

'Ports and harbours' to a conference held jointly by the Institution, the Institution of Mechanical Engineers and the Institution of Electrical Engineers in 1951. (Jt Conf. 1951, 93).

Elected an Associate Member in 1910, he became a Member in 1930. He is survived by two brothers and a sister.

ALEXANDER GRANT, who was born on 21 March, 1870, died on 2 June, 1964.

Educated at Advie School and Elgin Academy, he received ten years' practical training in the office and works of Messrs Gordon & Macbey, civil engineers, of Inverness and Elgin (the beginning of a lasting association), and in 1897 joined the firm in Inverness. As one of three partners, he was jointly responsible for waterworks and sewerage in several parts of Scotland, including Lossiemouth; for two bridges built for Ross-shire County Council; for the extension of Inverness Harbour quays; and for an 8-mile survey of the River Spey and estimates for two light railways (Kinloss and Findhorn, Inverness and Lochend). From 1910 onwards Mr Grant was in sole charge of the firm, then known as George Gordon & Company, and responsible for estimating for the working plans for Nairn Harbour, new waterworks for Invergordon, the reconstruction of roads to the naval base, and new sewerage works for the town.

During World War I he supervised highways in Inverness-shire, reconstructed Dalmore Mining Base after occupation by the United States' Navy, and carried out many ambitious drainage and water extension schemes. He acquired an intimate knowledge of the main water supply systems in the northern counties of Scotland from Lossiemouth to Thurso and wide experience of harbour works, land surveying, road engineering, and sewerage. During World War II he continued as senior partner of Messrs George Gordon & Company.

In his later years he was consulting engineer to the Northern Town and County Councils, Engineer to the Inverness Harbour Trust and Consulting Engineer to the North of Scotland Hydro-Electric Board in certain northern areas.

Mr Grant was a member of the Institution of Water Engineers and of the Association of Consulting Engineers, a Licentiate of the Royal Institute of British Architects and a Fellow of the Royal Incorporation of Architects in Scotland.

He was elected a Member in 1927.

He is survived by his widow, a son—Mr A. M. Grant, *O.B.E.*—and a daughter.

SIR IVOR RICHARD COX, *D.S.O.*, *D.Sc.*, who was born on 28 March 1891, died in June 1964.

He studied engineering at University College, Cardiff, and received the degree of *B.Sc.* in 1911. After graduating he joined the British Westinghouse Company as an assistant turbine engineer.

In World War I he served in France, Palestine, and Salonika with the Royal Garrison Artillery, and ultimately commanded a brigade, retiring with the rank of Major in 1919. He was twice mentioned in despatches and was awarded the *D.S.O.* and *Croix de Guerre*, with palms.

In 1919 he returned to Metropolitan-Vickers Electrical Company (who succeeded British Westinghouse) and was appointed Chief Turbine Engineer. In 1927 he was sent to the U.S.S.R. on behalf of the Company as Chief Mechanical Engineer for that territory. In 1933 he became a Director of Metropolitan-Vickers Electrical Export Company, and over the next seven years travelled to Turkey, Poland, Australia, and the United States. He also travelled widely in Europe and the Commonwealth in connexion with the generating equipment of electrical power stations. In 1945 he joined the Board of Metropolitan-Vickers Electrical Co. to become Managing Director, a position which he held until 1954.

In 1954 the parent company, Associated Electrical Industries, Ltd, formed a subsidiary company devoted to the manufacture of electrical equipment overseas, and Sir Ivor, already a Director of the main company, became the first Managing Director of A.E.I. Overseas. He also held a number of directorships in Australia, India, Pakistan, and South Africa, and was Chairman of several large companies.

An expert on power stations and heavy electrical machinery, he was a member of the Institution of Mechanical Engineers and of the South Wales Institution of Engineers. From 1950-51 he was Vice-Chairman of B.E.A.M.A. For his outstanding services to industry he received a knighthood in 1955, and retired from service with the A.E.I. companies in 1958.

In 1955 Sir Ivor was made an Officer of the Southern Cross of Brazil in recognition of his services to Anglo-Brazilian trade relations.

He was elected an Associate Member in March 1920.

He is survived by his widow, Lady Cox.

GEOFFREY DILLWORTH LLOYD, O.B.E., M.A., who was born on 31 August, 1906, died on 3 June, 1964.

Educated at Marlborough College, he studied engineering at Cambridge University and received the degree of M.A.

After eighteen months' practical training with Mr J. A. Wickham (M), Chief Engineer for Docks with the London & North-Eastern Railway, he joined Sir Robert MacAlpine & Sons as Assistant Engineer, working first on the construction of Candia Harbour, Crete, then on the Cockfosters extension of the London Underground Railway (cuttings, bridges, and viaducts), and finally on the construction of the North Circular Road at St Albans.

In 1934 he joined the London & North-Eastern Railway as Engineering Assistant to Mr A. Tulip (M), Chief Engineer for Docks, so setting the pattern for the next fourteen years of his career. In 1939 he became Resident Engineer at head office, then Maintenance Engineer to Mr Tulip, a post he retained until 1947, when he was appointed District Engineer for the docks at Hull under Mr W. Mackenzie (M), Chief Docks Engineer. He became Assistant Chief Engineer for the Humber Ports under Mr Mackenzie in 1949, and later Chief Docks Engineer, Humber Ports, a position he held until his sudden death.

Prominent in his profession as an expert in dock and harbour engineering, Mr Lloyd was awarded the O.B.E. in 1964 in recognition of his work in modernizing the port of Hull. In 1960-61 he was a member of the Institution's Divisional Board (Maritime and Waterways division).

Elected an Associate Member in 1932, he became a Member in 1953.

He is survived by his widow and by two sons of his former marriage.