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Development of Highway Lighting Pole with Resistance to Wind Vortex -Induced Oscillation

Û 4s µ (Ikuo Jo) 5 Ê Å#è(Tadao Kaneko) Ì ` %, Ã(Shogo Nagatsu) 9× « æ x(Chiyomaru Takahashi) Œ § G µ(Masao Kimura)

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Synopsis :

Basic vibrational characteristics of a lighting pole resulting from wind vortex -induced oscillation have been studie d and an impact damper which has layered cellseidd(na)13 (f)6.5 (

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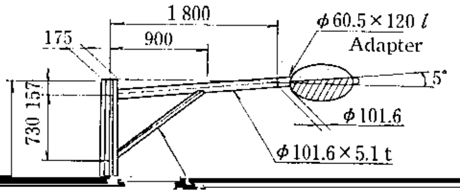
耐風照明柱の開発*

Development of Highway Lighting Pole with Resistance to Wind Vortex-Induced Oscillations

要旨

風で生ずるカルマン渦による道路用照明柱の渦励振振動につい



2.2 基本振動特性の調査

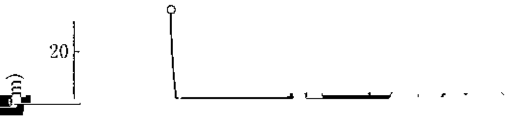
Table 1に示すように，供試体照明柱の各部位に加速度計を設置のうえ，加振力一定の条件下で振動数を変化させる掃引試験を実施して，共振振動数を求めた。この結果を一括して Table 2 に示す。

Table 2 Basic oscillation characteristics of octagonal-cross-section lighting pole

	Inplane oscillation mode			Out-of-plane oscillation mode		
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

2次の場合よりも制振効果が良く，また面内1次は面外2次とほぼ

実験とに分けられる。予備実験では，電磁ダンパを起振機として使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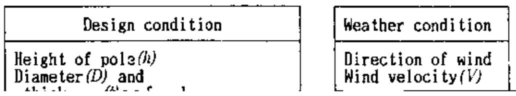
Design condition
Height of pole(h)
Diameter(D) and
Weather condition
Direction of wind
Wind velocity(V)