



COMMENT TO REVISION

Prof. Andre ASSIS

Thank for your precious work and for your suggestions. In the following details of thesis updates. It is signalled that the following page references are referred to the first thesis version. The last version updated (after the English language proof-reading) could be slightly different in paging numeration.

- All grammar and spelling mistakes highlighted by the reviewer have been corrected. Furthermore, an English professional proof-reading of the work has been accomplished;
- Pag.89 : I agree with the reviewer, the time scheduling is not regular. This was due to technical reasons (mixing preparation, casting, demoulding, sample checking and sample testing) related to UCS tests. Often, it was impossible to perform tests exactly at 60 minutes of curing. Instead of discard data, another testing time was added. The same occurs for time testing 120 – 125 min. Once established the timetable for UCS tests, it was strictly followed by SCS ones (more agile to be performed). Anyway, in hindsight, this imperfection helped us to understand the high reaction hardening velocity at short curing time;
- Pag.90: More information on compression testing machine and the whole equipment have been added;
- Pag.100: As correctly highlighted by reviewer, the thesis has an uncommon structure. Particularly, the literature review is “unpacked” in function of the considered chapter. This choice was taken in order to better contextualize the topic of each chapter, trying to involve readers in an easier consultation, providing the needed starting concepts for addressing a topic just before describing the experimental work;
- Pag.114: A sentence has been added in order to better highlight that the average of τ (104 KPa) has been computed speculating undrained condition (with the shear strength independent by the vertical stress);
- Pag.119: As correctly reported by reviewer, the obtained value of c_{pd} depends on the range and number of tests and normal stresses applied. Anyway, the purpose of the chart is to highlight the discrepancy between c_u and c_{pd} , i.e. to prove that the hypothesis of have performed undrained shear test at 1 hour of curing obtaining 104 kPa as average of shear strength is wrong. Paragraph 9.7 has been slightly modified in order to better clarify the readability of Figure 76;
- Pag.121: The nomenclature of the elastic moduli are introduced in paragraph 10.6;
- Pag.124: Charts needed for compute elastic modulus were analysed by Mapei operators and were not available. Anyway, Figure 79 has been provided by Utt Mapei and has been added to the thesis;
- Pag.142: The review's statement ($E_d > E_s$ by 10-20%) is perfectly aligned with cited references (technical rules n.195 drafted from the CNR, Philleo, 1955, Lee et al., 1977);
- Pag.145: Deterioration that occurred after 5 months of curing (that caused the failure of the static elastic modulus assessment) has not been deepened. This lack, has been reported in the final consideration (paragraph 11.6) and the necessity of performing a specific test campaign on this topic has been also underlined;
- Pag.147: The information concerning the loading cell has been shifted and reported in paragraph 7.3.4;
- Pag.154: The reviewer commented the importance of the ratio R_t/UCS . According to the study reported in Chapter 13, it has been chosen also in this chapter to analyse the ratio UCS/R_t . Values of UCS/R_t have been reported for each curing modalities (paragraph 11.3.4). The growing trend is highlighted in the General discussion (13.3.4.4) and differences with standard concrete are also underlined;
- Pag.157: The Brazilian test is introduced in next chapters (12 and 13), anyway, the name of Brazilian test has been added also in this paragraph (11.3.5);



- Pag.179: The use of the point load test has not been taken into account in this work. Anyway, the suggestion of reviewer is very interesting, since “out of geometry samples” could be a source of further information. This test can be taken into account in future, anyway several test campaigns expressly aimed to calibrate the PLT with real value of UCS should be preliminarily performed.
- Pag.187: In Figure 118 (119 in the new manuscript), scale of y-axis has been changed;
- Pag.189: In Table 49 the line of variance has been deleted. This streamline has been applied to all the thesis.

Prof. Joung OH

Thank for your precious work and for your suggestions. The thesis has been completely checked and it has been formatted according to guidelines provided by Doctoral School of Politecnico di Torino.

Furthermore, a professional English language proof-reading of the work has been accomplished.

Carrie Torino