

DIRIGIBLE

THE JOURNAL OF THE AIRSHIP MUSEUM

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DIRIGIBLE is the journal of the Airship Museum and is published by Friends of Cardington Airship Station. It is published quarterly and distributed free to all members and associate members of FOCAS and, through our close associations, to the Friends of the British Balloon Museum and Library.

■ The objects of **FOCAS** are to foster and promote the study of the history of airships in every aspect, and to present the results of such study to the public, and to stimulate public interest in the role of Cardington as an airship base and in the conservation of the principal buildings thereof, and in particular to promote and assist in the formation and operation of a museum and study centre devoted to the airship.

Full Membership of FOCAS is limited to persons who, having a particular interest in or knowledge of airships, are approved by the Governing Council, the Trustees, who are elected by members from among their number. There is also provision for Associate Membership, which is open to the public generally. Further information and application forms can be obtained from:

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CRATE NEWS!

The famous "Cardington Crates" are at last back at Cardington once again. The 30 crates, which contain the collection of original airship and balloon artefacts displayed by Frank Keirnan in the 1970s as the basis of a small airship museum, were moved into storage after his retirement in 1981.

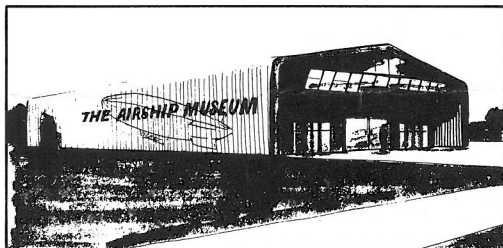
Examination and cataloging of their contents has been underway since their return from RAE Thurleigh and many items of great interest have been seen.

New exhibits for the museum are also being collected, and Cameron Balloons of Bristol have very kindly given the gondola from their prototype DG-25 gas airship (left).

MUSEUM PROGRESS

Negotiations are continuing regarding the site for the Airship Museum at Cardington, within sight of the historic sheds, and it is hoped that they will soon be finalised so that construction work can begin.

In the meanwhile plans are being prepared for the launch of a campaign to raise the further funding and sponsorship needed to build upon this first step. An initial part of this was the launch of the Associate Membership Scheme earlier this year, and we are pleased to report a very encouraging response so far. To further this effort all members will have received sheets of "Support the Airship Museum" stickers with this issue of *Dirigible*. Please use these on your correspondence, or in any other way you can devise, to further awareness of the Airship Museum. In addition, FOCAS members have been attending public events, such as the Cardington Air Day in July, with information and displays to further promote interest in our cause and to encourage membership recruitment.



Scott of the Atlantic

*A personal view of
Major Scott
by E A Johnston*

Foreword.

After I had lost both my parents, I was given a home by Jess Scott and absorbed into her family. She was then a 32-year old widow bringing up four children of her own on a pittance of a pension. My debt to her can never be repaid, but I dedicate to her memory this personal portrait of her husband, Major George Herbert Scott CBE AFC FRAeS.

Seventy years ago, Alcock and Brown flew 1890 miles from Newfoundland to a bog in Ireland, the first men ever to fly across the Atlantic non-stop. A fortnight later the Airship R34, commanded by Major Scott, flew non-stop 3130 miles from Scotland to Long Island, New York State, refuelled and returned to Pulham, Norfolk.

My childhood memory of "Uncle Scotty" encompasses a burly, affable man, full of jokes, perennially clenching a pipe between crooked teeth; he had a large American car, a grand piano in his drawing room, a Border Terrier called Judy, and was always having parties. My father was Scotty's First Lieutenant when he commanded the airship station in Anglesey in 1916. Scotty moved on to become Captain of No 9, the first British rigid airship to fly, but in 1925 Scotty invited my father to join him at Cardington. Though working closely together, their social lives diverged latterly as the Scotts increasingly enjoyed the more hectic whirl of the 1920s. Scotty had a liking for handsome, witty women, who found in him a man of great charm and good humour. Men in all walks of life found him approachable, modest as to his own achievements, a good listener; his flight crews knew him as a skillful, resourceful and unflappable airship commander whom they would gladly follow wherever he led. But even among his colleagues there were those towards the end who, disapproving of his lifestyle, conceived his relaxed self-assurance to be a sign of laziness, his dislike of paperwork a sign of superficiality. The outstanding expert in his own field, he could listen patiently to honest men however humble, but he deflated the pretensions of pompous men with devastating irony.

Scotty was that rare breed, an engineer who possessed a natural aptitude for piloting airships. After completing his education at the Royal Naval Engineering College, Keyham in 1908, he decided that the subordinate status of a Naval Engineer Officer was not for him. The War, however, forced him to give up his civilian career in general engineering in 1914. He wangled a commission in the new RNAS, where his mental aptitude for the arcane science of lighter-than-air flight brought him to the forefront of the band of airship pioneers at Kingsnorth. He was soon sent to Walney Island to take command of the largest and most sophisticated of the ships in the British service, No 4, the 290,000 cubic foot Parseval. There followed a spell in command of the airship station in Anglesey, after which he was sent back to Walney Island to take command of No 9. Several years behind the contemporary Zeppelins, she was short of lift, unstable and underpowered. Nevertheless during 1917 and early 1918, Scotty flying her out of Howden, established our basic operating techniques for rigid airships, trained many of our subsequent rigid captains and coxswains, and, having realised that an airship's unwieldiness and fragility on the ground were serious liabilities, took the lead in evolving methods of mooring them.

His next assignment was to R34, completed

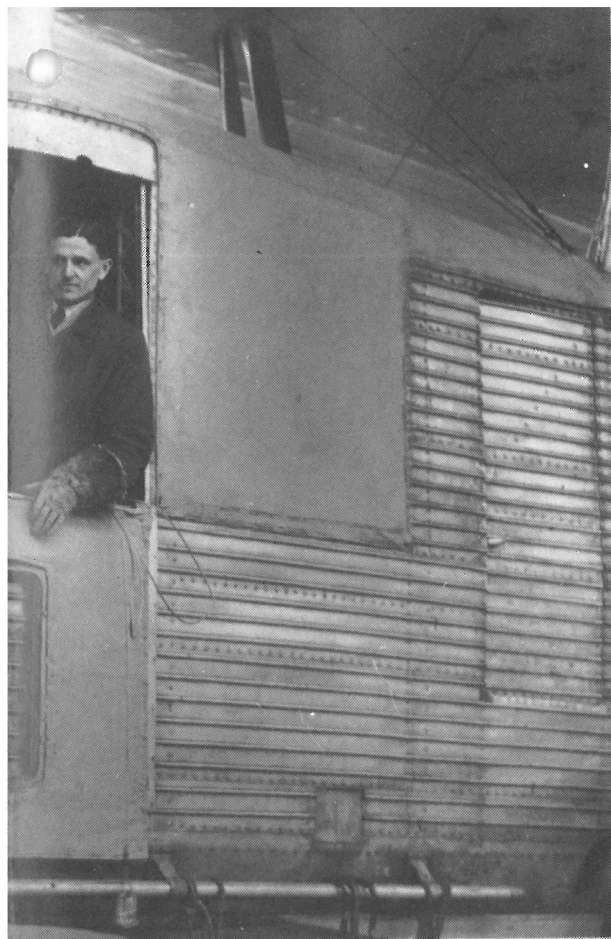


at the end of 1918 by Beardmores at Inchinnan. There the jovial, extroverted airship captain married Jessie Campbell, the dashing young daughter of Beardmore's senior yard manager. When asked about the Atlantic trip, she replied laconically: "I have no cause for worry: my father built her, my husband commands her."

R34 first flew in March 1919, and during her second flight, with Col Hicks (the Admiralty's acceptance officer) in charge, her elevator controls jammed. She went dangerously out of control. With everyone clinging on for life, Hicks invited Scotty to assume command. Imperturbably, Scotty issued the orders necessary to bring the ship back under control and return gingerly to Inchinnan. Had her flight trials not been held up a couple of months, she might well have been the first aircraft ever to have flown across the Atlantic.

The story of that flight needs no recounting here. It was a formidable undertaking with unreliable engines which did not deliver much more than half their rated power; the outer cover was a continual source of concern; the manual fuel pumping system was wholly inadequate for long flights; and the crew accommodation was primitive. Above all ability to forecast weather conditions over the Atlantic was negligible, and the ship met some extremely alarming turbulence down the eastern American seaboard. The experience here was not unlike that encountered by R100 up the St Lawrence River in 1930, about which my father wrote, of a period when later writers were suggesting





that Scotty's ability was in decline: "It was an education to the inexperienced to watch Scott handle the ship in these conditions. He appeared to know the very phases of the squalls and anticipated their arrival and manoeuvred the ship to meet them. It was like watching a patient horseman handling a frightened thoroughbred."

During the whole of her stay in Mineola, Long Island, R34 was moored to the ground by Scotty's three wire-system. On a number of occasions she was put at great risk by gusty winds to such an extent that he decided to start the return flight ahead of schedule. This experience resulted eventually in the decision to hand Pulham over to the prime function of solving the airship mooring problem.

Scotty was next assigned to a staff appointment in the Air Ministry's Civil Aviation Department in London, the sort of job that the man of action loathed. He was delighted, therefore, to take his demobilisation at the end of 1919 and, with Airship Licence First Class No 1 in his pocket, assume charge of Pulham.

The steel lattice mast developed by Vickers had been installed there during 1919. Although R24 had shown that a ship could ride at such a mast for long periods of time, the method of mooring to the mast had proved to be unsuccessful. Scotty devised the "vertical" system of mooring masts built later at Cardington, Montreal, Ismailia and Karachi. It was impossible to keep Scotty out of the air: during 1920 and 1921 he played the leading part in the flying programmes of R33 and R36, the



two airships which had been assigned to the civil programme. R36 was slightly damaged while testing Scotty's redesigned masthead, an incident which has been cited as an example of hamfistedness but which is rather more creditable as an example of the designer leading a pioneering experiment from the front.

When the Government terminated the airship programme after the R38 disaster in 1921, Scotty became involved in discussions with a number of parties interested in acquiring the two ships for developing commercial airship services. At one time he was nominated together with Barnes Wallis, Lieut Col Vincent Richmond and Sqn Ldr Reginald Colmore, to form Sir Denistoun Burney's design team for the grandiose proposals out of which the 1924 Government's programme evolved. Wallis's scathing response to that proposal is well documented; few now know how much Scotty, the judiciously enthusiastic professional, mistrusted the competence of the Johnnie-come-lately Burney.

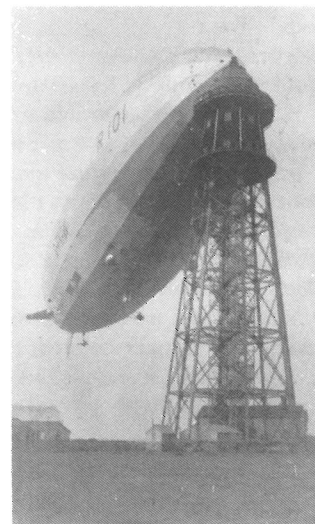
Scotty stayed on in charge of care and maintenance at Pulham until 1924, when he was appointed Officer in Charge of Flying and Training in the new Directorate of Airship Development set up at Cardington to mastermind the development of the Imperial Airship Transport scheme. Again he led from the front in the 1925/26 flying programme and in the development of procedures for mooring at his new Cardington mast. Against his advice, R33 and R36, which had been earmarked for experimental flying, training and tropical trials in advance of the big ships, were deleted early in 1927. He was thus forced to use kite balloons for training personnel in mast techniques.

The year 1928, following his trip to Canada to advise the Dominion Government on the location of the Canadian airship base, was a flat year for Scotty. He was still far and away the most influential man in British airships, but a change was in the wind. There was not a little criticism by some of his colleagues for his seemingly lackadaisical approach to processing post-flight paperwork, while his refusal to wear a watch of any sort did not endear him to serving officers bred to punctuality. There was no question of who was boss at Cardington while Air Commodore Fellowes was Director of Airship Development - a regular Officer in the RAF, a fine administrator and a born leader of great charm in the old naval tradition, though not an airshipman; but he was succeeded by Wing Commander Reginald Colmore RAF, an old airshipman very much in the shade beside Scotty, nevertheless an able and experienced Staff Officer. By the end of 1928 the vast, technologically exciting shape of the R101 was taking form in No 1 Shed, and the engineering aspects of airship development started to interest the world outside, with the result that Vincent Richmond, who had once had to ask Scotty for a job, began to emerge from the shadows. In 1929 and 1930 technical problems came increasingly to dominate the airship programme, and with them Richmond seemed to emerge as the most influential personality at Cardington.

"It was Scotty's duty to get the Secretary of State to India: he was under no illusions about the difficulties, but he was determined to give him a jolly good run for his money."

Main picture: R33 - Squadron Leader E L Johnston, navigator, Major G H Scott, SAD (Flying), Flight Lieutenant H C Irwin, Captain.

Bottom centre picture: R100 at St Huberts, Montreal.



R101 at Cardington

During the last year there was the immense pressure to perform. The climate in 1930 was unfriendly towards ambitious government expenditure; the press was scathing about the delays; and the Secretary of State for Air, who had come to nail his political reputation to what he thought of as "his" airship programme, expressed his determination to fly to India in R101 before the end of the Imperial Conference. On top of all this there had come the slow realisation by the airshipmen themselves that their gigantic airships were not really big enough to do the job. From the moment that the lift and trim trials of the two ships were concluded in their sheds in November 1929 Scotty, of all people, must have realised the enormity of the task ahead. It was not in his nature to say "No, it can't be done".

With R100 Scotty's worries started during the first flight when the outer cover developed standing waves at speed. Modifications slowed the programme of acceptance flights. Cardington was under ever more pressure from Burney, the contractor, to complete the Canadian flight and accept the ship on behalf of the Government before the cover had to be renewed. There were political constraints too, on creating further delays to the Canadian flight. Scotty and R100's Captain, Booth, judged the risk of flying to Montreal with the defective cover to be acceptable - and, as the flight was successful (though not without incident), the decision was not criticised.

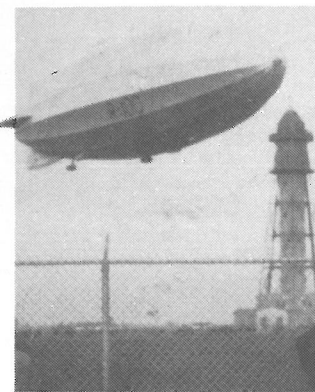
With R101 his worries really began after measures were introduced to increase the useful lift of the ship following the initial trial flights. The June flights made for the RAF Pageant at Hendon showed up a wholly new range of technical and handling problems which, owing to the pressure occasioned by first, the need to hold R101 in reserve for the Canadian flight, and second the need to enlarge the ship before the rapidly approaching deadline for the India flight, were never really resolved and tested.

Scotty himself, of course, had to participate

as the Officer in charge of very nearly every flight of both ships, and particularly the flights of long duration since there were too few qualified officers to maintain watchkeeping routine otherwise. On top of all this, he was closely involved in defining the specification of the four even larger airships to be presented to the Imperial Conference later in the year, as well as the planning of the layout of the airfield to accommodate them. The Treasury had approved the funding of this extended programme subject to R101's successful return from India and the Secretary of State had made the senior people at Cardington well aware of the importance he attached to the timing of the India flight.

The enlargement and modification of R101 were completed with barely time to spare for the test flying required before setting off into the unknown. Richmond was confident that she was now technically sound, though others had reservations. "A patched shoe is never as good as a new one," Scotty remarked. Adverse weather conditions prevented her leaving the shed for some days, so the Director of Airship Development had to seek approval to curtail trials to one flight, and a much shortened one at that, subject to Major Scott being satisfied with the ship. The future of the Imperial airship scheme now fell upon his shoulders, and he did not shirk the responsibility, though he knew the climatic odds were against getting any further than Egypt, and that even if R101 did get to India she was likely to be stuck there for months. He assessed the risks and made the decisions, and at each successive decision the risks became greater. It was Scotty's duty to get the Secretary of State to India: he was under no illusions about the difficulties, but was determined to give him a jolly good run for his money.

This time fortune did not favour the brave. In a squall in the middle of the night the outer cover split near the nose, resulting in a massive loss of lift from the forward gasbags. R101 was forced down near Allonne. Scotty perished at the age of forty-two.



R100 approaching the mast at Montreal

PULHAM ANNIVERSARY

On 16 July several members of FOCAS joined local airship enthusiasts in Norfolk to celebrate the 70th Anniversary of the historic double crossing of the Atlantic by R34 in 1919.

Sir Peter Masfield unveiled a plaque to mark this achievement, and afterwards Norman B Peake of the Pulham group led a tour at the remains of the old airship station site (now part of a farm). Sadly the full festival of activities, reported in the last *Dirigible*, did not take place for various reasons, but it was felt that the plaque was a fitting tribute to the men of R34.

FOCAS has close links with the Pulham group with several of their members having joined us.



Right: The R34 plaque.