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effort to make American-constructed jet airliners not only the
fastest in the world but also the safest."
These curious views have brought the following comments from
the de Havilland Aircraft Co., Ltd. (our own reactions are given
in a leading article in this issue):—
"The points raised by Mr. Lee about the take-off performance of jet airliners are all covered by the licensing requirements for British civil aircraft. Irrespective of the type of power unit em-ployed, all civil aircraft, including the Comet, must demonstrate their ability to take off safely and climb away if one engine fails at the most critical time. The following facts should be noted in connection with the specific points mentioned by Mr. Lee :— "(1) The statement that the thrust of the jet engine is compara-tively low before reaching operating altitude is contrary to the facts, in that the jet engine develops its maximum thrust at sea-level. "(2) No pure-jet-engined aircraft can ever have propeller-blown slipstream over the wing. This is one of the reasons why the jet-engined aircraft suffers less if an engine should fail at take-off. "(3) Regarding Mr. Lee's further statement, about the slow acceleration and fiat climb of jet aircraft, it can be said that the take-off acceleration of a jet aircraft is no worse than that of a propeller-driven aircraft and the angle of climb is considerably better. The Comet 1 is designed and certificated to operate from existing airfields and the succeeding Series 2 and 3 Comets will require progressively less runway. For example, the Series 3, under standard conditions, requires only 6,000 feet of runway to clear a 50ft obstacle at the end of the runway, assuming one engine to fail at the critical point, and this at maximum gross weight. "(4) As regards reversed thrust for landing, alternative schemes are under development, although none is yet available. In the case of the Comet the approach and landing speeds are no higher than some of the current types of propeller-driven American airliners. "(5) Engine failure during take-off is far less probable with a jet engine, because of its relative simplicity. In over 12,000 hours of Comet flying there has been no case of engine failure at take-off. If such should happen the effect is far less serious than with a normal aircraft, because of the absence of propeller drag. The Comet carries a flight engineer and any loss of power would be detected immediately and just as quickly as in a piston-engined aircraft. "(6) The prevention of explosive decompression in the cabin is merely a matter of good engineering. The windows of the Comet 3 have been tested to more than 20 times the maximum working pressure to which they are subjected in flight.
"(7) The handling characteristics of the Comet at high speeds are thoroughly well known and are not at all dangerous.
"(8) It is true that at high altitudes and at high temperatures kerosine and air can form an explosive mixture. But the tempera-ture of the fuel has to be above 20 deg C, and with an outside air temperature of -55 deg C such explosive mixtures are unlikely to occur. In any event, at these altitudes the Comet is above the weather and will not fly into electric storms. At lower altitudes, where the storms may be encountered, an aircraft using ordinary petrol runs a worse risk in temperatures below -15 deg C."

The Airlines—A Busy Easter

EASTER week-end which brought a holiday to millions was a

time of exceptional activity for civil-aviation interests. As crowded aircraft flew out of London Airport on Friday evening, bound for the Continent, Air France brought in for the first time one of their remarkable double-deck Breguet Provences to help with the holiday traffic. Flight inspected the huge machine— F-BASQ—and was most impressed with the businesslike 107-seat layout. The type is described on pages 458-461.
Elsewhere at London Airport the main traffic tunnel from the Bath Road to the new central terminal building was completed except for fighting. It is half a mile long and 87ft wide, and will be officially opened in October.
Comets were in the news the next day, mainly because of the good progress on the noteworthy first jet service on the Tokio route. The arrival, with 36 B.O.A.C. passengers, was five minutes ahead of timetable. The 10,200-mile journey from London is scheduled to take 36 hours outwards and 38 hr 50 min return. The Comet left on its homeward flight with 22 passengers on the same (Sunday) afternoon and reached London Airport on schedule. Piston-engined aircraft have been taking about 80 hours. Coincident with this inauguration of a third B.O.A.C. long-distance jet service came the news of an order for two D.H. Comet 3s from Air-India International, for inter-continental ser-vices in 1957. In addition B.O.A.C. announced that they would make two of their Comet is available on hire to South African Airways.
Viscounts—B.E.A.'s Discoveries—were making final proving md test flights in preparation for their first services to Istanbul, Cyprus and Zurich in about a week's time.
Also making civil-aviation news over the week-end was the

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eturn of the Viscount 700 G-AMAV from its six weeks in Canada.

iloted by Jock Bryce, it reached its makers' airfield at Wisley on unday morning, having arrived at Prestwick overnight. It had

left Goose Bay at 0600 hr G.M.T. on Saturday and, flying via Bluie West and Iceland, had made Prestwick at 1823 hr—thus completing the first two-way Atlantic trip by a turboprop. Mr. Bryce told us that he had enjoyed a completely uneventful cross-ing, in perfect weather. Designer George Edwards, who went out on the aircraft, had returned to England earlier, and was at Wisley to meet the returning party.
Initially, in Montreal, the 15 Vickers-Armstrongs technicians on board were joined by T.C.A. engineers, and the Viscount flew on to Winnipeg and then to Fort Churchill, Hudson's Bay. Here, in temperatures as low as —32 deg C, tests were made of engine starting (the Darts were immediately run up to full power after 24 hr in the open), actuators and other items likely to be affected by cold. G-AMAV then returned to Montreal for icing tests. T.C.A.—who have ordered 15 Viscounts—expressed them-selves "very pleased" with the results. Flying time on the com-plete trip totalled 113J hr. During a visit to New York, Manhattan was circled at 1,000ft.

Air Ministry Expenditure

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[the Appropriation Account for the Air Services for the period 1951-52, published last week, the report of the Comptroller and Auditor General, Sir Frank Tribe, contained a number of criticisms of Air Ministry expenditure during the period.
According to Sir Frank, the Air Ministry had spent about £6 m more than had been authorized on certain contracts totalling approximately £20.5 m in approved expenditure. One hundred and two cases were involved, and in 85 of these the 10 per cent limit by which Air Ministry was empowered to exceed Estimates had been overstepped. In many instances, the work had been carried out without permission even being sought. The Ministry had admitted the delays in referring matters to the Treasury, but pleaded that there was an inevitable time-lag owing to the difficulty of assessing, and attempting to reduce, costs.
Another point criticized in the report was the cost—£388,920—
of hiring B.O.A.C. and charter aircraft in the summer of 1951 as reserves in case transport operations were required to and from Abadan. Ten Yorks and their crews were concerned, and these were hired at rates of from £380 to £420 a day, plus £50 an hour when airborne (or £20 if R.A.F. petrol was used). One of the Yorks was on loan to the charter company from the R.A.F., at £1 a day, and it was supplied at £240 a day. The Air Ministry replied to this charge by saying that the two companies were deprived of their aircraft at the height of the tourist season, at a few days' notice, and that, additionally, they had to provide reserve aircrews and certain ground-crews and spares. It had not been possible to utilize existing R.A.F. Yorks and crews at short notice. In these circumstances the charges had seemed fair.

The New R.Ae.S. President

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T a meeting of the Royal Aeronautical Society held on March 26th, Sir William S. Farren, C.B., M.B.E., M.A., F.R.S., M.I.Mech.E., F.R.Ae.S., was elected president for 1953-54, and will take office at the annual general meeting on May 7th. Sir William, who has been technical director of A. V. Roe and Co., Ltd., since 1947, has had a long and distinguished career in aviation. Born on
April 3rd, 1892, he was educated
at Perse School and Trinity
College, Cambridge, and began
his engineering career with the
B.T.H. Company. He soon
turned to aircraft engineering,
and by 1915 was in charge of the
experimental and design aspects
of aerodynamics at Farnborough;
he learned to fly in 1916, and
flew regularly as a pilot until as
recently as 1948.
From 1918 to 1920 he was with
Armstrong Whitworth Aircraft,
from 1920 to 1922 he lectured at
Cambridge on engineering and
aeronautics, and then, until 1931,
at the Royal College of Science,
on aircraft structures. In 1937
he abandoned academic work and
was appointed Deputy Director
of Scientific Research, Air Minis-
try, and early on in the war period he was Director of Technical Development at M.A.P. In July 1941 he returned to the R.A.E., Farnborough, as its director, and between then and 1945 he flew most of the British, many of the American and some of the German aircraft which came to the Establishment.

Deciding to enter industry after the war, he went to Blackburn Aircraft as technical director, and in November 1947 he went to A. V. Roe and Co., Ltd:

Sir William S. Farren.