

OBITUARIES

ROBERT HURST

Robert Hurst, CBE, GM, first director of the experimental reactor project at Dounreay, died on May 16 aged 81. He was born on January 3, 1915.

BOB HURST belonged to the generation of clever young atomic scientists who laid the foundations for Britain's nuclear power programme after the Second World War. The chemistry of plutonium was among the new areas he explored while he was head of a sequence of research groups at Harwell in the late 1940s and 1950s.

But, despite his distinguished progress, culminating in his appointment to the directorship of Dounreay at the early age of 43, this was only the second phase of a career which had earlier established him as a war hero.

Interrupting his PhD studies at Cambridge in 1940, Hurst volunteered to work as a civilian scientist with bomb disposal and mine detection teams during the war. For the next five years he worked as a "hands-on" experimental officer through the Blitz and the terrifying V1 and V2 raids.

His most famous experiment came in June 1944 when Hurst was a leading member of the team led by Major (now Professor) John Hudson, Royal Engineers, which defused the first intact flying bomb found in Britain. The so-called "Doodlebug" contained a new kind of fuse which Hurst and the others were instructed to recover intact "without fail".

The nerve-testing operation on a Sussex farm lasted a week, Hurst and Hudson working in shifts during daylight hours, fighting off waves of dizziness and nausea brought on by toxic fumes from the explosive. Continuing air raids complicated their task, while they knew that the slightest wrong move could have set off the clockwork mechanism of the time fuse inside the bomb. But they made it, and the citation for Hurst's George Medal, which was published in the *London Gazette* three months later, praised their "sustained courage and determination".

Hurst was put into uniform himself at the end of the war and flown to Berlin to help to detect and make safe unexploded bombs dropped by the Allies on the city. This was not, however, his first involvement with Hitler's Germany. As an undergradu-



Robert Hurst with Queen Elizabeth the Queen Mother at the opening of Dounreay nuclear power station in 1958

ate in New Zealand in the 1930s, Hurst belonged to a group of students who had helped Jews to escape from the Nazis. Among those they aided was the Austrian-born philosopher Sir Karl Popper, whom Hurst got to know in New Zealand and later in Britain. Among his more treasured possessions was a signed first edition of Popper's book *The Open Society and its Enemies*.

The son of a New Zealand businessman, Robert Hurst was born in Nelson on South Island. He was soon recognised as an outstanding student at school in Nelson and at Canterbury College, where he took an MSc in physical chemistry. From there he won a fellowship at Emmanuel College, Cambridge, and sailed for England in

1939, working his passage as a radio operator on board ship.

The war broke out during the voyage and the ship was held up in the Caribbean while it was hastily camouflaged in battleship grey. Once in Britain, Hurst completed the first year of his doctorate before volunteering for the work of bomb disposal.

At the end of the war, he returned to Cambridge to finish his thesis, then joined the newly opened Atomic Energy Research Establishment at Harwell in 1948.

At first he was engaged in studying the chemistry of materials, notably plutonium. But then he moved on to head a project team investigating the potential of various kinds of nuclear reactor. After a brief spell, 1957-58, as

chief chemist at the Atomic Energy Authority's Industrial Research and Development branch at Risley, Cheshire, Hurst was offered in 1958 the directorship of the new experimental "fast breeder" reactor complex at Dounreay in Caithness. It was a highly prized appointment for one so comparatively young at a time when the fast breeder reactors — which produced more fuel than they burnt — were thought to hold the future for Britain's energy needs.

Five years later, however, Bob Hurst was coaxed by a fellow émigré to leave the nuclear industry for something entirely different. He became director of research at the British Ship Research Association, which had been founded to help Britain to keep pace with increasing competition in shipbuilding.

Computer-aided design was among the technical innovations introduced under Hurst, who brought to the job his considerable experience of managing research and applying its results.

Retiring in 1976, he applied similar qualities to his garden in Poole, Dorset, which he transformed from a wilderness, while turning himself into an expert on bonsai trees. He also researched the genealogy of his family, although he failed to trace back the Hursts beyond the Australian Gold Rush in the last century.

An early heart attack prevented him from becoming an amateur sailor. But he worked for the local sailing club on land and did voluntary work for the Royal National Lifeboat Institution. As a student he had been an accomplished cross-country runner and hockey player.

A quiet, well-balanced person, one of his strengths was a prodigious memory which made him a somewhat daunting conversationalist. Recalling almost everything he had heard and read, he seemed to know more about any subject than even those who claimed to be experts.

But he was also a very practical entrepreneur who, while at Harwell, kept his diary on a blackboard, rubbing out and chalking in changes as required. Robert Hurst, who died after a third heart attack, is survived by his wife Rachael, whose parents had kept the Sussex hotel in which he had stayed for part of the war, and by three sons.