

TC250/SC7/EG11

15 May 2013

10.00 CET/9.00 GMT/ 11.00 EET

Teleconference

Meeting called by: Paolo Croce (PC) **Notes by:** Alessandro Flora (AF)
Attendees: PC, AF, Cyril Plomteux (CP), Beata Gajewska (BG), Barry Slocombe (BS), Norbert Vogt (NV), Jakub Saloni (JK), Colin Serridge (CS)

Apologies:

Pre-meeting documents: 1) Emails sent with communications and agenda
2) A presentation circulated by NV on 'Design rules for solid improved ground – DIN 093'

Agenda Items

Topic	Presenter	Time Allotted (mins)
1. Briefing on the Madrid meeting and proposal on design approaches	PC	15
2. Information on national recommendations, guidelines and regulations	NV, AF	35
3. Discussion	All attendees	30
4. Work programme	All attendees	15
5. Next tele-meeting: date and topics	PC	

Notes of meeting

Action	By	Due by
1. Report on the Madrid meeting. EG14 has been explicitly asked to consider also rock improvement, for which tight connection with EG13 will be necessary. Since we do not deal with structural reinforcement, only grouting can be considered to this aim. This peculiar problem will be dealt with after we have done some work on soil improvement. The power point will be circulated.		
Presentation of a list of techniques to be considered, and of two possible approaches to be adopted in modelling: a geotechnical or diffused approach, in which the improved soil is characterized as a soil having better mechanical properties, and a structural approach, in which the improved soil is modelled considering it as a different material having different properties (in the case of jet grouting or deep mixing, for instance, considering a uniaxial compressive strength). In this framework, two different set of indications should be presented.	PC	-
In the discussion on the proposal to consider these two approaches, all agree. BS suggests to consider also stone columns in the list of techniques. Some attendees point out that even in the structural approach it should be clear that the improved body is not a structure in	All attendees	-

the classical sense.

2. German design rules for jet grouting, grouting and deep mixing (DIN 093) are presented and discussed (power point already circulated). The rules give clear indications on mechanical parameters of the improved soil. Italian recommendations on jet grouting are presented and discussed (power point will be circulated). These recommendations stress out that jet grouting columns are far from being perfectly cylindrical and ideally positioned bodies, and introduce also partial coefficients to take into account diameter variability and column deviation from ideal position (geometrical partial factors).

NV, AF

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3. The two presentations are discussed. With regard to the partial geometrical factors presented by AF, JS fears that such factors may introduce a discrimination among techniques, possibly privileging some of them. AF argues that geometrical partial factors (actually, all partial factors) must be introduced if needed to rationally represent the site conditions. As a consequence, if a variation in diameter is expected, a partial factor should be introduced. Factors should be calibrated on the technique as well as on the treated soil.

All attendees

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4. Work programme. It is proposed to start working on the structural approach of columnar ground improvement techniques, namely jet grouting, deep mixing and stone columns. All attendees are invited to take part to the next tele meeting with proposals and contributions on this topic. In case, documents can be circulated before the tele meeting to give contributions to the discussion. It is also reminded that we will have a face to face meeting in Vienna on the 17th and 18th, and it was agreed to have a long meeting of our EG.

PC, AF

5. Next tele meeting will be scheduled soon. It should take place in the first two weeks of July. A poll will be circulated before the end of May.

AF

End of May