

ISSUE: 08. ROAD BRIDGES IN WINTER CONDITIONS

SUB-ISSUE: Maintenance of road bridges under winter conditions

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Room: A

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Presentation title:

EXPERIMENTAL STUDY ON DETERIORATION CHARACTERISTICS OF PARTIALLY REPLACED RC SLABS UNDER FREEZE-THAWING AND FATIGUE COMBINED ACTION

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Summary:

In Japan deterioration of road bridges constructed from 1960s to 1970s becomes social problems, then it has often been reported that RC slab subsides partially due to fatigue damage. With regards to snowy regions like Hokkaido, it is predicted that the possibility of the occurrence of subsidence drastically increases in the near future due to severe environment, frost damage by freeze-thaw action of snow melt water penetrating into slabs and salt damage by deicing salt, accelerating the reduction of load carrying capacity of RC slabs. From above, it is necessary to develop a partial replacement method to ensure structural performance such as load resistance and fatigue durability under snowy condition after subsidence as well as a preventative repair method before that to prolong fatigue life.

