reason of the suspension of operations and the installation and protection of embankment control equipment shall be considered as included in the prices paid for the various items of work.

A layer of imported sand fill shall be placed over the top of the vertical sand drains as hereinbefore provided.

In order to accelerate subsidence, additional embankment material shall be placed as a surcharge at the locations and to the depths shown on the plans or as directed by the Engineer.

After the rate of subsidence, determined by means of embankment control equipment to be placed as hereinafter provided, has reduced to an amount satisfactory to the Engineer or after the resting period specified under "Order of Work" of these special provisions, surcharge material remaining above the required subgrade elevation, as shown on the plans shall be removed and used to flatten embankment slopes as directed by the Engineer. Unless specifically directed by the Engineer, no surcharge material shall be used to flatten embankment slopes within the areas where sand drains have been constructed. Removal and disposal of surcharge material will be measured and paid for as roadway excavation and overhaul.

REFERENCE.

1) Proceedings of the First International Conference on Soil Mechanics and Foundation Engineering, June 22-26, 1936, Vol. 1, Page 299.

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IX d 3

TREATMENT OF PLASTIC CLAY WITH ELCTRIC CURRENT

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SUMMARY OF THE FRENCH REPORT

Drainage of saturated soils by means of direct current is a well-known procedure which has been already frequently applied with a view to draining, or accelerating settlement due to progressive consolidation of clay under a load. The experiments providing the matter of this paper were aimed at determining:

1. Whether in addition to drainage of a mass of clay by means of direct current (for instance clay of Provins), it was possible to obtain a permanent improvement of its mechanical properties at the same time. (Atterberg's limits, factors of consolidation and heave derived from comparative oedometric tests of treated and untreated clay.)

2. What would happen if alternate current were used instead of direct current.

In both cases iron electrodes are used, and, since the experiment is made on samples of non-saturated clay, of poor conductivity, electrical resistance is reduced through addition to the anodes (d.c.) or to both series of electrodes (a.c.) of a soda lye.

The results of these tests are as follows:

1. Direct current produces only a temporary dehydration of the clay without improving its mechanical properties. Dehydration ceases as soon as the current is cut and the clay returns fairly soon to its initial water content.

2. Alternate current leads to hydration of the clay, the mechanical properties of which are unfavourably modified as far as foundations are concerned.

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