

# TC250/SC7/EG 10: Calculation Models

## Progress Report No 2 for the period April-Dec 2012

### AGREED SCOPE OF WORK

- Critical review of existing calculations models in EN1997.
- Review of calculation models in supporting national standards for possible inclusion in next version of EC7.
- Review of the international literature in order to ensure that calculation models are the best currently available. Results from both theoretical analyses and experimental investigations will be considered.

### KEY ISSUES UNDER DISCUSSION

- Bearing capacity factors.

### DECISIONS/OUTCOMES

- Each member should short summarize the practice followed in her/his country for central vertical loading and circulate this within the group, including a personal opinion on the quality/accuracy/reliability of bearing capacity factors, particularly  $N_\gamma$  factor.
- Members are also invited to include information on large scale test results, if any.
- Every member should also provide the values of the inclination factors used in the respective country (without any eccentricity).
- Also indicate which value of  $\phi$  has to be used in the formulae (peak, constant volume or residual) and the way to obtain it (triaxial, direct shear tests...).
- Every member (except those that already have done it) should circulate a note briefly describing the state of practice for bearing capacity assessment as well as for settlement prediction in her/his country.
- The convenor will try to collect information from other countries, not represented in the EG10.
- The basic equations are correct and the definitions of actions and resistances are logical and consistent. There are rigorous solutions for the factors  $N_c$  and  $N_q$  and there are good numerical values for  $N_\gamma$  in the literature.
- The convenor collected reports by the Degebo on large scale field tests on footings that obviously constitute the basis for the values given in the respective DIN code and the

last published version of the EC7. Comparisons are presently made between these test results and the formulae.

- Clarification is still needed on the equations for the shape and inclination factors. Available computational codes have been identified. Test results are presently being collected by the convenor.

## MEETINGS HELD/PLANNED

Tele-meeting no.	Date held/scheduled	Available from webpage?
4	16 May 2012	

## ACTIVE MEMBERSHIP

Name	Position*	Country	Listed on webpage?
John Atkinson	Member	United Kingdom	
Liudvikas Furmonavicius	Member	Lithuania	
Jana Frankovska	Member	Slovakia	
Sergio Gobbi	Member	Italy	
Achim Hettler	Member	Germany	
Áurea Perucho	Secretary	Spain	
Ivan Vanicek	Member	Czech Republic	
J. P. Volcke	Member	France	
Christos Vrettos	Convenor	Germany	

\*please indicate Convenor/Secretary

## REPORT PREPARED BY:

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