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ARTHUR VALENTINE CLEAVER [1917-1977]

Abstract

Val Cleaver was a prominent British rocket engineer who is best known for his work as chief engineer at Rolls Royce in the development of the RZ2 engines for the Blue Streak missile. Arthur C. Clarke once described Cleaver as the man who should have been the British Von Braun and like Von Braun Cleaver was interested in the wider horizons of space travel and much of his life was spent championing this cause.

Cleaver was born on February 14th 1917 in Conway North Wales to Percy and Mildred Cleaver. After elementary schools he attended Acton Technical College for three years from 1931. From 1934 to 1939 he continued his education at evening classes working for a degree in aeronautics but the war interrupted his studies before he could complete his final examinations.

He joined the propeller Division of de Havilland in 1935 and during the war was responsible for establishing the standards used to evaluate airscrew performance. At the end of the war he became the Chief Project Engineer for the de Havilland Propeller Company before transferring to the de Havilland Engine Company. As a result of rocket developments in Germany during the war he became the Special Projects Engineer with a brief to study rocket feasibility and subsequently he became responsible for the development of the Sprite liquid propellant rocket. In 1956 he joined Rolls Royce as Chief Engineer of their rocket team where he developed the RZ2 engine for the Blue Streak missile. The engine worked perfectly on all of its thirteen launches. Cleaver was closely involved in the development of the ELDO launcher and was tireless in his attempts to promote an effective European space entity. His disappointment at the lack of support from the British Government for a European venture had a profound effect on him. He was however awarded the OBE in recognition of his part in the Blue Streak Programme.

Cleaver was a very early member of the British Interplanetary Society, [BIS] joining in 1936 and became Chairman in 1948 for three years. Cleaver used BIS to promote his vision of space travel and one of his most significant publications was a collaboration with L. Shepherd in JBIS on 'The Atomic Rocket' which was the first published paper in open literature to propose the use of nuclear powered engines with hydrogen as the working fluid.

He died on 16th September 1977 aged 60.