

Civils de France, he was Chairman of the International Committee on Special Cements for Large Dams. He served on innumerable committees, including the British National Committee on Large Dams and the British Committee on Special Cements for Large Dams (1934–36). In 1924 he attended the First World Power Conference in London, to which he contributed a paper on 'Swedish Arch Dam Design'. From 1929–34 he was Hon. Secretary of the Anglo-Swedish Society in London. In 1952 he received the Swedish Order of Nordstjarnan. On the International Commission on Large Dams in Washington in 1936 he represented his Government and from 1939–45 was President of the *Fédération Internationale des Ingenieurs-Conseil (FIDIC)*.

Of him John Palmer writes, 'B.M.H. was one of the two most magnificent great men it has ever been my good fortune to have known and loved'.

Elected an Associate Member in 1933, he became a Member in 1935.

He is survived by his widow, three sons and a daughter.

Selection of writings

1918. 'Turbine Scroll Cases of Reinforced Concrete'. *Teknisk Tidskrift*.
1919. 'Coefficients of flow in the pipeline at Haby Hydro-electric Power Station'. *Teknisk Tidskrift*.
1921. With Dr F. R. Berwald. 'Treatise on variations of Temperature and Stresses in Reinforced Concrete'. (Awarded Gold Medal by Svenska Teknologforeningen.)
1923. 'Multiple Arch Dam at Melby'. *Teknisk Tidskrift*.
1924. 'Recent Swedish Arch Dam Design: Transactions of the World Power Conference, London, 1924'.
1924. 'The Israelites' Crossing of the Red Sea'. Stockholm. (See also Tract, 4th Vol. 169. Stockholm, 1950.)
1951. 'The Oldest Dam in the World'.

James Kelman Cunningham Wilson

who was born on 3 January, 1905, died on 18 December, 1967.

Educated at Robert Gordon's Secondary School, Aberdeen, his five-year practical training under R. W. Walker, AM (of Walker & Duncan, Aberdeen), was followed by varied experience in Spain and Mexico. After a year in Spain as Assistant Engineer to the Foundation Company on the Islas de Guadalquivir reclamation scheme, he became Surveyor to the Geological Department of the Mexican Eagle Oil Company. In 1929 he was transferred to their Engineering Department in Mexico as Resident Engineer in the Tonalá and El Burro oilfields, but in 1931 was back in Scotland and spent the next two years as Engineer with William Tawse Ltd, on the Glasgow-Inverness Road contract.

After taking the Institution's examination, two years of private study intervened before his appointment in 1934 as Surveyor to the Department of Agriculture for Scotland under the Chief Engineer and Surveyor, A. G. Ingham (M). In the service of this Department—later renamed the Department of Agriculture and Fisheries for Scotland—he was to continue for the rest of his life.

For the first six years he reported on the water and road work necessary for projected estates, prepared schemes and carried them out—either by direct labour or contract. Thus came into being a reservoir to supply water to Dunragit Estate (capacity 9 million gallons), improvement of supplies to

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.