



**Sir John Henry Butters, CMG,
MBE, VD**

who was born on 23 December, 1885, at Alverstoke, England, died in Australia on 29 July, 1969.

Educated at Taunton School, Southampton, he studied engineering at the University College of Southampton, graduating in Engineering Science in 1904. Later that year his practical training began by apprenticeship with J. I. Thornycroft and Co. Ltd, and continued from 1905–7 with Messrs Siemens Brothers and Co. Ltd, where he was subsequently appointed assistant engineer in charge of estimating and design in the Works Cost Section of their Technical Department. In 1908 he was transferred

to Siemens' head office in London, as assistant engineer of their Central Station and Contract Department. Here he was responsible for the Central Station and power plant designs and estimates, for technical advice and supervision of contracts until handed over.

In 1909 he went to Australia as chief engineer of Siemens' Australian Branch to take charge of the company's engineering works in Australia and New Zealand: a year later he advised on the design and layout of the Hira Hora hydro-electric works in New Zealand.

In 1911 he was loaned to the Complex Ores Co. Ltd, as consulting engineer for the design and layout of the first stage of the Great Lake hydro-electric works in Tasmania (capacity, 10 000 hp). Subsequently he was appointed engineer-in-chief of the Hydro-Electric Power and Metallurgical Co. Ltd, and carried on the Great Lake Scheme until it was sold to the Tasmanian Government in 1914. He then became chief engineer and general manager of the Tasmanian Government Hydro-Electric Department and from 1914–24 was responsible for the design, construction, operation and completion of the Great Lake Scheme (with a capacity of 60 000 hp water power, together with two auxiliary steam stations). The distribution system reached out to all important parts of the State. Butters was also responsible for establishing and conducting a water power and hydrometric survey of Tasmania.

In 1916 he was appointed by the Tasmanian Government as its representative on the Institute of Science and Industry—a body which later developed into the Commonwealth Scientific and Industrial Research Organization. In the same year he was selected by the Australian Government as their engineering representative on the Royal Commission on Wheat Shortage.

He volunteered for service abroad with the Australian forces in 1914, but was retained in Australia by the Government. From 1914–19 he served

in his spare time as Chief Engineer of Hobart defences, was promoted to Major for 'specially meritorious services rendered in Australia during the war' and awarded an MBE. In 1922 he had conferred upon him the CMG for services to the State of Tasmania in connexion with the hydro-electric works. Meantime the Tasmanian Government had appointed Mr Butters Chairman of the Committee to report on the water supply of the City of Hobart, and in 1920 as its representative on the Australian Commonwealth Engineering Standards Association.

Two years later he was asked by the Auckland Electric Power Board to report upon its affairs and advise them on future action. The New Zealand Government sought his advice on the organization and functioning of its hydro-electric undertaking, and in 1923 he was appointed Chairman of the Power Survey Committee, to study the power resources of Australia. In 1924 he became Chairman of the Federal Capital Commission of Canberra and was in charge of the building of the City of Canberra, including all buildings and engineering works and services. For his services with the Commission he was knighted in 1929.

On completing the first stage of the building of Canberra the Commission was disbanded, and in 1931 Sir John joined the Board of Associated Newspapers as Deputy Chairman, becoming Chairman in 1940. He retired from the Board in 1956 when the Sydney Morning Herald (John Fairfax Ltd) acquired Associated Newspapers. When in 1932 General Motors (USA) acquired Holden Motor Body Builders of Adelaide, he joined the first Australian Board of General Motors-Holdens and continued as a Director until his death.

Between 1931 and 1937 he was elected to the boards of Babcock & Wilcox, Australia, Hadfields Steel Works (of which he later became Chairman), the North Shore Gas Company (later Chairman), Morts Dock and Engineering Company, the Royal Insurance Company and British General Electric Company.

He was President of the RAC (Australia) from 1937-48, and during that period was also President of the Federal Body of the Club. From 1948 until the time of his death he was Vice-Patron of this association.

In 1933 he was appointed one of three members of the State Government Commission to reconstruct the State Bank of New South Wales, which later became the Rural Bank. In 1935 he served as Chairman of the Macquarie Street Replanning Committee set up by the NSW State Government and from 1937-38 was Chairman of the Circular Quay Replanning Committee.

He was Honorary Consulting Engineer to the Australian Army from 1927-43 and was promoted Honorary Lt Colonel of the Royal Australian Engineers.

In 1946 he was a founding Board Member of Bitumen and Oil Refineries Australia Ltd (now BORAL), and in 1953 of Petroleum and Chemical Corporation Australia Ltd.

Sir John Butters was a Fellow of the American Society of Civil Engineers and of the Institution of Engineers, Australia. He was also a Fellow of the Institution of Electrical Engineers (UK). He was elected direct to Fellowship of ICE in 1927.

Until about 1954 he maintained a consulting engineering practice and led a

continuously active life to within two years of his death, when ill-health forced his progressive retirement from many long-standing interests and directorships.

Sir John's widow has herself since died: he leaves a son and three daughters.

J.W.R.



William Hamilton Shortt

who was born on 28 September, 1881, died on 4 February, 1971.

Educated at Christ's College, Blackheath, he entered the engineering department of the London and South-Western Railway as an engineering Cadet in 1902 under J. W. Jacomb-Hood. In 1906 he was appointed Bridge Assistant to the then London District Engineer, A. W. Szlumper.

He won distinction both as a railway engineer and in the horological field with his invention of the Shortt Free Pendulum Clock, for many years the standard time-keeper at Greenwich Observatory. Apart from the years 1916-18, his engineering career

was devoted to the London and South-Western Railway (later the Southern Railway).

From 1908-10 he served as Secretary to a Sub-Committee of the Railway Engineers' Association on speed of trains round curves: during this period he devised the Shortt Speed Recorder, which by means of an electrically maintained tuning fork measured accurately the time taken for a train to pass a given distance along one rail. This device was later used by the Bridge Stress Committee of the DSIR (1923-27). Shortt presented two papers to the Institution on the subject, 'A practical method for improvement of existing railway curves', P. 176, p. 97, and 'A new method for the improvement of existing railway curves', SEP No. 3 (1923). The principles formulated in these papers still provide the basis for adjusting transition and circular curves on railways.

From 1910-12 he was Resident Engineer at Nine Elms on the construction of the locomotive running shed extension of the LSWR. When in 1914 A. W. Szlumper became Chief Engineer, Shortt was appointed Permanent Way Assistant: two years later he was released from his duties to serve in France with a commission in the Royal Engineers as a Field Company Officer, with the rank of Captain (temporary). In 1919 he resumed work as Permanent Way Assistant to the London and South-Western Railway's Chief Engineer.

In 1922 he became Acting District Engineer to the Western Division, LSWR, and in 1923 was appointed Divisional Engineer, based at Exeter. In this capacity he was responsible for track, bridges, tunnels, signals and earthworks from Salisbury to Devonshire and Cornwall, and for developing the first railway depot at Exmouth Junction for the manufacture of precast concrete products, varying from fence posts to station footbridges; the first