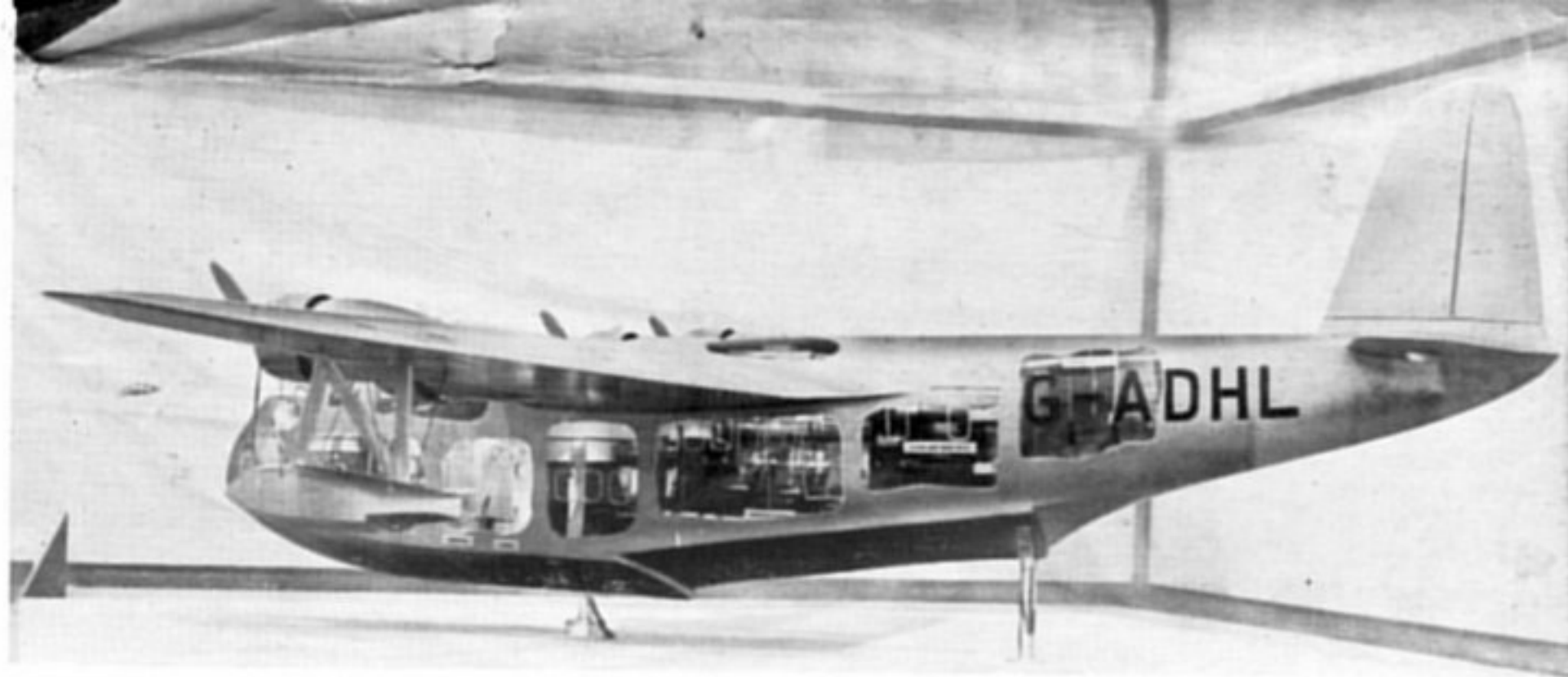


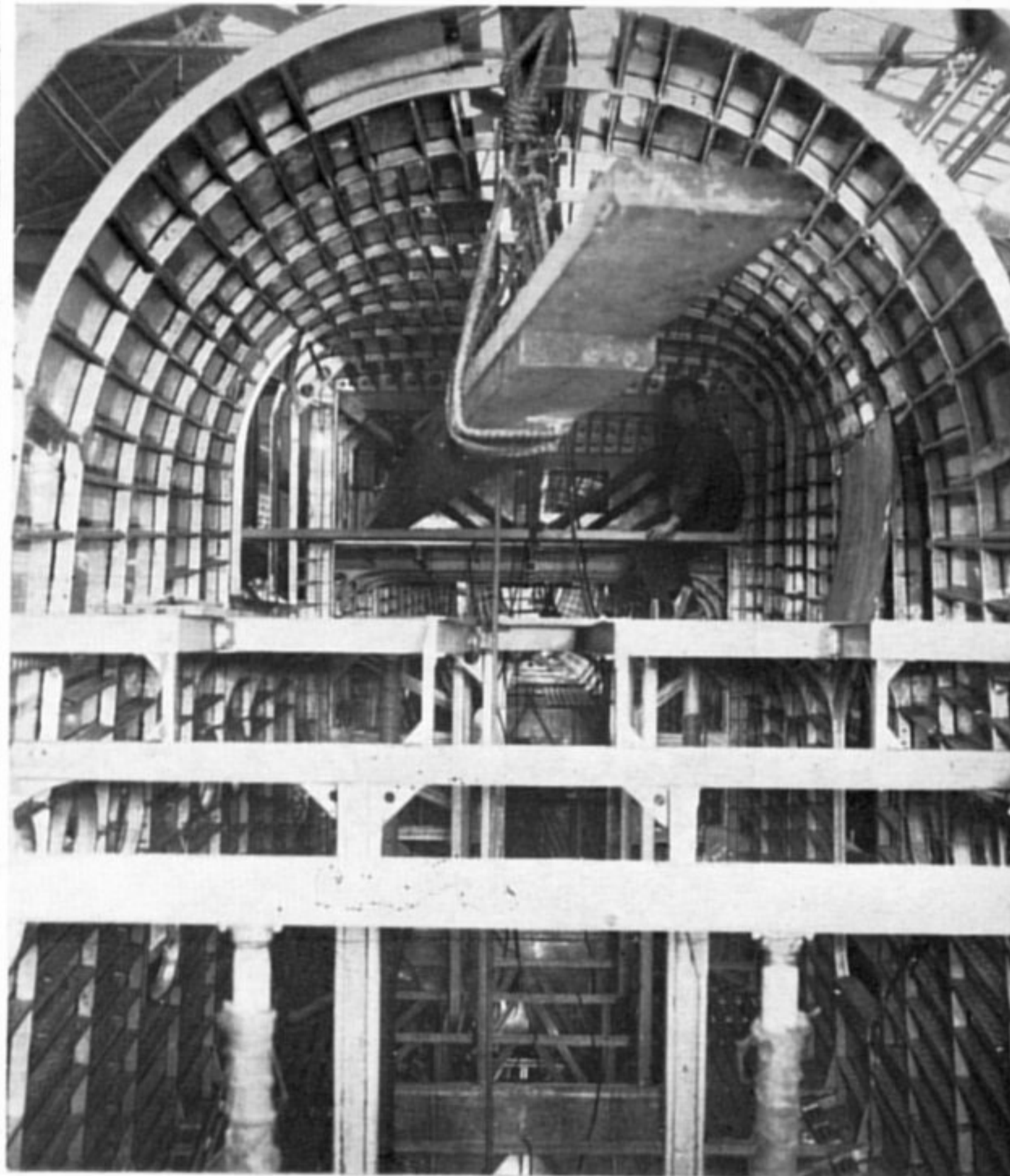
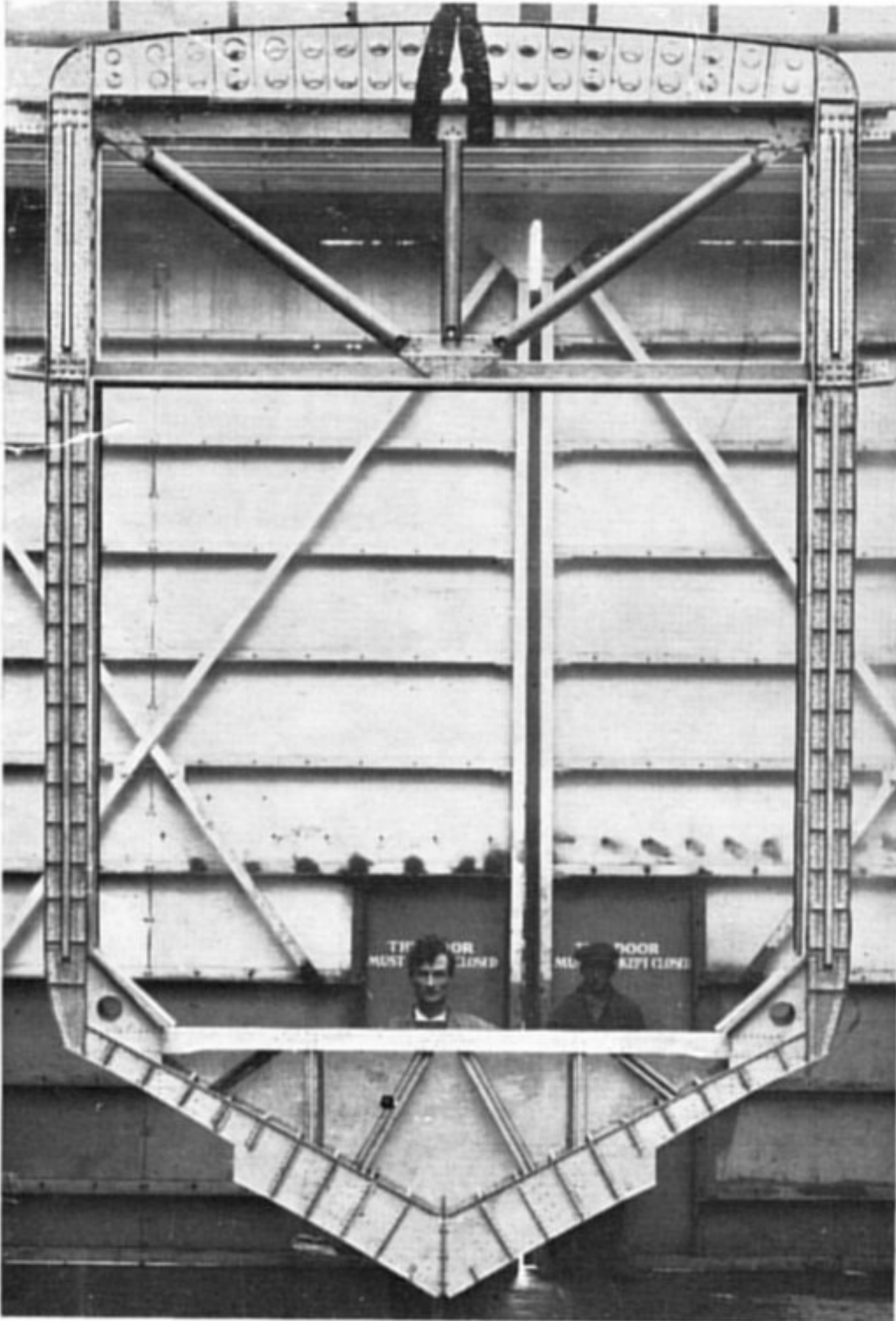
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First Illustrations of the new flying boats being built at Rochester are now published. Some of the constructional features are revealed and commented upon in this and the next page.

## THE EMPIRE FLYING BOATS



vertical straight-sided construction. The photograph of one of the spar frames shows that the ratio of beam to height is much smaller than in previous Short boats, one result of which will be extra head room in the cabins. Doubtless the reduction in stability will be made up by using large wing tip floats. Generally speaking, the system of construction is similar to that which has given such excellent results in Short boats for many years, but the



**W**ITH remarkable speed the first batch of the large number of flying boats which Short Brothers are building for Imperial Airways are taking shape in the Short works at Rochester. The photographs show some of the structural features, and reveal the fact that considerable departures from what has hitherto been Short practice have been made in the Empire flying boats.

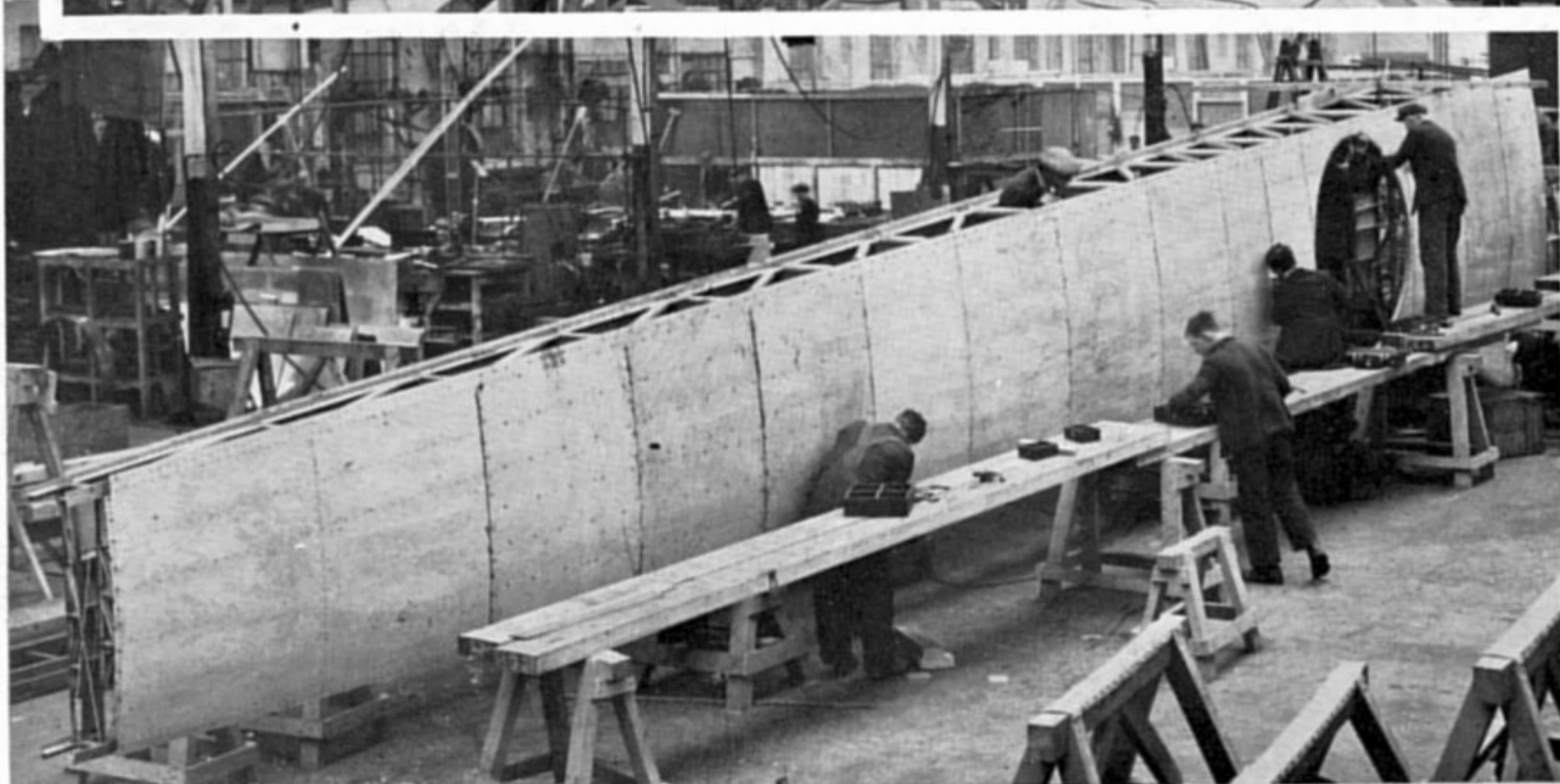
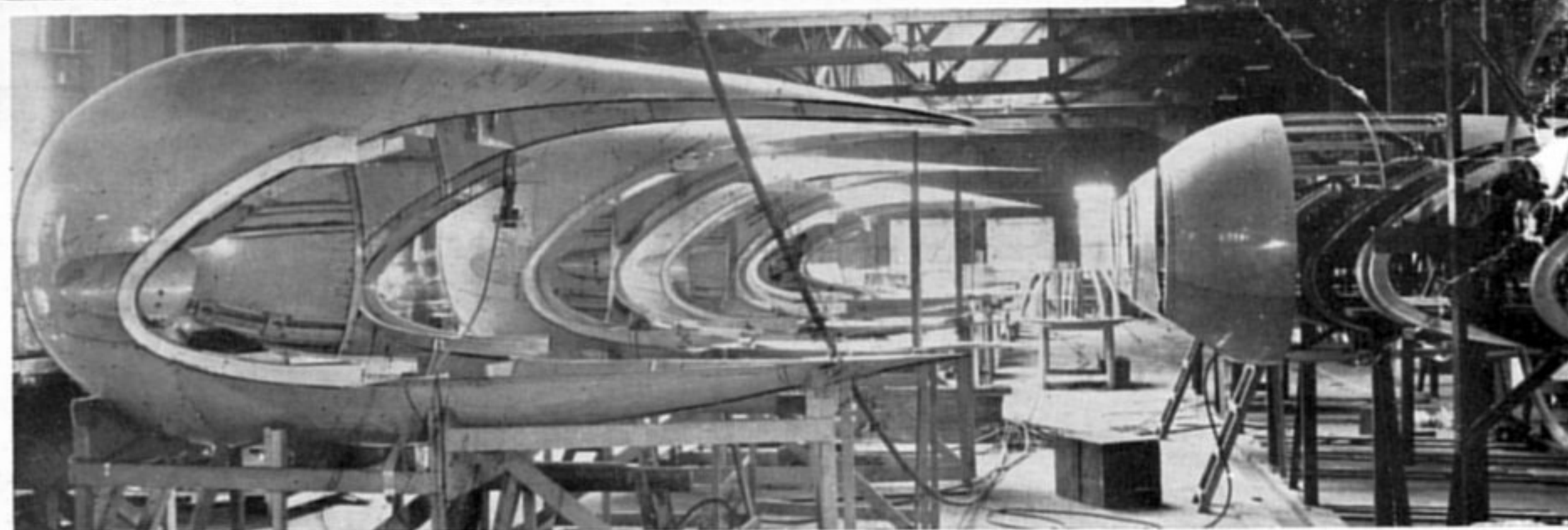
One of the most notable changes in design is the change from the flaring chines which characterised all early Short boats to

The frame in way of rear spar is shown on the left. Note the straight sides and small beam-depth ratio. On the right, a view inside the hull of boat No. 1, looking aft. Below is a view of the cantilever tail.

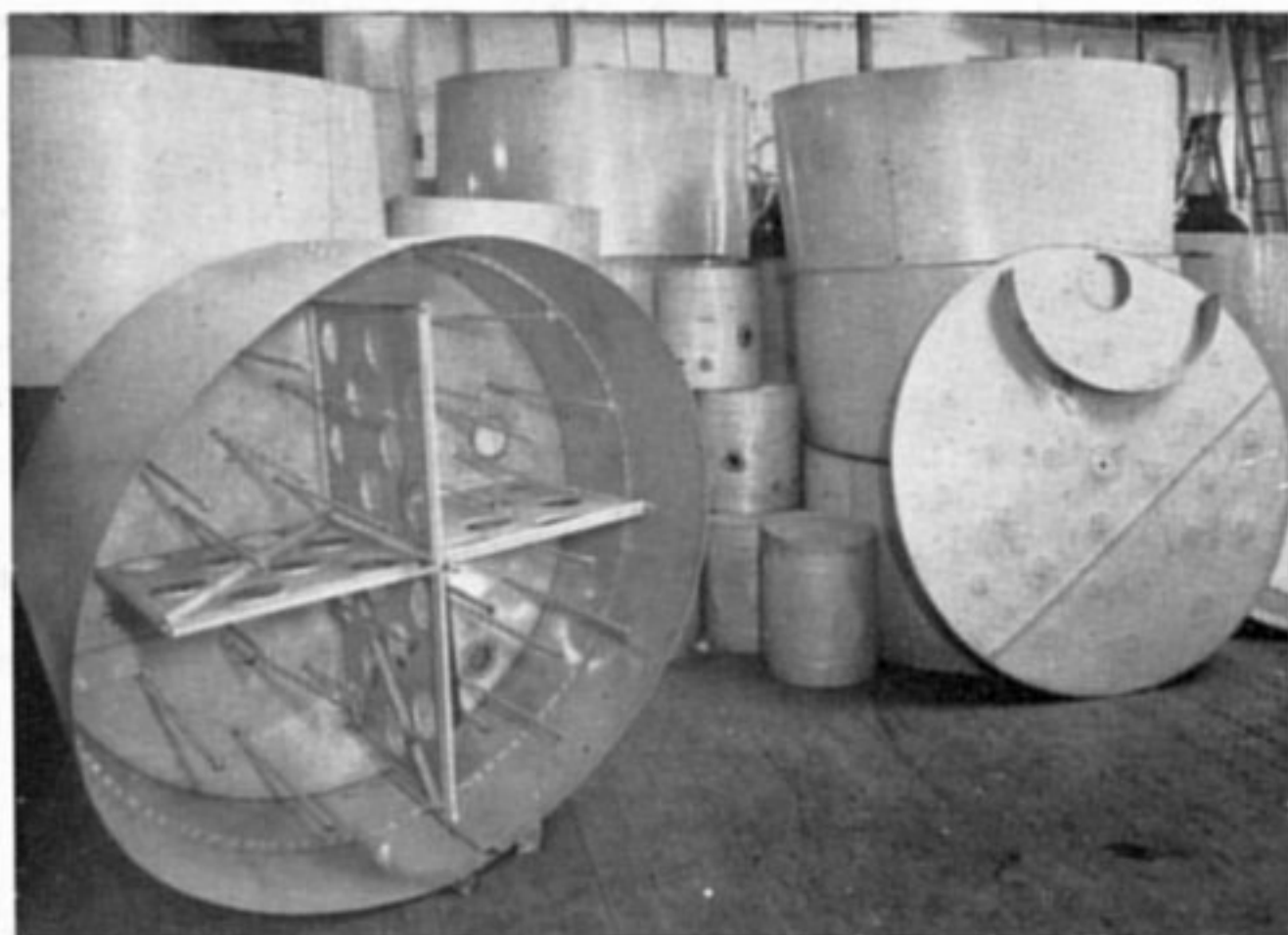


## FLIGHT.

On the stocks. A view in the Rochester works, showing hulls 1 to 5.



The "box" section wing spar of one of the first boats in course of construction. Above that, the engine nacelles for boat No. 1 nearly completed, with others in jigs. The details of the wing construction are somewhat similar to those tried out in the Short Scion.



Cylindrical petrol and oil tanks. Note the baffle plates, and the numerous tie rods which brace the tank ends.

extensive use of flush-riveting will give a neater finish. In the wing construction very material changes are found. Use is made of what is virtually single-spar construction, the spar being in the form of a large "box" of approximately rectangular cross-section, to which leading and trailing edge portions are attached. The wing is a pure cantilever beam, and the tail surfaces also are without external bracing. The wing span will be no less than 114 ft.

The four Bristol engines will be carried in streamline fairings on the leading edge of the wing; the picture of the engine nacelles shows the shape of the fairing.

When fully loaded, the Empire boats will weigh approximately 17.5 tons, and 3.5 to 5 tons will be available for pay load on normal stages. With a smaller pay load, and more fuel, the range can be increased to 1,500 miles.