

## H.M. AIRSHIP R.100

**D**URING the gales R.100 remained safe in her shed at Howden, but with the advent of the anticyclone she promptly emerged. On Monday, December 16, everything was got ready and soon after 4 a.m. the party of 500 soldiers who were to form the walking party arrived by lorry at Howden. The north door of the shed was then opened, and the Condor engines were run up. Major G. H. Scott, Squadron-Leader Booth (Captain of the ship), Capt. G. F. Meager (first officer), Sir Dennistoun Burney, Mr. B. N. Wallis (the designer), Squadron-Leader Colmore, and other experts were on board. Altogether the ship carried 68 souls.

The soldiers were arranged in 12 parties, four of which manned the control car and the three engine cars, while the others took charge of guy ropes. The ship was brought out of the shed tail first. The party began to walk her out at 7.22 a.m. and in six minutes she was safely clear of the shed. She was wheeled round until she faced south-west. The walking party then let go, ballast was dropped, and R.100 soared up into the air and commenced her active career. She actually commenced to fly at 7.53 a.m.

There was a favouring breeze of from 6 to 9 m.p.h., and the airship flew slowly towards York, which was reached at 9 a.m. She spent a quarter of an hour over the capital of her native county, and then headed for Bedfordshire. Major Scott, of course, was testing her "feel" in the air. He found that she rode as satisfactorily as R.101 has done, thus vindicating the policy of the  $5\frac{1}{2}$  to 1 fineness ratio. Possibly some of the critics are grievously disappointed to find that neither airship wants to stand on her tail or loop the loop. The two ships, however, handle differently. This was to be expected, as, apart from the minor difference in the dimensions, the design and position of the fins is quite different in the two ships. Moreover, R.100 has all her six engines placed well aft. With the Condors, it was found possible to fly R.100 at a slower speed than is possible with R.101, but when throttled down to 20 m.p.h., it was found that she had not much steering way.

The journey was made at an air speed of 55 to 58 m.p.h., and the following breeze brought the ground speed up to about 64 m.p.h. The journey of 140 miles was covered in a little over two hours.

The ship cruised over Bedford for a while, and then approached the mooring tower. At first she came in too slowly and without sufficient control. The second approach was successful, and at 12.45 the mooring cable was dropped. By 1.35 p.m. the ship was made fast to the head of the tower, and then the roller weights were secured to her tail.

As the airship approached Cardington the fabric on the underside of the hull and on the lower vertical fin was observed to be flapping slightly in the slipstream of the propellers; but Major Scott said that he had not had any reports of anything abnormal from the observers stationed at different points about the ship. He was very pleased with the general behaviour of the airship on her maiden flight.

Next day, Tuesday, December 17, another trial flight of four hours was made. The airship slipped from the tower at 10 a.m. and cruised for four hours in the neighbourhood of Bedford. The objects of the flight were general testing in manoeuvre at different speeds and special observation of the fabric underneath the hull and on the lower vertical fin, which had been seen flapping on the first flight. Great attention was paid to this point, for not only was it carefully observed from inside, but special observers with powerful binoculars were stationed at various points on the ground. During the flight one of the crew climbed down the ladder inside the lower vertical fin and carried out repairs to the fabric. There is room inside each of the fins for a man to move about, but the operation is easier in the vertical fins than in the horizontal ones. It will be interesting to learn whether this behaviour of the fabric is due to the comparatively small distance between the fin and the rear engine car. After the flight Maj. Scott naturally said that he could not make any statement until he had formed an opinion after studying the reports of all the observers.

Aerodynamically, the airship gave great satisfaction. All the six Condor engines were run at 1,400 r.p.m., and the ship developed a speed of about 57 to 58 miles an hour. No attempts at developing full speed were made. This was not to be expected on the second flight of the ship. But tests in turning were made, and the ship answered her controls satisfactorily. The results of the first two flights will be carefully studied and analysed before further flights are made.



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—AT CARDINGTON: On the left, The nose made fast. On the right, Sir Dennistoun Burney and Major G. H. Scott. (FLIGHT Photos.)