

A NEW GENERATION OF AIRSHIPS?

Flying saucer takes off

What could be the forerunner of a new generation of airships has made its first public flight recently at an old airship base in Cardington, 45 miles north of London.

The Skyship is a scaled down prototype, 30 feet in diameter of a planned craft measuring 700 feet across. It would be able to lift a payload of up to 400 tons.

The craft is the brainchild of 47-year-old British marine engineer John West, whose other work includes the design of the passenger liner Canberra. He sees its main use as a bulk

main use as a bulk cargo carrier, able to deposit its loads in the middle of distant and hostile terrain out of reach to all of the more conventional forms of transport except at enormous cost and difficulty.

Skyship Mark One was flown in one of the two vast sheds at Cardington in which the great British airships of a previous era were constructed and in which, in 1930, perhaps the most famous of the breed, the R 101, was housed.

But the men who worked on the old airships almost 50 years ago would hardly recognise the newcomer. Whereas the R 101 and the others were cigar shaped, Skyship is circular, appearing to owe its lineage more to "flying saucers" than to traditional airship design.

The flying saucer image was strengthened by a line of

ened by a line of dummy portholes around the circumference of the craft.

Drive power for the prototype came from four tiny 22hp engines connected to propellers 12 inches in diameter, each capable of being swivelled in any direction. Four other motors give vertical thrust while batteries provide the source of power.

The unusual shape of Skyship was decided by Mr West and his design team after extensive wind tunnel tests. Two of its great advantages are that it can thrust itself down on to the ground for loading or discharge of cargo, while its series of engines enable it to move to any direction quickly and positively, an attribute which the older generation of airships lacked.

Skyship owes much to traditional airship technology in the manner in which it is lifted and kept up — the employment of

the employment of gas. But in this case the gas is the very safe, inert helium, which actually puts out any fire with which it comes into contact.

This was only one of the safety aspects of Skyship emphasised by Mr West and his team at the flight demonstration. As the craft is lifted by gas, engine failure would be nothing like as serious as in an aircraft.

Quite major engine repairs could, in fact, be carried out in flight, but as the eventual full-scale Skyship would be powered by no fewer than 10 Rolls-Royce Tyne turboprops, the chance of all power ever being lost appears remote in the extreme.

Mr West also claimed that a serious fracture of the gas containers such as might be produced by a midair collision with an aircraft, would not necessarily

result in disaster. The gas would escape slowly and the Skyship would be stable enough to float down gently to a landing even from its maximum cruising height of 7000 feet.

This ability was demonstrated at Cardington by the dropping from a height of some 50 feet of a small scale model of Skyship. A broken exterior surface had let all the gas escape, but the model drifted down to a gentle landing — rather like an autumn leaf falling from a tree.

In the demonstration flight the craft rested on a wooden trestle, its skins like two saucers clamped face to face, made of nylon sail material and gleaming in the glow of television camera lights.

As the craft had a lifting power of only 215 lb and a payload of 40 lb, the "pilot" remained on the ground, operating the engines through the medium of

through the medium of a handheld radio. A group of handlers let go of the mooring ropes, and engines whirring furiously, the Skyship was airborne.

At an altitude of about 25 feet and at a speed of around six miles an hour the new British airship made a

stately progress down the hanger, pursued by design team, ground handlers, television crews and cameramen, aviation journalists and a host of excited onlookers.

Afterwards Mr West said that the next stage in the development program was to embark on the construction of a prototype of intermediate size. This would cost around £1 million Sterling would be 200 feet in diameter and would be able to carry a payload of up to 10 tons.

If this proved a success the next step

success the next step would be to design and construct the full scale Skyship. With its 10 turboprops, the Skyship would have a flying speed of around 100mph and would be able to deliver heavy cargoes over distances of many thousands of miles, which can take shipments months by sea.

Its designers have calculated that Skyship would operate at a cost of about one penny per freight ton mile, based on the use of 20 feet and 40 feet standard containers. This is almost as cheap as conventional cargo going by sea.

