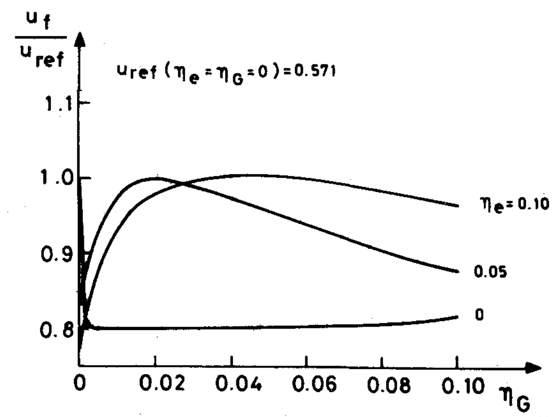

Fig. 3 The influence of structural damping on the flutter speed of the system, applying steady aerodynamics.

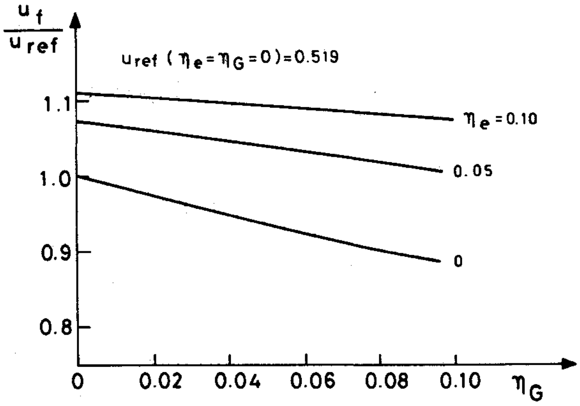

Fig. 4 The influence of structural damping on the flutter speed of the system, applying noncirculatory aerodynamics.

a consistent stabilizing tendency of the structural damping (η_e and η_G) while applying quasisteady or unsteady aerodynamics. Figure 5 shows a typical stabilizing effect of the structural damping while applying unsteady aerodynamics in the analysis. Thus, the results represented in Figs. 3-5 emphasize the strong interaction existing between structural damping and the aerodynamic lags incorporated into the aerodynamic forces applied in the analysis. A similar behavior is reported in Ref. 10 simulating the role of damping on supersonic panel flutter.

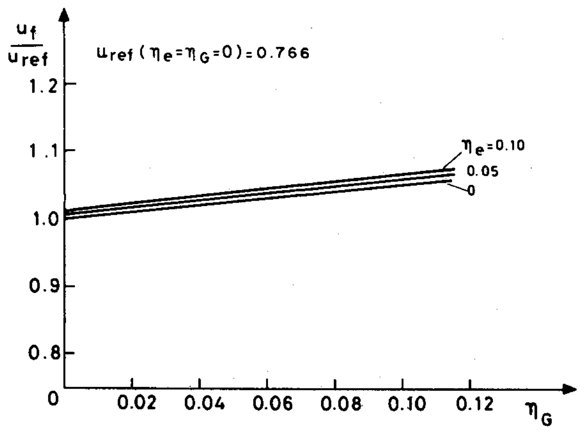

Fig. 5 The influence of structural damping on the flutter speed of the system, applying unsteady aerodynamics.

Conclusions

The strong effect of the aerodynamic lag terms on the flutter speed of the system is demonstrated. It is shown that quasisteady aerodynamics can appreciably offset the critical speed of the system. The strong coupling between aerodynamic and structural damping is demonstrated. It is shown that structural damping generally has a stabilizing effect on a fixed-root wing when applying unsteady or quasisteady aerodynamics.

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Errata

Noise of Counter-rotation Propellers with Nonsynchronous Rotors

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TABLE 1 should have appeared at the top of page 1098 as it does at the right.

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Table 1 Mode properties at frequencies near BPF

Mode indices m	k	Frequency, $\omega_{m,k}$	Cutoff ratio, ξ	Spin rate, ϕ	Number of lobes, $\|m-k\|/B$	Modal efficiency, η^a
0	± 1	$(1+\epsilon)B\Omega_2$	M_T	$-(1+\epsilon)\Omega_2$	B	0.13
± 1	0	$B\Omega_2$	M_T	Ω_2	B	0.13
± 2	∓ 1	$(1-\epsilon)B\Omega_2$	$M_T/3$	$((1-\epsilon)/3)\Omega_2$	$3B$	2×10^{-7}
± 3	∓ 2	$(1-2\epsilon)B\Omega_2$	$M_T/5$	$((1-2\epsilon)/5)\Omega_2$	$5B$	1×10^{-15}

[a] $\eta = J_{(m-k)B}[(m+k)Bz_0 M_T \sin\theta]$ calculated for $B=4$, $z_0=1$, $M_T=0.8$, $\theta=70$ deg.