

the Government service shortly before his death, which occurred at Wellington on the 16th September, 1905.

He was elected an Associate Member of the Institution on the 6th December, 1892.

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LOUIS CHARLES DO ROZARIO was born on the 28th October, 1863, and after passing through the engineering course at King's College, London, and gaining the Associateship of the College, he served a pupilage to the late Sir John Hawkshaw, Past-President, from 1884 to 1887, during which period he was employed on the design and construction of the Severn Tunnel railway. After a visit to Hong-Kong, where his family resided, he proceeded in 1888 to the Philippines and served for several years as a District Engineer on the construction of the Manila-Dagupan Railway. In 1891 he returned to Hong-Kong, where he practised on his own account as a civil engineer, but on receiving an accession of fortune, he retired from the active pursuit of his profession, only advising occasionally in engineering matters in an honorary capacity. He died at Hong-Kong on the 12th December, 1905.

Mr. Rozario was elected an Associate Member of the Institution on the 2nd April, 1889.

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FREDERICK SLADE, born on the 28th November, 1823, was the second son of the late Mr. Henry Slade of Aston Upthorpe, near Wallingford. Destined for agricultural pursuits, the subject of this notice was attracted to the engineering profession during the early days of railway construction. In 1846 he entered the service of Messrs. Tredwell Brothers, contractors, and continued in their employment, chiefly as Resident Engineer, until the completion of their last contract in 1872. During this period he was employed on the construction of the Berkshire and Hants, Oxford and Rugby, Bradford and Bathampton, High Wycombe and Thame, and other railways; harbour- and dock-works at Porthcawl; and improvement-works at Bristol harbour. In 1872 he was appointed by Mr. F. C. Stileman to superintend the construction of the Ramsden Dock and other works at Barrow-in-Furness, on the completion of which in 1879 he retired from professional life.

Mr. Slade devoted the remainder of his days chiefly to scientific

pursuits and to active participation in local affairs. He was keenly interested in astronomy and was also an enthusiastic and able meteorologist and a Fellow of the Royal Meteorological Society. His daily records of rainfall and other meteorological conditions at Beckford, extending over a period of 22 years, were compiled with painstaking care and accuracy; and he was well versed in many branches of natural knowledge, to the pursuit of which he brought a trained observation and a keen enjoyment of outdoor life. He died at Beckford, near Tewkesbury, on the 1st December, 1905, in his eighty-second year. In private life his wide culture and attractive personal qualities rendered their possessor a welcome acquisition in social gatherings and endeared him to a large circle of friends.

Mr. Slade was elected an Associate of the Institution on the 5th December, 1876, and was subsequently placed in the class of Associate Members.

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THOMPSON WHITWORTH, born at Batley, Yorkshire, on the 19th May, 1857, served his apprenticeship to Messrs. W. and J. Cardwell, Engineers, of Dewsbury, and, after gaining experience as a draughtsman with Messrs. Greenwood and Batley, of Leeds, he obtained an appointment as Engineer and Assistant Manager to Messrs. Darley and Butler, at Tuticorin, Southern India. He served three years in this capacity, from 1881 to 1884, when, as the climate did not agree with him, he returned home, and for a short period acted as Chief Assistant Engineer to Messrs. Barford and Perkins, of Peterborough. During 1887 he obtained experience of American engineering methods as Assistant Engineer on the staff of the New Jersey Steel and Iron Company, being employed on the design of bridges and other work. Returning to England in the following year, Mr. Whitworth was employed by various firms in the design, erection, and inspection of mining and other machinery, in connection with which he undertook a voyage to Western Australia, and also on two occasions served on the staff of Messrs. S. Pearson and Son, Contractors, first as Mechanical Engineer and Sub-Agent on the Thames Tunnel Works at Blackwall, and afterwards as their managing Mechanical Engineer for the reconstruction of the Wouldham Cement Works, which the firm had acquired for the purpose of manufacturing the cement required for their various contracts. For these works, Mr. Whitworth designed improved appliances for handling and storing cement, which proved