

JOSEPH SMITH C.B.E., *Fellow*

1898 - 1956

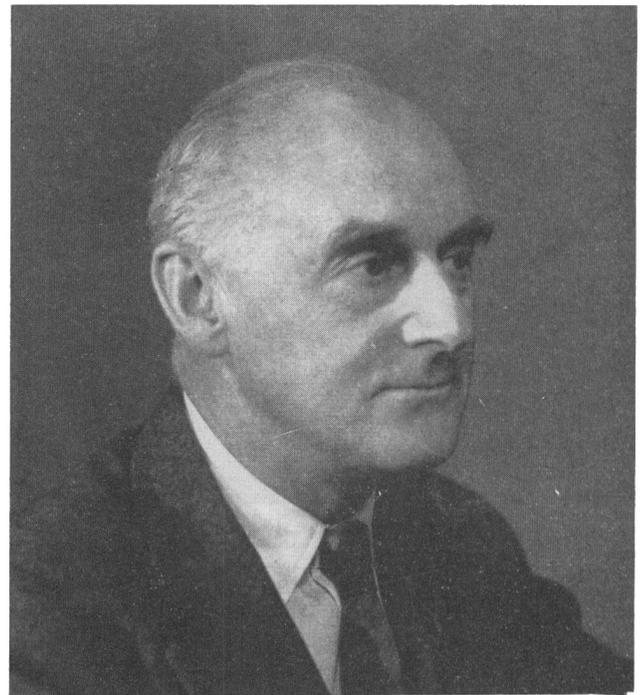
THE FACT that he was known as "Joe" to his staff, to the Aircraft Industry in general and to his friends in the Services and Ministries speaks volumes for the affection in which Joseph Smith, C.B.E., M.I.Mech.E., F.R.Ae.S., Chief Designer of the Supermarine Works of Vickers-Armstrongs (Aircraft) Ltd., was held. By his death on 20th February 1956 at the early age of 58 the Aircraft Industry has lost one of its most charming and likeable characters: it has also lost one of its most capable pioneers and a man whose whole working life was devoted to aircraft design.

Joe Smith was awarded the C.B.E. in 1946 in recognition of his war efforts and the Royal Aeronautical Society's Silver Medal in 1950 for his outstanding work on the design and development of high-speed aircraft. In 1948 he was appointed a Special Director of Vickers-Armstrongs (Aircraft) Ltd., and he served as Chairman of the Technical Board and Technical Executive Committee of the Society of British Aircraft Constructors from 1948 till 1951. He also served as Chairman of the Aircraft Industries Standards Committee, and as a member of the Engineering Divisional Council of the British Standards Institute. In 1956 he was posthumously awarded the British Gold Medal by the Royal Aeronautical Society for work of an outstanding nature in Aeronautics.

Joe Smith was born in 1898 near Birmingham, the nursery of practical engineers. He received his technical training at the Birmingham Municipal Technical School, and as an apprentice to the Austin Motor Company. He was just old enough to be involved in the First World War, and served in the Royal Naval Volunteer Reserve. The story has it that he and a few equally adventurous young men brought a naval launch *via* river and canal all the way across France, a foretaste perhaps of the other apparently "impossible" jobs he was to tackle.

After the war he returned to Austins and completed his apprenticeship, and was then transferred to their Aeroplane drawing office, at the time when the Austin "Whippet" was being designed. This exciting new form of engineering made an instant appeal to him, and when the opportunity arose in 1921 he joined the small team of young engineers which R. J. Mitchell was then collecting together at the Supermarine Works in Southampton. He probably did not realise it, but he had joined the design team which was to absorb his life's work, and of which he was to become leader.

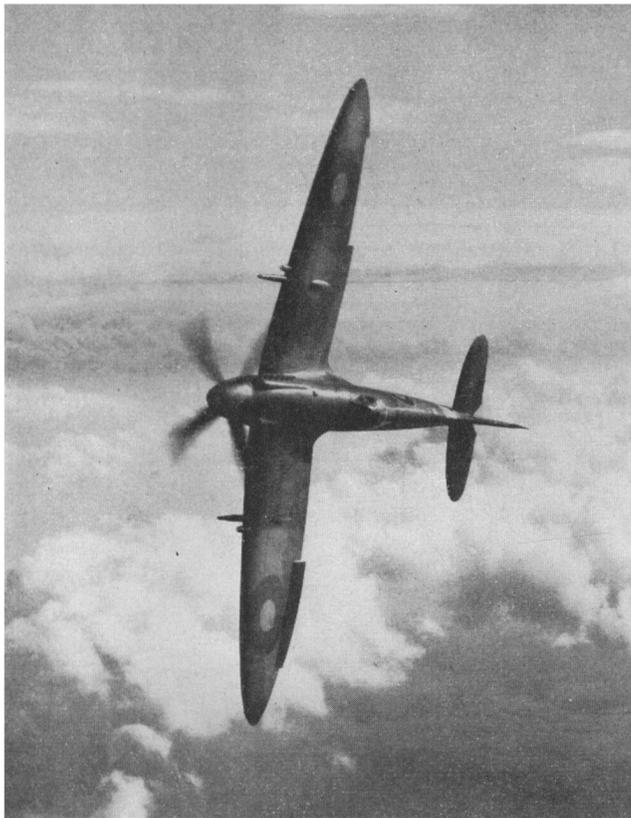
Being a member of Mitchell's team in the 1920's was no sinecure, but the successes which were achieved were not only a great incentive, but constituted the most valuable experience such a man as Joe Smith could



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possibly have wished for. His drive and energy, combined with his technical ability, soon marked him out for promotion, and in 1926 Mitchell made him Chief Draughtsman. There is no doubt that Joe made a very large contribution to the success of such historic aircraft as the "Southampton" flying boat and the Schneider Trophy racers. Two years later the Supermarine Aviation Works were acquired by Vickers Ltd., and further expansion resulted. Stirring times followed for this young design team, whose average age was only thirty. Vickers Supermarine produced four successful types of sea-going aircraft—the Scapa and Stranraer flying boats, the Seagull (later Walrus) amphibian, and culminated in the two versions of the S.6 which won the Schneider Trophy outright for Britain in 1931.

Mitchell decided that the Firm's experience with racing aircraft could be applied to the design of land-based fighters. The first venture, the steam-cooled F.7/30, was not entirely successful, but it led to a modified version which subsequently became the Spitfire. Mitchell died in 1937, and Joe Smith was chosen to succeed him as leader of the design team. The Spitfire had flown in prototype form and was acknowledged as a successful fighter, but a great deal remained to be done in the way of development if the full potentialities of the aircraft were to be realised.



The Spitfire 14.

It was not easy to follow in the footsteps of a genius, but Joe Smith had exactly the right capabilities to tackle the development problems involved, and to shoulder the heavy burden of responsibility. The measure by which he succeeded in carrying out his task is the conviction in the minds of those of us who worked with him that Mitchell would have been well satisfied with what was achieved. He kept the Spitfire, and later, the Seafire, in the front line of our defences throughout the war by designing a long series of aircraft with continually increasing performance and fighting efficiency. This was achieved with the help of the Rolls-Royce team under Hives (now Lord Hives) with their famous Merlin and Griffon engines, and propeller development, first by de Havillands and later by Rotols. Joe Smith was a firm believer in personal contact, and a great many meetings were held at managerial and technical levels to thrash out the problems and new ideas in order that the next mark of Spitfire should be a worthy successor to those which had gone before. Three or four new

types appeared every year, and the final total was 22,758 Spitfires and Seafires in 33 different marks. Typically, Joe himself was never satisfied with the rate of progress!

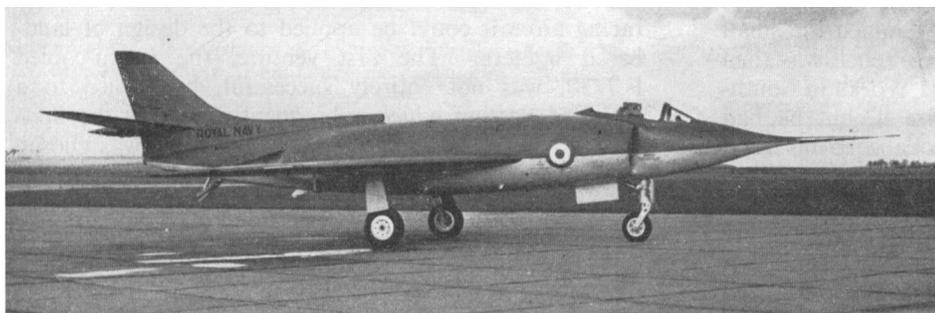
The final Spitfire was re-named Spiteful, and was the last of the firm's propeller-driven fighters. Its career was cut short by the end of the war, and Joe Smith next designed the first Naval jet fighter, the Attacker, using the Spiteful wing. Powered by the Nene engine, the Attacker saw service with the Royal Navy and took the 100 km. Closed Circuit in 1948 at a speed of 564 m.p.h.

After the Attacker came a swept-wing fighter known as the Type 510, which later became the Swift. This aircraft gained the World's Speed Record of 735 m.p.h. for Britain in 1953. Following the Type 510 came a twin-engined fighter, the N.9/47, and later, a swept-wing form of the aircraft known as the Type 525. This is now in production for the Royal Navy—the N.113—in which form it has recently successfully completed its first deck-landing trials on H.M.S. Ark Royal.

It will be seen from this brief summary that Joe's main pre-occupation has been fighter development, but he was also responsible for a post-war Sea Otter replacement, the Seagull, an amphibian flying boat which incorporated a variable incidence wing and slotted flaps, producing an outstanding range of speed.

Joe, who was responsible for so many fighter aircraft, was himself a fighter who met and overcame the technical problems which constitute the life of an aircraft designer by the application of sound engineering principles and experience, together with tenacity of purpose and unflinching good humour. In his off-duty hours the phrase "the life and soul of the party" might well have been specially invented with Joe in mind. His sincere humanity, coupled with a most lively sense of humour made him a delightful companion, yet with all this was combined the greatest possible distaste for any personal publicity, for Joe was in many ways a shy man, and the occasions on which he had to appear in public as the principal figure were ordeals to be faced. The deep sense of loss which is felt by all who knew him is due in part to the realisation of such a tragic end to a brilliant career, but also to his exceptional quality of comradeship with other men which created so much friendship and goodwill. He expected much of his staff, but their well-being was his greatest concern: particularly did he have a deep-rooted sense of responsibility for the safety of the pilots who flew his aircraft.

The world at large and the Aircraft Industry in particular can ill afford the loss of such a man.—A.B.



The Supermarine N.113 twin-jet Naval fighter.