

OBITUARY

SERGE N. LELIAVSKY, who was born on 9 July, 1891, died on 24 July, 1963.

Educated at Kiev Classical College, he studied engineering at the Institute of Alexander I in St Petersburg and passed the severe examinations of that school with distinction. After practical training, he became head of the hydraulic section of the Dneiper Falls Lock and Dam Construction Works, and in 1915 built the Wielke Bloto Dam. During World War I he dislodged a section of the Austrian front in Poland by damming back a river and drowning a whole valley. From 1916 to 1917 he was Technical Secretary to the Higher Council, Inland Navigation Department, in St Petersburg, and for the next four years was based in Ekaterinoslav at the Dnieprostoi Works, in charge of their survey and hydraulic sections, while at the same time lecturing as Professor of the Technical Railway School there.

After the Revolution he left Russia and went to Egypt, where he started work as a draughtsman in charge of calculations for the second heightening of the Aswan Dam. From 1922 to 1924 he acted as engineer on contract in charge of municipal bridges for the Ministry of Communications, and was delegated to the Ministry of Public Works for the hydroelectric scheme of Gharag Valley.

In the next few years he rose swiftly from engineer to head of the Egyptian State Railways (Bridges), while at the same time lecturing as Professor of Irrigation Design to the Egyptian Royal School of Engineering. From 1927 to 1944 he was Chief of the Designs Office, Reservoirs and Nile Barrage Department, Ministry of Public Works, in charge of projects which included the second heightening of the Aswan Dam, new barrages (Nag-Hamadi, Edfina, Mohammed Aly) and the remodelling of the Assiut and Esna barrages. In 1928 he worked with the International Technical Commission on the heightening of the Aswan Dam and came to London the following year to collaborate with the Consulting Engineers (Sir M. MacDonald & Partners) on this project. He helped to prepare the specification and drawing for the hydroelectric scheme in 1933 and was in charge of the civil part. The estimated cost of the dam was £6 000 000.

In addition to his duties as Chief of the Designing Office, Dr Leliavsky had other responsibilities. In 1928 he helped to revise the syllabus of the Royal School of Engineering and later reported on the settlement of the Mixed Court building, investigated cracks in Mohammed Aly Pasha's Mosque in Cairo, reconstructed the arches and cupolas and underpinned minarets. For two years he was a member of the Examining Board of Cairo University's Engineering Faculty. From 1936 to 1940 he was associated with the extension of the Atf Power Station and Nag Hamadi hydroelectric station. At the same time (and up to 1945?) he was engaged in the restoration of the Roda Island Nilometer, work which included the underpinning of masonry 1100 years old.

Dr Leliavsky retired at 60, the limiting age for Egyptian government officials, but continued in private practice.

The son of a distinguished Russian hydraulic engineer, Nicholas de Leliavsky, he was an outstanding personality with wide interests: a Doctor of Philosophy (Cairo), a member of the American Society of Civil Engineers and

of the Society of Authors (London). In addition to his teaching, practice and research, he found time to write a number of books and papers (a selective list of which follows) in his lucid and lively style, and was a frequent contributor to *The Engineer*. The conclusions of his years of experience are published in a monumental 3-volume work, 'Irrigation and hydraulic design'.

In 1915 Dr Leliavsky was awarded the order of St Stanislas II, with swords, for his work on the Wielke Bloto Dam, and in 1945 received the Egyptian title of 'Bey' (abolished in 1952 with all other Egyptian titles). Other honours included the Institution's Crampton Prize (1938), a Telford Premium (1948) and the Stevens' Premium, awarded in 1956 by the American Society of Civil Engineers.

He was elected a Member in 1945.

His sudden death from cerebral haemorrhage came only five days after the death of his wife. He is survived by his sister, Madame Vera Choumiline.

Selective list of books and papers by Dr Leliavsky:

Shearing stresses in gravity dams. *J. Instn civ. Engrs*, vol. 8, February 1938, p. 73.

Stresses and temperature effects in dams, with particular reference to Aswan Dam. *J. Instn civ. Engrs*, vol. 29, January 1948, p. 185.

Thermal movements in the buttresses of the Aswan Dam. *J. Instn civ. Engrs*, vol. 30, March 1948, p. 79.

'An introduction to fluvial hydraulics', Constable, London, 1955.

'Irrigation and hydraulic design', 3 vols, Chapman & Hall, London, 1955-60.

'Uplift in gravity dams: calculation methods, experiments and design theories'. Constable, London, 1958.

JESSEL ROSEN, B.Sc., who was born on 21 November, 1892, died on 9 June, 1963.

Educated at Monmouth Grammar School and Latymer Upper School, he studied engineering at the City & Guilds Engineering College, London, where he took the degree of B.Sc.(Eng.) in 1912. In the same year he joined Messrs C. A. Parsons & Co., working in their test house, workshops, drawing, and design departments under Sir Charles Parsons and Captain A. H. Law. In 1918 he became their Chief Electrical Designer and in 1922 Chief Electrical Engineer.

In 1927 he was made Director and head of Parsons' Electrical Department, responsible for the design, manufacture and development of large dynamo electric machinery, multi- and single-phase turbo-alternators, large power transformers, air-coolers, etc. Altogether he was associated for eighteen years with Sir Charles Parsons, until the latter's death in 1931, and was co-inventor with him of a high voltage alternator (concentric conductor).

In 1940 Mr Rosen volunteered to assist the Director of Electrical Engineering at the Admiralty, and in 1944 was appointed Assistant to the Director, being responsible for the design and development of high-power electrical supply systems and equipment for the Fleet. In 1946 he joined the Admiralty's Department of Scientific Research, where he remained until his later years.

An expert on electrical installations, internal combustion, and steam, Mr