

Three Authors of Papers presented at the Institution in London have been chairmen of the Association: Mr R. D. Duncan (Chairman, 1941) jointly delivered 'A full-scale experiment in bog blasting for road construction'; Professor Naylor (who has had long experience of work connected with water schemes in the Far East and Central Africa) 'The second-stage development of the Lochaber Water-Power Scheme'; and Mr D. Rebbeck, *C.B.E.* (Chairman, 1952), 'Some shipyard plant problems and experience.'

'The place of the University in the education of civil engineers' formed the subject of a Conference held at the Queen's University in September 1958, which was arranged by Professor Naylor and attended by almost every professor of civil engineering at universities in the United Kingdom.

Professor A. J. Sutton Pippard, *F.R.S.* (at the time President-Elect of the Institution) attended the Conference, not only as a matter of personal interest, but also as the representative of the Institution. 'The Conference was successful from all points of view,' he said. 'The Papers and Discussions were of real value, the arrangements made for the delegates were excellent, the attendance unexpectedly high, and representative of all branches of the profession: academic, consulting, and contracting'.

In continuing his tribute he added: 'If success attends these efforts, the Conference will take a noteworthy place in Institution history, and the Conference should serve as an example of co-operation in professional education and training, having far-reaching effects in the production of highly educated technologists so urgently required to enable us to maintain our position in the modern world.'

IRISH PRESIDENT

The name of William Kelly Wallace, President of the Institution in 1955, will always be associated with Northern Ireland, even though his connexion with the Irish railways ended before the formation of the Association.

He began his distinguished career in 1900, under Mr Berkeley D. Wise (*M*), the engineer of the Belfast and Northern Counties' Railway; in 1948 he retired as Chief Civil Engineer, *L.M. Region*, British Railways. When Mr Wallace was transferred to London in 1930, from the Northern Counties Committee, he had completed eight years as locomotive superintendent and permanent way engineer. He was a pioneer of light-weight diesel traction and flat-bottomed rails on British Railways.

Discussion on 'Civil engineering procedure'

Reported by

H. D. MORGAN, *M.Sc.*, *M.I.C.E.*

A discussion on the report entitled 'Civil engineering procedure', recently published by the Institution, was held on 30 April, 1963, with Mr Ralph Freeman, *C.B.E.*, *M.A.* (Vice-President), in the Chair.

The discussion was opened by Mr H. D. Morgan, *M.Sc.*, *M.I.C.E.*, Chairman of the drafting committee, who referred to the aims of the report and stated that points of substance raised in the discussion would be taken

into account in preparing subsequent editions. Twelve speakers joined in the discussion which ranged widely over the scope of the report and beyond.

Several speakers referred to the traditional and somewhat complex relationship between promoter, engineer and contractor. It was suggested that the introduction to the report might with advantage trace the historical development of the system described and the legal basis of an engineering contract. In addition it was urged that the separate functions of the engineer as interpreter of the promoter's requirements and as independent administrator of the contract between promoter and contractor should be stressed and clarified. The engineer, whether a consulting engineer or a salaried engineer in the employ of the promoter, should necessarily be an unbiased administrator of the contract between the promoter—as employer—and the contractor. He should not be subjected to pressures that might make it difficult for him to maintain a non-partisan attitude. Certain promoters required instruction in this matter so that they might realize that the concept of the independence of the engineer was very much in their own interest; their position in any legal actions arising out of a contract could be prejudiced by an attempt to dictate to the engineer. It was suggested that although the introduction stated that the report was primarily intended for the young engineer and the student, promoters should be encouraged to read it.

One speaker raised the question of how the engineer should deal with tenders with qualifying conditions and suggested that these should not be accepted. Questions raised by tenderers should be answered and the answers provided to all tenderers.

Reference was made to the relative merits of the Standard Method of Measurement and the brief form of billing as practised in the United States. Discussion followed on the merits of publishing items and rates quoted for a contract or of publishing the tender sums.

Several speakers referred to the treatment of errors in a tender; one view was that no error should be allowed to vary the value of the tender sum but that, in the event of a substantial error, the tender could be withdrawn; another view considered that a fundamental error in pricing a tender must invalidate a contract based upon it.

One speaker discussed the difficulties that could arise from the appointment of sub-contractors by the engineer without due regard to the conditions imposed on and by the main contractor's scheme of working.

A number of speakers referred to the question of 'all-in' or 'turn-key' contracts. In view of the amount of constructional work carried out under such a system it was suggested that they should not have been dismissed so summarily by the report.

It was suggested that the report should include diagrams of the contractor's head office organization and of the engineer's organization. The importance of comprehensive overall programming, with full weekly reports prepared by the resident engineer, was also stressed.

It was suggested that § 7 was incorrect in stating that officers of local authorities had to be expressly authorized to enter into a contract on behalf of the authority on account of the provisions of the Corporate Bodies Contract Act 1960; certain contracts, however, still required to be sealed.