

Editorial

UNPUBLISHED ENGINEERING STUDIES.

There must be a great deal of useful information available in municipal engineering departments which, for one reason or another, does not receive the publicity that it deserves.

Engineering departments, for instance, are constantly carrying on experiments, making studies, etc., which many engineers in similar departments would appreciate knowing about.

In many cases such investigations are too voluminous to be given space in the department's annual report which, for obvious reasons, must be limited in size.

The fact that the results of such studies are in many cases lost is not always due to the lack of a suitable medium for their presentation, but to the fact that those who could make them public and useful to the profession at large do not take the trouble to do so.

It is reasonable to assume that at some time or another engineering departments, at least in our larger cities, conduct correspondence with other municipal engineering departments for the purpose of ascertaining, if possible, what their experiences have been in the solving of specific engineering problems. Doubtless much correspondence of this kind goes on as between departments. There is surely a spirit of co-operation between the different engineering departments to insure team work in matters of this kind.

Is this interchange of experiences given as much publicity as it is entitled to? It is true they are used by the department preparing them and are filed away after they have served their immediate purpose, but is this enough?

The profession as a whole is seldom any better informed as a result of the investigations. There is surely some means by which such information can be made accessible to a larger number of engineers. The technical journals are constantly searching for just such matter, and such investigators will always find the engineering papers willing to give the facts adequate publicity.

METROPOLITAN WATER BOARD AND CHLORINATION.

It is interesting to note that in the last report on research work issued by Dr. Houston, of the Metropolitan Water Board of London, and which has recently come to hand, the admission is made that the substitution of chlorination for storage has been made with strikingly beneficial results.

When it is remembered that the local government board has always refused to sanction schemes involving the constant use of chlorine, in spite of the excellent results that have been obtained on this continent, this admission is rather significant.

Now that the city of London has demonstrated its general utility it is more than likely that the adoption of chlorination will become more general in the United Kingdom.

In the first part of the report referred to, which is the twelfth, the results of investigation as to the best relative positions of inlets and outlets in storage reservoirs are discussed and although no definite conclusions are reached, it is evident that Dr. Houston regards this as an important consideration and especially so when the period of storage is not very long. Some of the results show evidence of short circuiting, a factor which has been extensively studied in connection with some of the American supplies.

The most important part, however, of the report is contained in the section devoted to sterilization. Experiments are described which led to the elimination of one of the large storage reservoirs (Staines) and the substitution of chlorination therefor. This method of purification was apparently forced upon the board by the economic conditions caused by the war; the price of coal advanced to an unprecedented extent, and it became imperative, in the national interest, to reduce the consumption to the lowest possible limit. On May 1st, 1916, the 70 to 80 million gallons of water formerly pumped to the Staines reservoir were chlorinated and passed direct to the filtration plants. The storage reservoir usually reduced the excremental organisms by 90 per cent. and it was decided that the chlorination should effect an equal amount of purification if it were to be regarded as satisfactory. It was found that the dosage of 15 lbs. of bleach per million gallons (0.5 parts per million available chlorine) eliminated over 99 per cent. of the excremental organisms and produced a very satisfactory water for final treatment by the filters. In addition, an important collateral advantage was obtained in the shape of increased filter runs. The percentage reduction in the area of filter beds cleaned in 1916, as shown by this report (June to September), as compared with 1915, was as follows:—

	Percentage reduction.
Grand Junction (Hampton)	6
Grand Junction (Kew)	43
East London (Sunbury).....	30
Kempton Park	33
West Middlesex	56
Unweighted average	33

This reduction is attributed to the retardation of algal growths by chlorination.

THE CONSULTING ENGINEER.

It is not so very long ago when it was the rule for a manufacturer who was not an engineer to confine his attention to the trade regarding which he was especially concerned and, when necessity arose, to call in an engineer to advise him as to the purchase of this or that piece of equipment. To-day, however, it is, except in the case of large corporations and public bodies, very frequently the custom for this same manufacturer, to a considerable extent at least, to depend upon his own judgment, aided by those who would sell him the apparatus he is looking for.