

undertaking at Pernambuco, Brazil. In 1875 he established a consulting practice at Manchester, which he carried on until his death. He was recognized as one of the leading authorities on gas engineering, and was the author of a standard text-book and other technical memoirs, as well as of various literary works in prose and verse. He was a founder and past-president of the Institution of Gas Engineers.

Mr. Newbigging was elected an Associate of The Institution on the 5th April, 1870, and was transferred to the class of Members on the 30th April, 1878.

BERNARD BROTHERTON HARKER, born on the 19th October, 1862, at Poole, Dorset, died at Hong Kong on the 4th December, 1913. On completing an apprenticeship with Messrs. Waring Brothers, of Westminster, he was engaged on railway and waterworks contracts in Argentina and Brazil. In 1894 he went to Hong Kong, where, at first under Mr. Danby, and later independently, he carried out extensive architectural and engineering works, remaining in practice until his death.

Mr. Harker was elected an Associate Member of The Institution on the 7th April, 1903.

COSMO REYNOLD JONES, born at Llanfyllin, N. Wales, on the 9th August, 1877, died on the 16th March, 1914, at Aliwal North, Cape Colony. After serving a pupilage to the late Mr. George Owen, he was engaged for several years on the Cambrian Railways. In 1903 he entered the service of the Capetown Corporation and was employed on the new waterworks scheme, but relinquished this work in 1909 to join the staff of the Central South African Railways, assisting in the survey and construction of various branches of that system until his death.

Mr. Jones was elected an Associate Member of The Institution on the 8th January, 1907.

WILLIAM GEORGE KIRKALDY, who died at Aberdare Gardens, Hampstead, on the 10th April, 1914, was the son of the late Mr. David Kirkaldy,¹ the pioneer of systematic testing of engineering materials. Born on the 6th July, 1862, he was

¹ See Memoir, Minutes of Proceedings Inst. C.E., vol. cxxviii, p. 351.