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## STRUCTURAL ENGINEERING / EARTHQUAKE ENGINEERING

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[\[PDF \(779K\)\]](#) [\[References\]](#)**EXPERIMENTAL INVESTIGATION ON AGEING BEHAVIORS OF RUBBERS USED FOR BRIDGE BEARINGS**Yoshito ITOH<sup>1)</sup>, Haosheng GU<sup>1)</sup>, Kazuya SATOH<sup>1)</sup> and Yukihiro KUTSUNA<sup>2)</sup>

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In order to evaluate the deterioration characteristics during the lifecycle of bridge rubber bearing, a series of long-term accelerated exposure tests are performed on four kinds of rubber materials widely utilized for bridge bearings. Different degradation factors are applied in these tests, such as thermal oxidation, ozone, low temperature ozone, ultraviolet radiation, salt water and acid rain. The test duration lasts from 96 hours to more than 6,000 hours. Mechanical properties of aged rubber specimens are measured and compared. The effects of pre-strain are investigated too. The ageing behaviors of each kind of rubber are made clear. The test results are fundamental to the prediction of rubber bearings' durability.

**Key Words:** rubber bearing, ageing behavior, mechanical property, pre-strain[\[PDF \(779K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

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