Investigation of cyclic behavior of EPS-sand mixtures using large direct shear apparatus
4. Conclusions

The objective of current experimental investigation is to understand the effects of EPS contents on the behavior of sand, and to have an understanding of the behavior of “Chamkhaleh sand” in cyclic direct shear testing apparatus. The tests reported in this paper show the followings:

1. The results showed that the inclusion of EPS bead in sand will lead to a decreased shear modulus and softer mixture indeed.
2. The results showed that the inclusion of EPS bead in sand will lead to a decreased damping ratio, due to more elastic behavior caused by deformable beads.
3. These observations lay the foundations toward the engineering design of these materials. However, further data are required to analyze the behavior of these sands under monotonic and cyclic tests. Low and high strain ranges need to be covered by other apparatuses to provide clear understanding of the behavior.