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A study on the application of surveillance technology with large bolt axial force of nuclear facilities

Jeongsu Ju

University of Seoul, Korea

The axial force of bolts is very important for structural stability. To obtain the stability of a structure, the axial force of bolts should satisfy specifications and be maintained consistently. Hence, it is important that the axial force of bolts is measured and carefully watched. However, measuring axial force using sensors is very expensive. Torque method frequently used in the field does not provide accurate values of axial force due to the changes in torque coefficient. This study suggests a surveillance system to measure and monitor bolt axial force. The purpose of the study is to examine how the long-term behavior of concrete exerts influence on the axial force of bolts used in structures and to verify the reliability of the suggested surveillance technology.

Biography

Jeongsu Ju is a Graduate student at Steel Structure and Architectural Engineering Department of University of Seoul. His research focuses on experimental and analytical studies of steel structures and nuclear facilities, composite structures and tall buildings.

creamshow8@gmail.com

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