know him, will seek to honour and perpetuate the name of a gallant member of the Club.

The competition is for "open rubber duration" and it is appropriate that we recall one of Walton's own performances with a rubber-driven model, "Northern Star". Released from Southampton Common, this model climbed and flew away, passing out of the sight of those on the ground in 9½ minutes. A day or so later in a report in the Southern Daily Echo - not emanating from the Club - the pilot of a Miles Magester aircraft described how he had seen this model still flying steadily at 2,000 feet.

In all humility may we suggest that the story is peculiarly apt to the brief but eminently successful life of Ronald Walton.

The Editor.

WHAT PRICE THEORY?

By J. Churchill, B.Sc.

There are many technical publications on the market and nearly all aeromodelling journals nowadays include a technical article in each of their issues and these deal in some detail with the theory attached to the design of various parts of model aeroplanes. The newcomer to aeromodelling quite rightly overlooks the more complex theory and either builds replicas of well tried models, or designs his own by rule of thumb. There are on the other hand the modellers who absolutely revel in technicalities and are never happier than when they are arguing about some minor point. Nevertheless to whichever of these groups of aeromodellers we belong each one of us at one time or another wonders, when confronted by a page of mysterious looking hieroglyphics, just how much all this theory is really worth.

Theory can, broadly speaking, be divided into two sections:- the "quantitative" theory and the "qualitative" theory. The former sets out to give us an exact mathematical analysis of our model. We start by assuming certain data which has been obtained experimentally and then use this to calculate various factors of our models.

Qualitative theory is not so ambitious:- it does not give us its results in hard and fast figures but rather in the form of a set of "do's and don't", which we have to interpret to suit the case on hand.

At the present moment there is not enough data of sufficient accuracy to warrant the use of exact mathematical analyses of our designs. Nearly all the theory put forward so far makes use of data derived from full scale aerodynamics and applies it to models. Such a process is most unsatisfactory since the conditions prevailing in each case are so vastly different. Sometimes the data is "corrected" for model work but then this correction has not been verified by measurements on models and has such a doubtful accuracy that it is almost useless. Calculations based on full-scale aerodynamics will not tell us what a model is going to do. Recently however some data has been published which has been derived directly from experiments carried out at model scales. I refer of course to the characteristics of the R.A.F. 32 and the L.D.C.2 sections obtained by the "Low Speed Aerodynamic Research Association." A comparison of these characteristics with those for R.A.F. 32 published by Mr. R. H. Warring in his book "Airfoil Sections" will bring home this point. At 5° angle of attack the L.S.A.R.A. figures for lift and drag coefficients for R.A.F. 32 are 0.4 and 0.14 respectively while Mr. Warring's figures are 0.9 and 0.05. Such a discrepancy renders useless any calculations we have made which are based on figures derived from full scale aerodynamics. I would say then that until we have enough model data that we know is accurate and until we are confident that we can build our models to the same degree of accuracy, then time spent making lengthy calculations is just so much time wasted.

There is a huge unexplored field of research in model aerodynamics. Even the fundamental laws which we take so much for granted ought to be put to the test. The practice of assuming laws which have been found to hold in every case for full sized aeroplanes must stop; we must start from scratch and form laws of our own which will hold in every case for models.

I do not wish to give the impression that all theory is a waste of time. We must be able to account for any peculiarities one of our 'planes may have and be able to correct it in our next design:- this is where our qualitative theory comes in. By observing the performances of models and noting the differences in their design we rapidly build up a store of valuable knowledge which we use later. It is the experienced aeromodeller who can consistently design and fly competition-winning models.

HAMBLE AERODROME. We have now heard from Air Service Training Ltd. that while they would have liked to have helped the club in the matter of granting flying facilities on their aerodrome they regret that in present circumstances this is impossible.

The committee is working on alternative suggestions regarding a venue for 'power-driven' competitions.

INSURANCE. Members are informed that the committee is availing itself of S.M.A.E. facilities whereby all members of the club will be insured against third party risks, during 1947, in respect of all 'rubber' and glider models flown by them.

Those members who contemplate flying power-driven models are reminded that the initiative for taking out insurance cover rests with them.

FLYING REGULATIONS. These are now being printed. Copies will be placed in the Club-room and all members are advised to thoroughly acquaint themselves with the revised regulations. Those members who prefer to have their own copies may purchase same at 3d. per copy.

NEW HEADQUARTERS. Negotiations with the Borough Engineer are proceeding and we expect to be able to report definite progress very shortly.

MAJOR CARLTON. A long, informative and friendly letter has been received from Mr. Alan B. Carlton of Merced, California and will be communicated to the club at the first opportunity. It seems natural that we always refer to Mr. Carlton as "The Major" - his U.S. Army rank - and we are delighted to note that he uses the expression "our club".

"JAM" We nearly fell down when we heard recently that John A. Mountain - "Jam" to us - our ex-Competition Secretary, had been posted to the Royal Army Medical Corps! This keenest of aeromodellers is at present mastering the intricacies of peeling potatoes and the art of heaving coal. He will be with us at Blackdown on 6th April. Address:- 19123280 Pte. Mountain, J., No. 2 Squad, B. Coy. Depot & T.E., R.A.M.C., Boyce Barracks, Crookham, Hants.

NEWS FLASH We learn that Mr. Welch's "Pleiades" which was last month reported to be on the stocks is now in the dust-bin!

PROGRAMMES.

It is now possible to publish the general lay-out of the new season's flying programme in respect of major club competitions and some other important events (see below) The dates of further attractive fixtures such as the Northern Heights Gala Day and Competitions with other clubs are still awaited.

When these are received, it may be found necessary to make minor adjustments in the case of those events marked (P), which are only provisionally arranged.

Although so many dates are necessarily provisional the lay-out is published now so that members may have a general idea of the spacing of competitions thus affording them the maximum notice for new construction.

Each issue of the Digest will contain the detailed official programme for the month and members are advised to make a point of noting this carefully.-

PROGRAMME FOR APRIL 1947.

Friday 4th. - Monthly business meeting at "Common" Club-room 7 p.m.
Sunday 6th. - Walton Memorial Competition and S.M.A.E. Gamage Cup
Competition (combined). Open rubber duration.
To be flown at Blackdown near Baulieu Road Station,
commencing 11 a.m.

Fridays 11th, 18th and 25th. - Club-nights at "Common" Club-room
7-9 p.m.

PROVISIONAL FLYING PROGRAMME AS FROM MAY 1947.

May 4th Combined Club and S.M.A.E. Wakefield Competition.
-.-18th Air League Model Flying Competition, Hamble.
June 1st. (P) Club Competition for Power-driven Models.
-.-15th Wraight Memorial and S.M.A.E. Open Glider Competitions.
July 13th (P) Club competition for Tail-less Gliders.
-.- 27th S.M.A.E. Seaplane Competition, de-centralised.
Aug. 17th Inter-Club Competition, Portsmouth & Dist. M.A.C.
-.- 31st (P) Club Competition for F.A.I. Gliders.
Sept. 7th (P) Club Competition for Scale Models (Rubber)
-.- 21st (P) Club Competition for Power-driven Models.
-.- 28th S.M.A.E. Open Rubber & Glider Competition, de-centralised.

(Note - Present information is that the Reading Open Day and the
Southern Counties Rally (Portsmouth) will not be repeated this
season).

PLEASE NOTE. Enquiries referring to the Club should be addressed
to the Secretary, Mr. B. Welch, "Redcroft", Oaklands Way, Bassett,
Southampton.

Contributions and letters to the Editor should be addressed to
Mr. R. O. Richards, "Scamills", Hawthorn Road, Highfield, Southampton.