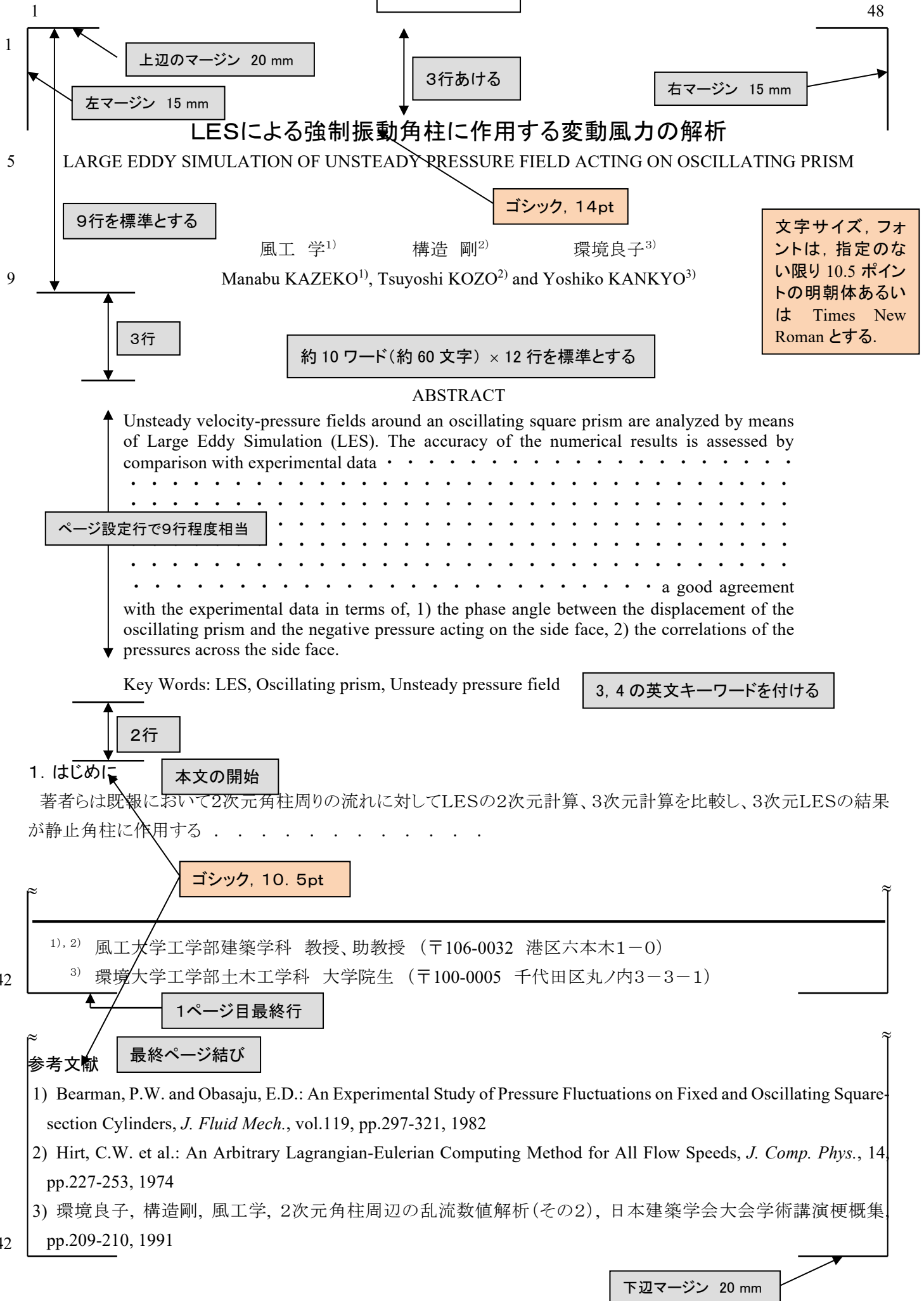


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LARGE EDDY SIMULATION OF UNSTEADY PRESSURE FIELD ACTING ON OSCILLATING PRISM

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Manabu KAZEKO¹⁾, Tsuyoshi KOZO²⁾ and Yoshiko KANKYO³⁾

10 words × 12 lines abstract

ABSTRACT

Unsteady velocity-pressure fields around an oscillating square prism are analyzed by means of Large Eddy Simulation (LES). The accuracy of the numerical results is assessed by comparison with experimental data

about 9-line space

. a good agreement with the experimental data in terms of, 1) the phase angle between the displacement of the oscillating prism and the negative pressure acting on the side face, 2) the correlations of the pressures across the side face.

Key Words: LES, Oscillating prism, Unsteady pressure field

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1. INTRODUCTION

Distributions of the fluctuating surface pressure and the wind forces acting on bluff-shaped bodies are of great practical interest in the field of structural

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REFERENCES

1) Bearman, P.W. and Obasaju, E.D.: An Experimental Study of Pressure Fluctuations on Fixed and Oscillating Square-section Cylinders, *J. Fluid Mech.*, vol.119, pp.297-321, 1982

2) Hirt, C.W. et al.: An Arbitrary Lagrangian-Eulerian Computing Method for All Flow Speeds, *J. Comp. Phys.*, 14, pp.227-253, 1974

3) Kankyo, Y., Kozo, T. and Kazeko, M., Numerical Study on Air Flow around 2D Square Prism (Part 2), Summaries of Technical Papers of Annual Meeting Architectural Institute of Japan, pp.209-210, 1991 (in Japanese)

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LESによる強制振動角柱に作用する変動風力の解析

LARGE EDDY SIMULATION OF UNSTEADY PRESSURE FIELD ACTING ON OSCILLATING PRISM

風工 学¹⁾

構造 剛²⁾

環境良子³⁾

Manabu KAZEKO¹⁾, Tsuyoshi KOZO²⁾ and Yoshiko KANKYO³⁾

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1. はじめに

著者らは既報において2次元角柱周りの流れに対してLESの2次元計算、3次元計算を比較し、3次元LESの結果が静止角柱に作用する

[本文](#)

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- 1) Bearman, P.W. and Obasaju, E.D.: An Experimental Study of Pressure Fluctuations on Fixed and Oscillating Square-section Cylinders, *J. Fluid Mech.*, vol.119, pp.297-321, 1982
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Text

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