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SECTION IX

IMPROVEMENT OF THE MECHANICAL PROPERTIES OF SOIL.

SUB-SECTION IX b

MECHANICAL METHODS

IX b 1

AN IMPROVED SOIL COMPACTION RAMMER

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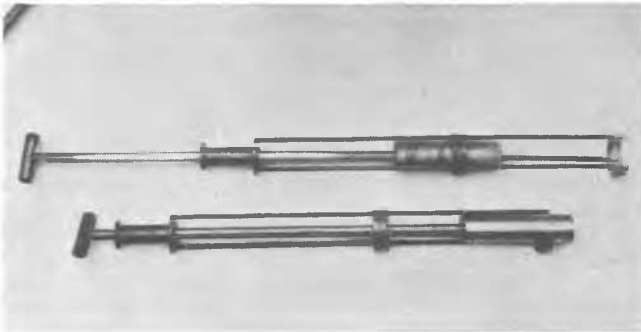


FIG. 1

The compaction rammer used in the A.A.S.H.O. and Modified A.A.S.H.O. compaction test commonly consists of a cylindrical metal weight having an end area of three square inches attached to a rod of smaller diameter and which is allowed to fall in a guide tube of internal diameter slightly greater than the weight.

Unless the guide tube is provided with large air holes at the top and bottom, the fall of the weight is impeded by the air compressed within the tube. In addition, certain soils adhere to the rammer and to the guide tube, introducing a source of friction and reducing the velocity of impact.

Figure 1 shows two compaction rammers designed for use in the Modified A.A.S.H.O. compaction test. These rammers use parallel steel rods in place of the more usual guide tube.

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IX b 2

SOIL STABILIZATION IN ARGENTINE HIGHWAYS

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RESUME

In the first part of the paper, it is described the soil conditions in Argentina, for the main purpose to build Highways and Airports.- Eastern zone with heavy clays and plenty of rainfall is the worst place, where the Engineer has many problems to solve on Soil Stabilization. Detail of soils from three typical roads of this zone are included.-

Second part, leads to the description of the different kind of stabilizations applied in Argentina upon certain extent. Physico-chemical stabilizations are not included, because the little work made....Mechanical stabilization with controlled moisture was used with success, according to some results detailed.-

Physical stabilization, was the most applied. There are, from the experience obtained, some interesting matters to quote, which mean several improvements on the technique, like the influence of certain characteristics of the binder soil on the stability.- Plasticity of the mixtures must be enlarged in the specified limits for calcareous mixtures and upon the use of lateritic binder soils.- It is pointed out the excellent behavior on calcareous granular Bases, either with no very coarse gradation, and the successful use of