

generating heavy water reactor at Winfrith Heath, in which he played a crucial part.

It was only towards the end of 1965—two years after construction of the reactor was sanctioned—that Arthur Firth underwent a major operation and after a short interval resumed work, knowing that what had promised to be a brilliant career might be cut short—a fact he accepted philosophically. Until only a few weeks before his death he continued his unsparing work for the success of the project, and before the end came had the satisfaction of knowing that the reactor had gone critical and that final nuclear tests had begun according to schedule.

Quiet in manner and with an unassuming charm, Arthur Firth appraised situations without bias and brought not only engineering experience and skill as a designer to bear on the project in hand, but a firmness in management reflecting his own clear thinking.

He was elected an Associate Member in 1952.

He is survived by his widow and two children—a son and daughter.

Sir Josiah Eccles, CBE, DSc

who was born on 29 July, 1897, died on 14 October, 1967.

Educated at Cookstown Academy, he studied from 1919–22 at Queen's University, Belfast, taking a first-class honours degree in electrical engineering. Much later (1956) he received his DSc.

Service in World War I (1914–18) intervened between school and university. In 1917 he received the Military Medal.

Ahead lay a brilliant future in electrical engineering at a period of vast potential, in which his own qualities and education were reinforced by a remarkably thorough grounding with Metropolitan-Vickers Electrical Company in Manchester. Here he remained for six years, serving his post-graduate apprenticeship from 1922–24. The next two years were spent as Engineering Assistant in the Company's relay and meter department, development laboratory and test section, with finally two years as Erection Engineer—a post in which he commissioned half the Company's new plant in Scotland and was responsible for maintenance and site erection. He took charge of Motherwell's switch from local generation to bulk supply of electricity.

In 1928 Josiah Eccles was appointed Senior Technical Assistant to the Electricity Supply Department of Edinburgh Corporation, where with a staff of ten draughtsmen, he himself prepared contract specifications for all works executed and plant purchased by his Department. These included turbo-generators, pumps, pipework, coal handling plant and switchgear for 60 substations. Eight years later he was also made Construction Engineer to the Department, and in 1937 Deputy Engineer and Manager: finally (1940–44) Engineer and Manager. He then accepted a post in Liverpool as City Electrical and Lighting Engineer, and after four years there became Chairman of Merseyside and North Wales Electricity Board (1948–54). There followed three years as Deputy Chairman (Operations) to the British Electricity Authority and from 1957 he served on the Electricity Council (from 1958 as Deputy Chairman). He retired in 1961.

Honours and appointments snowballed in his later years. A member of the Council of the Institution of Electrical Engineers from 1945, he was later their Vice-President and finally in 1954 President. He was a member of the Institution of Mechanical Engineers, and from 1947-48 President of the Incorporated Municipal Electrical Association. The following year he was Chairman of the Council of the British Electrical Development Association and in 1957 President of the British Electrical Power Convention. He found time to contribute to a number of technical journals. In 1957 he received a knighthood.

Elected an Associate Member in 1941, he became a Member in 1945.

Predeceased by his only son, he is survived by his widow and two daughters.

Henry Dudley Gill

who was born on 14 July, 1874, died on 15 October, 1967.

Educated at the City of London School, he studied mechanical engineering at Finsbury Technical College from 1890-92.

His practical training was in Grantham, where for two years as an apprentice to Richard Hornsby & Sons he earned 7s a week, working on the Hornsby oil engine. In 1899 he joined Reavell & Company, Ltd, of Ipswich, as head of their Testing Department, engaged on the high-speed steam engines then being manufactured under the Scott patent. Three years later he became Works Manager of Ralph Horsfield & Company, of Bredbury, near Stockport, and there from 1902-05 worked on the design and manufacture of high-speed compound enclosed steam engines. At this time he drove the first car in his area (a Packard)—a sidelight on the period which underlines the then paramount importance of achieving fast rail travel.

The later years of his engineering career were spent in India. In 1905 he joined Richardson & Cruddas, of Bombay, as Works Manager, and in 1909 was made a partner of the firm. His first concern was to modernize and expand: an iron foundry of advanced type was installed, business greatly increased by a number of bridge-building projects and construction of large barges for freight, and—with the projected opening of a branch in Madras—the firm's activities extended to Southern India.

Henry Gill retired in 1919 and returned home to settle in Plymouth. Ahead lay close on 50 active years in which he was to serve well the County of Devon—as a member for 37 years of Devon County Council, as County Magistrate from 1931-35, and as Chairman for 12 years of the Public Assistance Committee.

During World War II he was engaged in local defence and food supply, and after the introduction of the new National Health Service became in 1948 Chairman of Plymouth Special Hospitals Management Committee. During his final years with Devon County Council the construction of Tamer Bridge was of absorbing interest to him, and he was a member of the committee which held discussions on the project with Cornwall County and Plymouth City authorities.

Henry Gill was remarkable both for his ability as an engineer and for the conscientiousness which was an integral part of his nature. Though much of