

A Fundamental Study for Real-Time Safety Evaluation System of Landing Pier Using FBG Sensor

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Abstract : A landing pier is subjected to safety assessment by visual inspection and design data, but it is difficult to check the damage in real-time. In this study, real - time damage detection and safety evaluation methods were studied. As a result of structural analysis of the arbitrary landing pier structure, the inflection point of deformation and moment occurred at 10%, 50%, and 90% of pile length. The critical value of Fiber Bragg Grating (FBG) sensor was set according to the safety factor, and the FBG sensor application method for real - time safety evaluation was derived.

Keywords : FBG sensor, harbor structure, maintenance, safety evaluation system

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