SESSION 6: SOFT GROUND

Papers:

INVESTIGATION OF SOFT FOUNDATIONS WITH SURFACE REINFORCEMENT
H. Ohta, R. Mochinaga and N. Kurihara; vol 1, 123-128

THE USE OF TRIAL EMBANKMENT OBSERVATIONS IN THE CONSTRUCTION CONTROL OF ROADWAY EMBANKMENTS ON SOFT SOIL
N.F. Robertson and R.N. Reeves; vol 1, 129-136

Paper by H. Ohta, R. Mochinaga and N. Kurihara

Mr J.H.H. Galloway commented that while the paper was chiefly about experiments which demonstrated quite convincingly that reinforcement produced significant benefits in the short term, he would be interested in the opinion of the authors, or anyone else present, on the suitability of the technique as a long term solution. He queried the durability of the steel reinforcement and asked whether other reinforcements, eg glass cloth, might be used. Prof Ohta explained that the reinforcing was required only in the short term whilst the ground gained strength through consolidation. Thus durability did not seem to be a critical consideration. Mr M.S. Boyd intimated that, given the anticipated soil conditions and project life, suitable reinforcing steel could be obtained, hence the use of steel should not be a limiting factor.

Dr J.C. Small asked how the author arrived at the thickness of the equivalent elastic layer which was used to represent the reinforcement, how much plastic failure of the soil occurred, and whether the use of the plastic model was justified since it was not used to predict collapse loads (the model was only used for settlement behaviour which may have been in the elastic range).

Prof Ohta replied that the thickness of the equivalent elastic layer was arrived at by considering the longitudinal stiffness of the reinforcing strips; bending effects were not considered in the type of element used. With regard to the model for soil behaviour chosen, Prof Ohta said that they had investigated a number of possibilities both more complex and less complex, and the plastic model chosen seemed to be the most satisfactory.