Development of survey system for damaging factors of road structure by TLAM system.

1996 Fiscal Year Final Research Report Summary

Development of survey system for damaging factors of road structure by TLAM system.

Research Project

Project/Area Number

07555440

Research Category

Grant-in-Aid for Scientific Research (B)

Allocation Type

Single-year Grants

Section

試験

Research Field

構造工学・地震工学

Research Institution

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Project Period (FY)

1995 – 1996

Keywords

Traffic load / Road structure / Damaging factor

Research Abstract

The structure lifetime depends on preservation of the physical integrity of gross structure element. Therefore, an adequate inspection, maintenance and repair procedure for the entire structure are indispensable. The existing road structures have various damage patterns. The integrated evaluation process of damage based on the damage inspection result of various patterns is very complex.
The research results are next items.
1.Surveying system of damage factors effected structure lifetime was complete.
2.Spectral analysis system of working stress of damaged structural elements based on Traffic Load Auto Measuring data system was assembled.
3.Statical and dynamical motion simulation system of renewal structures consist of repaired elements and parts of road structures, reinforced concrete, steel and composited strucures was completed.
By above results, Caring System of Damaged Structures was more useful.

Research Products (12 results)

All | Other

All | Publications (12 results)

[Publications] 梶川康男: "都市内PC高架橋の環境振動軽減対策とアセスメント手法の適用" 構造工学論文集. 41A. 691-700 (1995)

[Publications] 桝谷 浩: "落石覆工への荷重係数設計法の適用について" 構造工学論文集. 41A. 1299-1308 (1995)

[Publications] 西澤辰男: "プレキャストコンクリート舗装の温度応力に関する基礎的検討" 土木学会論文集. 508. 101-107 (1995)

[Publications] 中野博文: "上路式鋼2ヒンジアーチ小原橋の振動と疲労解析" 土木学会橋梁交通振動コロキウム論文集. 235-240 (1995)

[Publications] 西澤辰男: "FEM解析に基づくコンクリート舗装版横目地のそり応力式" 土木学会 論文集. 532. 89-96 (1996)

[Publications] 梶川康男: "弾性支承と桁連結構造を用いた既設高架橋の振動特性" 構造工学 論文集. 43A. 747-756 (1997)

[Publications] Y.KAJIKAWA,M.SHINKAI,Y.SANUKI and K.MURATA: "Environmental Assessment of Viaduct Vibration by Traffic Loads" Journal of Structural Engineerings. Vol.41A. 691-700 (1995)

[Publications] H.MASUYA,Y.KAJIKAWA and T.KUROKAWA: "Application of Load Resistance Factor Design to Rock-Sheds" Journal of Structural Engineerings. Vol.41A. 1299-1308 (1995)

[Publications] T.NISHIZAWA,E.NODA and T.FUKUDA: "A Fundamental Examination of the Thermal Stress of Precast Concrete Pavements" Proceedings of JSCE. No.508. 101-107 (1995)

[Publications] H.NAKANO and Y.KAJIKAWA: "Vibration and Fatigue Analysis of Two Hinged Steel Arch Bridge" Proceedings of Colloquium on Bridge Traffic Vibration. Vol.1. 235-240 (1995)

[Publications] T.NISHIZAWA,A.HIRUKAWA and T.FUKUDA: "Warping Stress Equation at the Transverse Joinht Edge of Concrete Pavement Slab based on Analysis" Proceedings of JSCE. No.532. 89-96 (1996)

[Publications] Y.KAJIKAWA,S.FUKUDA,H.HAYASHI,M.YOSHIKAWA and K.USUI: "Vibration Characteristics of Highway Bridge with Isolator & Jointless System under Moving Vehicles" Journal of Structural Engineerings. Vol.43A. 747-756 (1997)

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