

## **The Performance Evaluation Test for Elastomeric Bearings in Korea**

Hyejin Yoon<sup>1</sup>, Imjong Kwahk<sup>2</sup>, Changbeck Cho<sup>3</sup> and Youngjin Kim<sup>4</sup>

### **Summary**

The purpose of this paper is to show performance test results of elastomeric bearing made in Korea. Bridge bearings are required to accommodate superstructure movements due to live load, temperature, creep and shrinkage and support vertical load, therefore their compressive stiffness and shear stiffness are important material properties. Also Korean code(KS F 4420) for the elastomeric bearing made in Korea suggests the allowable values for design, but these values have been referred from EN 1337-3 without any experimental verification. Bridge bearing designed under this specification which does not reflect actual bearing's behavior is not likely to show their required performance.

In this study, on the purpose of estimating the bearing's performance made in Korea, compressive and shear test are conducted on the elastomeric bearings made in Korea with different dimensions and various shape factors. Also compressive limit and shear limit test are conducted on the elastomeric bearings. Because the bearing behavior is quite dependent on the shape factor, test specimens have been determined considering the small and large shape factors. Compressive and shear stiffness evaluated from test results are compared to other bearing code such as AASHTO LRFD, EN 1337-3 and Japanese bearing code. Based on the results, this paper proposes compressive stiffness formula for elastomeric bearings made in Korea.

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<sup>1</sup>Researcher, Korea Institute of Construction Technology

<sup>2</sup>Senior research, Korea Institute of Construction Technology

<sup>3</sup>Researcher, Korea Institute of Construction Technology

<sup>4</sup>Research Fellow, Korea Institute of Construction Technology

