$\Delta L/T$. However, no detailed flowfield surveys have been presented in Refs. 4-6 to substantiate this conclusion.

Acknowledgment

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Technical Comments

C80-107

Comment on "Calculation of Rotor Impedance for Articulated-Rotor Helicopters in Forward Flight"

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(A) C79-001 (no ref) 7

THE paper by Kato and Yamane (*Journal of Aircraft*, Vol. 16, ~~July 1979~~, pp. 470-476) is very interesting and certainly adds to our understanding of rotor impedance in forward flight. There are two oversights in the paper, however, that should be corrected. First, the introduction states that in their Ref. 2[1] "numerical results are given in terms of steady-state thrust and moment derivatives for steady ($\omega = 0$) shaft incidence as well as blade pitch controls." To the contrary, one will find that Figs. 4-13 of Ref. 2 give theoretical and experimental unsteady frequency response due to unsteady shaft incidence ($\omega \neq 0$) and unsteady pitch controls.

Second, Fig. 6 of the paper by Kato and Yamane indicates that the H-force variation with pitching rate approaches a constant as ω goes to zero. In forward flight, however, a steady value of pitch incidence α gives a nonzero change in H-force. Therefore, the pitch incidence derivative $\partial H/\partial \dot{\alpha} = (1/i\omega)\partial H/\partial \alpha$ must go to infinity as ω goes to zero. The source of this discrepancy may be in Eq. (6) of the paper, in which it appears that the contribution of pitch angle $U\alpha$ is missing from the vertical velocity H_a.

On the other hand it should be emphasized that the above oversights are small, and do not negate the overall quality of the paper.

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Index categories: Helicopters; Vibration; Aeroelasticity and Hydroelasticity.

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PROFESSOR Peters's comments and his interest in our paper are greatly appreciated. We would like to offer the following comments.

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Index categories: Helicopters; Vibration; Aeroelasticity and Hydroelasticity.

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