

Balfern Estate (reconstruction of concrete suction and service tanks and introduction of pressure filtration and electric pumping plants) and improvements to Terrigles Estate, by separating water supplies into high and low-pressure areas.

In 1940 he became Civil Engineer to the Department, and for the next ten years prepared and executed by direct labour schemes for land drainage and flood protection, under the Land Drainage (Scotland) Act of 1941 and other Acts—Piltanton Burn drainage, Crooks POW drainage, tidal flood-banks at Locharwoods, Greenmerse, Tomich, and others. He inspected land drainage schemes prepared and submitted for grants by outside firms of consulting engineers, and from 1947 onwards was also in charge of the maintenance and calibration of the 40 gauging stations operated throughout Scotland by the Department. In 1949 he designed and supervised construction of a 45 ft-span bridge at Daljedburch to standard MOT loading.

When in 1951 Mr F. W. Waddell (M) became Chief Engineer, James Wilson was put in charge of a survey for an ambitious project to drain 11 500 acres of highlands and protect from flooding 95 miles of the River Spey. Flood banking, internal drainage of haughlands and treatment of deep peat lands were only a few of the items on the agenda. After completing his report and estimates in December, 1954, he was engaged by his Department on river gauging work covering the whole of Scotland. Starting with 52 operative gauging stations, the aim was ultimately to increase the network to 80 primary and 220 secondary stations. His sudden death came while he was still involved in the intricate responsibilities of this programme.

James Cunningham Wilson was an Associate Member of the Institution of Structural Engineers and of the Institution of Water Engineers. He was an Associate of the Royal Institute of Chartered Surveyors. From 1950–52 he was Secretary to the Scottish Sub-Committee of the Inland Water Survey Committee.

He was Chairman of the Edinburgh and East of Scotland Association from 1964–65 and a member of the Hydrological Group from 1963 to the time of his death. In the Scottish Hydrological Group, of which he was the founder, he has an enduring memorial.

Elected an Associate Member in 1932, he became a Member in 1956.

He is survived by his widow and two sons.

James Gray, CBE, BSc

who was born on 28 October, 1877, died on 20 January, 1968.

Educated at the Merchant Venturers' School, Bristol, he studied engineering at the Merchant Venturers' Technical College and received the degree of BSc at the newly-established Bristol University in 1910.

Of Scots parentage, his future lay in marine engineering. After a five-year apprenticeship in the engine works of Fairfields Shipping & Engineering Company, he spent seven years as a draughtsman for several firms in succession—Fairfields, the Union Castle Mail Steamship Company, Yarrow & Company, of Poplar, and again Fairfields. From 1908–12 he was Assistant Superintendent Engineer to the Union Castle Line, then for two years Chief Superintendent Engineer with the Canadian Pacific Railway, marine division.

OBITUARY

Returning in 1915 to Union Castle in this same capacity, his qualities as an engineer impressed Lord Kysant, head of the shipping combine of Harland & Wolff: he in 1925 gave him the post he was to hold for the next ten years, as General Manager of Harland & Wolff's Works in London, Liverpool and Southampton. He was elected to the Board in 1929.

Six years later the Union Castle Line were ordering three new liners to be propelled by the most powerful diesel engines then afloat (the *Stirling Castle*, *Athlone Castle* and *Capetown Castle*) and it was arranged that Gray should return to them. Later he became their Technical Director, with duties extending over all technical matters affecting hull and machinery, and supervising the building in Belfast of these and other vessels, including the *Pretoria Castle* and *Edinburgh Castle*. From 1935 until his retirement in 1956 (in his late seventies), his responsibilities extended over the building and repowering of a wide range of ships.

A member of the (now Royal) Institution of Naval Architects, he was made a CBE in 1942.

Described as a quiet, contemplative man who avoided the limelight, James Gray in his own field stood head and shoulders above his fellows.

Elected an Associate Member in 1906, he became a Member in 1919—a near-record of 62 years on the Roll of the Institution.

He is survived by his widow and two daughters.

DEATHS

It is with deep regret that intimation of the death of the following has been received.

Members

Ernest Reginald Griffiths (E. 1941, T. 1958)
Narhar Sawalaram Gupchup, BSc, BE (E. 1939, T. 1958)
John Letham White, CBE, DL, BSc (Former Member of Council) (E. 1912, T. 1947)

Associate members

Noel Bayzand Ellington, BA (E. 1907)
Guy Montgomery Gordon, OBE, BA, BAI (E. 1920)
John Grove-White, VD (E. 1909)
Malcolm Heddle, DSO, MC, BSc (E. 1918)
Walter Donald Homer, BSc (E. 1938)
Ernest Ford Watson Mayhew (E. 1908)
Neville Annandale Reeve (E. 1949)
Robert Kinnear Wood (E. 1935)