



S.C. Pinsky, Sacramento
GR-469

SOUTH CENTRAL RAILWAY

12 SEP 2014

प्राकृतिक संसाधन विभाग, नई दिल्ली

Dy. ~~CE/Br.~~ D

CBE/SC (N)

Office of the

Chief Administrative
Officer (Construction)
Secunderabad-500 071

Dated. 02.09.2014

No. W.Con/496/PL/C/T&C/XIX/Vol.VIII/

**DYCE/C/I/SC,II/SC,III/SC,IV/SC,HX,MBNR,
NED,NZB,TPTY,GTL,KZJ,GNT,BZA.**

M. Sidhar Rao

Sub: Pile load/integrity testing.

The following instructions are reiterated with the approval of CAO/C for strict compliance **in works involving Pile Foundation.**

A. INITIAL LOAD TEST & ROUTINE LOAD TEST:

- INITIAL LOAD TEST & ROUTINE LOAD TEST:
1. Initial load test is to be conducted on not less than 2 numbers of test piles in any case. Routine load test is to be conducted on working piles before casting of pile cap. Provision must exist for these tests in the contract.
 2. As stipulated in IR Unified Standard Specifications, Routine load test should be conducted in not less than Two percent of the total number of piles in the structure and not less than 2 in number. Accordingly, if the total number of piles to be tested @ 2% in a bridge works out to:
 - (i) Less than one, then two working piles should be tested.
 - (ii) More than one but less than 1.5, then also, two working piles should be tested.
 - (iii) Equals to 1.5 but less than 2.5, then, two working piles should be tested.
 - (iv) Equals to 2.5 but less than 3.5, then, three working piles should be tested.
 3. Initial/Routine load testing items in a contract should be operated as per IRUSS provisions and no deviation shall be permitted.
 4. Item description of Initial load test and Routine load test should be as per USSOR-2010 (Chap-19) and the test should be carried out as per IS:2911(Pt.IV)-1985.

B. PULSE ECHO TEST (LOW STRAIN INTEGRITY TEST):

1. Description of this item is given under USSOR Item No: 192120. In all tenders this item must be included without fail.
2. Provision should be available for carrying out Pulse Echo Test in 50% of the total number of piles in every future contract.
3. If this item is not there in any of the running contracts in which pile caps are yet to be casted, this item should be inserted as an additional USSOR item to cover atleast 50% of the balance piles.
4. This test is to be conducted before casting of pile caps.
5. This test should conform to ASTM:D5882 standards.

C. CROSS HOLE SONIC LOGGER TEST:

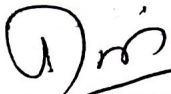
1. This pile integrity test should be provided in all future contracts at a rate of one pile in a group of piles in one foundation.
2. In running contracts, where piling work is yet to commence, this test should be carried out by inclusion of a new NS item.
3. In running contracts, where some piles are yet to be casted, this test should be carried out by inclusion of a new NS item.
4. This test should conform to ASTM: D6760-02 standards.

F.T.O.

D. HIGH STRAIN DYNAMIC TEST:

1. This test should be provided in all future contracts for Railway Bridges (Line Bridges) at the rate of one pile per bridge without pile cap.
2. In running contracts, where pile caps are not yet casted, this test should be conducted by inclusion of a new NS item at the rate of one pile per bridge.
3. This test should conform to ASTM: D4945-2000 standards.

Relevant literature for guidance in execution and for preparing Rate Analysis (for new NS items) is enclosed herewith.


02/09/14
(AVH MALLIKARJUNA)
DY. CE/C/G-I/SC

Copy to Secretary to CAO/C for kind information of CAO pl.

Copy to CE/C-I,II,III,IV,V,VI for kind information pl.

✓ Copy to CBE/SC for kind information pl.