MR. EDWARD PEASE SMITH was born on the 9th of June, 1816, at Croydon. His parents belonged to the Society of Friends, and he was carefully educated under their auspices. About the year 1833, he entered the office of the Stockton and Darlington railway, after which, among other works at the commencement of his career, he was engaged, between the years 1838 to 1840, as sub-resident Engineer, upon the North Midland railway, then in course of construction near Chesterfield. It was during this period that Mr. Smith first became acquainted with Mr. J. T. Leather, Assoc. Inst. C.E., who was the contractor for a portion of the line. Mr. Smith had a good knowledge of and a taste for mechanical engineering, which led him, after an interval of a few years, to establish works at Southampton. Here his attention was devoted to marine engines, and especially to their furnaces, with a view to the durability of the boilers and the economy of coal. He was not, however, satisfied with the commercial success of his efforts in this direction, and turned his attention wholly to civil engineering.

In the year 1851, Mr. Smith undertook the charge of the Portland breakwater works, as Resident Manager for the contractor, Mr. J. T. Leather. He carried out the system of water supply for the works, by bringing the water from the south side of the island, for which purpose steam pumping power of an efficient kind was provided, and entirely arranged by him. He also isolated the Verne fortifications by a cutting in the solid rock, 100 feet wide, by 75 feet deep, and carried out other important works in scarping the Verne rock. The works of the Weymouth Waterworks Company were constructed under his supervision during this period. In 1859 he went to the Cape of Good Hope, with Mr. A. T. Andrews, M. Inst. C.E., in connection with the harbour works at Table Bay. In 1860–61, he designed and carried out the circular staging for constructing the large pier-head at the outer end of the Portland breakwater, and the fort erected upon it; and in connection therewith arranged an ingenious system of tipping the deposit, and afterwards building the masonry by means of radiating steam-girder travellers of wide span, the steam crabs upon which could command any point below them. This arrangement was subsequently used by Mr. Smith in the construction of other large works, among which may be mentioned the forts at Spithead, Gilkiker Fort, and in the works for the extension of Portsmouth Dockyard. In 1861 the contract was taken by Mr. Leather for the construction of the forts at Spithead; and the whole of the arrangements for carrying out these works, including

concrete-block making, plant, shipping pier, special barges for transport, and circular stages for the construction, were designed by Mr. Smith. In connection with the Spithead forts, it may be mentioned that not a single accident of a serious character happened throughout, and the arrangements were in fact almost perfect. A special feature in all his contrivances was the extreme care with which he provided an ample margin of safety to minimise the risk to life. In 1862, he was also engaged under Mr. (now Sir John) Hawkshaw, Past-President Inst. C.E., in the operations connected with works to remedy the failure of the St. Germain's sluice of the Middle Level drainage. Before the completion of the superstructure of the Spithead forts in the beginning of the year 1867, Mr. Smith undertook for Messrs. Leather, Smith, and Co., the charge, as General Manager, of the important works, then commencing, for the extension of Portsmouth Dockyard, and was chiefly instrumental in modifying and improving the suggested means for successfully executing that work, and he had the satisfaction of seeing the success of his arrangements. There was only one effort of any consequence connected with the works which was not entirely successful. This was an attempt to execute excavations in deep mud by means of dredging machines working from staging. It was of importance to commence this excavation, and, from the nature of the mud and its position and depth, ordinary means were inapplicable, and floating dredgers were out of the question. Complete and well-arranged dredging machines of light construction, worked by steam, were put upon travellers of 64-feet span, of nearly the ordinary pattern in use on works in which Mr. Smith was concerned, and these dredged the mud and put it into wagons at the end of the travellers, from whatever position the dredgers upon them might be, without much difficulty and very economically. But the strains upon the staging and traveller were too great, due partly to the fact that beds of peat with trees and roots were met with, and below the peat in some cases hard rock, the exact position of which was not known until it was touched by the dredger. In the end this method of performing the work had to be abandoned, and the machinery provided for it was converted into an effective means for working inclines. Though of a sanguine disposition and less careful, like many another genius, when his own affairs only were at stake, Mr. Smith possessed distinguished talents as an engineer, and was most discreet and prudent in all matters in which the interests of others were concerned. He was bold in his ideas, but always weighed carefully the probable result of any action, and spared no pains to ensure success. In works of the

magnitude of those of which Mr. Smith had charge, many difficulties of course had to be met, and his promptness and resource were on all occasions noticeable. He possessed in a marked degree the happy faculty of carrying his assistants with him in all his efforts, and was ever ready to hear and fairly consider any suggested improvement in arrangements, however differing from his own views, and frankly to give credit to those under him for what was their due. Mr. Smith had considerable experience in matters connected with diving, beyond those in which that operation had to be resorted to in carrying out the construction of works of which he had charge, as in the recovery of valuable property lost by shipwreck, and he was much looked up to for his judgment by the men he employed. His views as to the limit to which it was possible to carry diving operations usefully were very decided, and perhaps few had more experience from which to draw conclusions. Mr. Smith continued to hold the position of General Manager of the Portsmouth dock extension works till March 1876, when he finally retired in consequence of failing health. He died on the 1st of November, 1877.

Mr. Smith was elected an Associate of the Institution of Civil Engineers on the 2nd of February, 1864.