AC358 Revision Questionnaire

Issue: Non-Conforming Shaft Sizes

ICC-ES has notified the AC358 Ad Hoc Committee that ICC-ES will not be issuing ESRs for helical shaft sizes that do not have a specifically listed Kt upper bound in the current AC358, approved September 2014. It was explained that ICC-ES believes it is not qualified to evaluate if a submitted Kt value for a non-conforming shaft size is appropriate, or too high to be practical. Therefore, unless AC358 is revised with guidance for these values, an ESR for any product with a non-conforming shaft size will not be possible. This has effectively eliminated any possibility of approval for non-conforming shaft sizes at this time. This issue applies not only to shaft sizes above 3.5" diameter, but also sizes in-between those specifically listed in AC358, such as 2.375" diameter, and even other shaft styles like square hollow tube.

If the industry has an interest in receiving an ESR for a non-conforming product, the AC will need to be revised. While ICC-ES has solicited the industry for assistance on this issue, they have not ruled out revising AC358 independently with conservatively low Kt values if no guidance is provided. This may cause significant difficulties going forward.

On behalf of the Ad Hoc Committee, we are trying to determine how important this problem is to the industry members and explore options for resolution. In addition, we are seeking to determine if there are other aspects of AC358 that might be improved in conjunction with a revision.

Below is a questionnaire concerning some basic aspects of this potential revision to speed up the initial phases of the Ad Hoc Committee meetings. CTL|Thompson, together with the manufacturing industry, as well as ICC-ES, are trying to start this process of revising AC358 as soon as possible. We are seeking your feedback in order to accelerate this process.

Please send you responses to: Moncef Souissi (msouissi@ctlthompson.com)

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1. Do you think there is a maximum shaft size where torque correlation factor is valid? If so, what size?

2. Would you like to see AC358 revised to add Kt values for larger product sizes?
   a. Yes
   b. No

3. If yes. What practical shaft sizes above 3.5”OD would you like to include (please circle)?
   a. 4.5” O.D shaft
   b. 5.563” O.D shaft
   c. 6.625” O.D shaft
   d. Others (please list) _____

4. Would you like to see AC358 revised to include hollow square shafts, 2-3/8” O.D shaft, 2” solid square shaft, or any other smaller size shafts that are non-conforming under the current AC358?

5. Are there any other specific provisions to AC358 you wish to see included or revised?

6. Do you have any test data of your product related to these shaft sizes?

7. If you replied yes to #6, are willing to share this data with the Ad-Hoc committee?

8. If you replied yes to #7, how many load test data per shaft size can you provide the Ad Hoc Committee for use in this issue? (Note: Each qualified test must have installation torque and preferably geotech info for the site)

9. If you cannot share because of confidentiality reasons, would you be willing to provide info to CTL|Thompson for generation of “scrubbed” data points? The data would only be used/published/released without source, client or location information.

10. In your opinion, how many data points for a shaft size qualify as good sample to determine an upper bound limit of Kt for a shaft size?

11. ICC-ES proposed two options to develop the Kt values for large diameter piles, described below. Which option do you prefer?

    a. Gather test data and come up with prequalified Kt values for these shaft sizes which can then be included in the conforming section of AC358.

    b. Establish an upper bound for the Kt values and test the product as non-conforming in AC358.

12. Currently, AC358 designates upper limit Kt values in a table of discrete values. Therefore, in-between sizes are not addressed. Do you feel the upper limit Kt should be expressed as a continuous function (equation) or should this table remain a long list of Kt values for specific sizes?

13. Are you willing to participate in the ad-Hoc committee?

    a. Only participate in Committee meetings/donate time?

    b. Participate financially if additional independent testing is required?

14. What is your preferred time frame for a revision to AC358? Is this a high priority issue, or something that can wait until the future?