

Building Crack Inspection using Small UAV

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Abstract—As for large scaled skyscrapers, it is time-consuming, requires a significant amount of expenditures, and too risky for an inspector to examine in person with tools on hands. Therefore, unmanned aerial vehicle is specifically required to inspect the facilities in order to deal with limited access of an inspector, to examine multiple structures, and to confirm whether the inspected areas are damaged in each season or daily time frame. This study is intended to specifically develop the small aerial vehicle-based Image acquisition system for the inspection of structures aiming to identify the cracks of the building. Hereupon, safety inspection was conducted on the building. It is also intended to utilize the suggested system in this study to safety inspection in diverse fields of industry in the future.

Keyword—Small unmanned aerial vehicle, Image acquisition system, Monitoring facilities, Safety inspection, Image processing, Edge detection, Building crack.



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