

NO: EM1(10)83/Vol.IX/ 12943

DATED: 20.9.90

CIRCULAR NO. 408

SUB: INITIAL LOAD TESTING OF PILES.

It is required to conduct initial load test for pile foundations as per the provisions of clause 2.4 and 4.1 of IS-2911-Pt.IV-1985.

Clause 6.1.5 of this code lays down as follows:-

"The safe load on single pile for the initial test should be least of the following:

- a) Two-thirds of the final load at which the total displacement attains a value of 12mm unless otherwise required in a given case on the basis of nature and type of structure in which case, the safe load should be corresponding to the stated total displacement permissible.
- b) 50 percent of the final load at which the total displacement equal 10 percent of the pile diameter in case of uniform diameter piles and 7.5 percent of bulb diameter in case of under-reamed piles."

It has been observed that initial load tests are not being conducted by the field engineers in accordance with the above mentioned provision of IS Code. In some cases, the initial load tests had been conducted by loading the piles only upto twice the designed safe load rather than continuing the loading till the above mentioned stipulated limits of settlement were achieved, implying thereby that the actual safe load carrying capacity of the piles was not assessed. This obviously resulted in under utilization of the total load carrying capacity of the piles, thus making it uneconomical.

It is, therefore, enjoined upon all engineers to ensure that initial load tests are conducted on the piles and also that these are conducted as per the provisions of clause 6.1.5 of IS Code 2911-Pt.IV-1985 by loading the piles till the stipulated limits of settlements are achieved, so that

..2/..

actual safe load carrying capacity of the piles is correctly evaluated.

The design of the piles should be re-evaluated on the basis of the results of the initial load tests, if the results so warrant, so that it can be modified to make it both economical as well as structurally safe.

Similarly, provisions of IS Code 2911-Part.IV-1985 about Initial Testing of group of piles should also be followed accordingly.

These instructions must be followed scrupulously.

H.D. Sharma

(H.D. Sharma)
Engineer Member

1. All Chief Engineers. 1/c C.E.(QC)
 2. All Suptdg. Engineers. 1/c S.E.(QC)
 3. All Ex. Engineers. 1/c E.Es(QC)
 4. EMB(103)BE/CTE/Rohind.
 5. Guard file.
- Copy to-

V.C., DDA for information please.

H.D. Sharma

Engineer Member.
D.D.A.