



The Mi-6 is the largest helicopter at present flying in the world

IN THE AUTUMN of 1957 the Soviet aircraft industry marked the 40th anniversary of the Communist Revolution by unveiling prototypes of the world's largest airliner, the Tu-114, and the world's largest helicopter, the Mi-6 (NATO code-name "Hook"). Of the two, the Mi-6 came as the greater surprise, particularly when the F.A.I. announced that it had set up two international records by lifting a payload of 22,046 lb. to a height of 7,979 ft. and 26,964 lb. to a height of 7,874 ft. This meant that it could have carried with ease any other helicopter then flying.

Like Mil's earlier designs, the Mi-1 and Mi-4, the Mi-6 prototype had an entirely

conventional pod-and-boom "single-rotor" layout. Clamshell loading doors formed the rear of the cabin which, according to Moscow radio, could accommodate up to 120 passengers. A model displayed at the 1961 Soviet Exhibition in London featured a 75-passenger layout, with seats in five abreast rows, entrance and toilet at the rear of the cabin and baggage space at the front.

The two shaft-turbine engines, mounted side-by-side above the cabin, were said to be products of Soloviev's design team. In record claims submitted to the F.A.I. they were given the designation TB-2BM and each was stated to develop 4,635 h.p. A

cutaway drawing published in the Soviet press showed that the drive was taken out of the rear of each engine, through primary and secondary gearboxes, to the shaft carrying the 114 ft. 10 in. diameter, five-blade main rotor. The control system of both the main rotor and the four-blade tail rotor appeared to be conventional. Other features of the design included a small horizontal stabiliser at the rear of the tail-boom and a tricycle undercarriage, with a twin nosewheel unit and single spatted mainwheels. During its development the Mi-6 has undergone a number of external changes, the most important being the addition of shoulder-mounted stub wings which off-load the main rotor by providing some 20 per cent of the total lift during cruising flight. The mainwheels are now seen usually without spats and a pair of cylindrical fuel tanks can be carried externally for extended range. In its production form the Mi-6 has an empty weight of 41,000 lb. and maximum take-off weight of 86,000 lb. Maximum speed is quoted as 186-217 m.p.h., with a normal range of 310 miles at 168 m.p.h. These figures have been borne out by a long series of international records established by the Mi-6. Those still standing include five payload-to-height records—ranging from a height of 18,320 ft. with five tons to 6,562 ft. with an incredible 44,350-lb. payload—and several closed-circuit speed records, including 196.1 m.p.h. over 500 km. and 186.64 m.p.h. over 1,000 km. with a two-ton payload.

MODERN SOVIET
AIRCRAFT: No. 20

Mil's Mi-6 and V-10

by John W. R. Taylor

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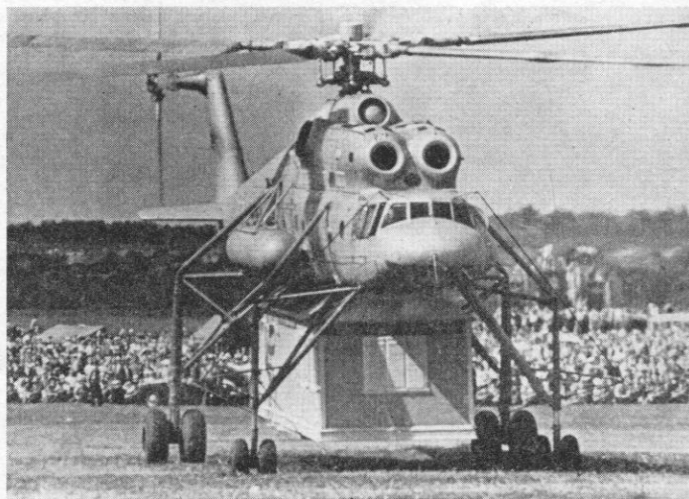


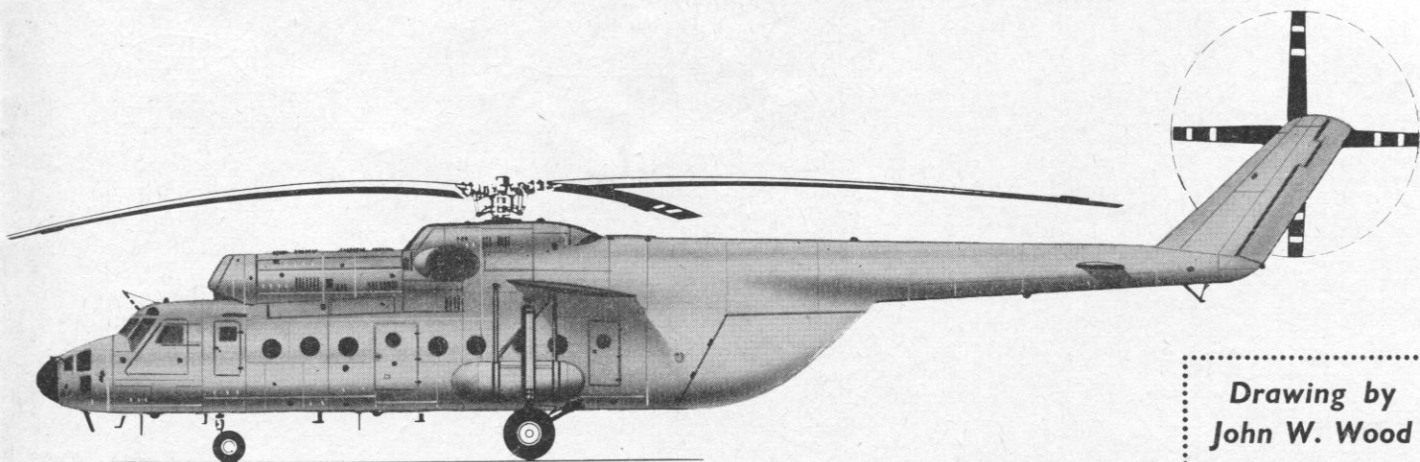
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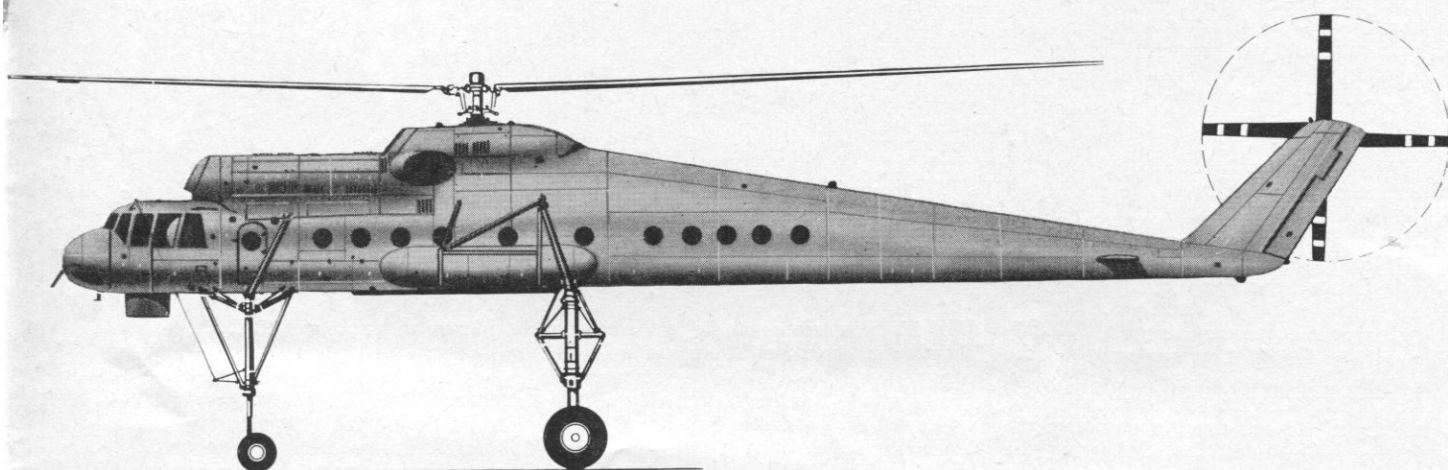
The General Secretary, R.A.F. Association, 43 Grove
Park Road, London, W.4.

The V-10, a flying-crane development of the Mi-6





Drawing by
John W. Wood



For some reason the Mi-6 does not yet appear to have entered passenger service with Aeroflot, and orders are believed to have been limited to a pre-series of five and thirty production models. Six were demonstrated in a tactical missile transport role at the 1961 Tushino Display. They landed in two groups of three, after which one helicopter in each group unloaded a pair of dummy field artillery missiles, while the others disgorged support equipment. Other Mi-6s flew over the airfield carrying what was purported to be Yuri Gagarin's *Vostok* space-craft and a model of a *Lunik* moon-probe.

Since then these helicopters have been reported in service only in a flying-crane role. Early in 1963 it was announced that an Mi-6 had ferried the component parts of an oil rig to a site near the town of Zhyrnovsk, in the Transvolga steppeland, and that others were to be used to air-lift drilling rigs to the oilfields in the Tumen region of Siberia. In January of this year an Mi-6 began the task of lowering seventeen 6-ton vulcanisation units through the roof-hatch of a tyre factory at Yaroslavl.

These operations are particularly interesting in view of the fact that one of the newcomers at the 1961 Tushino Display was a specialised flying-crane development of the Mi-6, known as the V-10 (NATO

code-name "Harke"). The rotor system and engine installation of the two machines appear to be identical; but the depth of the fuselage pod is reduced on the V-10 and the tail-boom is deepened and swept down to provide a flattened and unbroken undersurface from nose to tail. This permits external loads to be carried flush under the fuselage between the legs of the stalky, long-stroke, quadricycle undercarriage.

Loss of fuel tankage in the lower fuselage of the V-10 is offset by the use of large external tanks on each side of the cabin. Other features include the introduction of large, bulged side windows on the flight deck and an observation "dustbin" which can be extended under the nose to enable a crew member to supervise loading and unloading.

At Tushino, the prototype V-10 carried into the airfield a large prefabricated building. A few months later, in October 1961, it set up two records by lifting a payload of 33,302 lb. to a height of 7,631 ft. A flying crane is, in theory, the ideal aircraft with which to attempt payload-to-height records, so it was rather surprising when these particular records were recaptured easily by a standard Mi-6. There is no reason to believe that development of the V-10 has been abandoned; but

it has not yet regained its lost records and it may be significant that the Mi-6 is now being used so regularly and successfully in flying-crane roles.

73 Sqn. meeting place

ARRANGEMENTS HAVE been made for the Talbot Hotel, 1 Little Chester Street, Belgravia, London, S.W.1 (Tel. Belgravia 1639), to be the London meeting-place for aircrew and ex-aircrew of No. 73 Squadron. (Sqn. emblem is a Talbot Hound.) Details can be obtained from either: W/Cdr. J. E. Scouler, D.F.C., Ministry of Aviation (S.A.(L.)S), Shell-Mex House, Strand, London, W.C.2, or F/Lt. B. L. Robinson, Officers' Mess, R.A.F. Akrotiri, B.F.P.O. 53.

Norwich film show

AN AVIATION FILM show to be held at the Assembly House, Norwich, on Wednesday, 28th March, at 7.30 p.m., will include: Richard Cawston's documentary "The Pilots"; the R.A.F. films "Mach 2" and "Streaked Lightning"; and record films of wartime operations by the U.S.A.F. from East Anglian airfields. Details and tickets for the show can be obtained from the Waveney Flying Group, 89 Bridge Road, Oulton Broad, Lowestoft.