

Attribute Index and Classification Method of Earthquake Damage Photographs of Engineering Structure

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Abstract : Earthquake damage phenomenon of each large earthquake gives comprehensive and profound real test to the dynamic performance and failure mechanism of different engineering structures. Cognitive engineering structure characteristics through seismic damage phenomenon are often far superior to expensive shaking table experiments. After the earthquake, people will record a variety of different types of engineering damage photos. However, a large number of earthquake damage photographs lack sufficient information and reduce their using value. To improve the research value and the use efficiency of engineering seismic damage photographs, this paper objects to explore and show seismic damage background information, which includes the earthquake magnitude, earthquake intensity, and the damaged structure characteristics. From the research requirement in earthquake engineering field, the authors use the 2008 China Wenchuan M8.0 earthquake photographs, and provide four kinds of attribute indexes and classification, which are seismic information, structure types, earthquake damage parts and disaster causation factors. The final object is to set up an engineering structural seismic damage database based on these four attribute indicators and classification, and eventually build a website providing seismic damage photographs.

Keywords : attribute index, classification method, earthquake damage picture, engineering structure

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