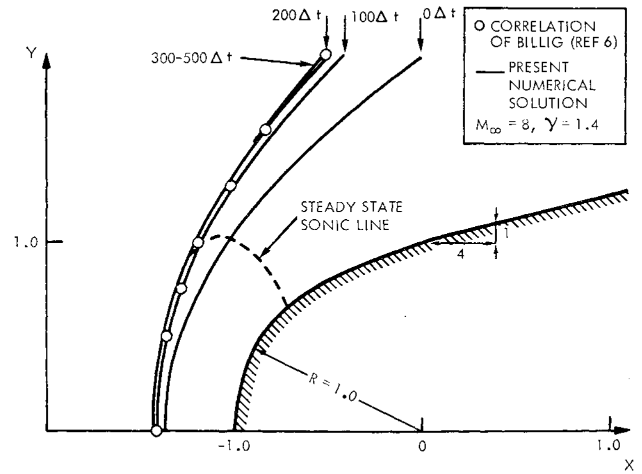

Fig. 1 Transient and steady-state shock-wave shapes for a cylinder-wedge; Δt denotes increment for one time step.

for the detached bow shock wave (for example, see Refs. 1–5); on the other hand, there are advantages of obtaining this knowledge from simple engineering estimates without resorting to a complex computer program. Billig's[6] recent correlation for bow shock-wave shape and location is an excellent example of such an engineering simplification.

The purpose of the present Comment is to present new results for shock-wave shape which serve to complement and confirm the recent work of Billig.[6] These new results have been obtained with an accurate, numerical, time-dependent blunt-body solution[7] similar to the method of Moretti and Abbett.[5] Briefly, this method entails the solution of the appropriate inviscid, unsteady-conservation equations for the case of a fixed body shape and specified freestream conditions (the "direct" problem). Starting with an assumed initial flowfield and shock shape, the unsteady equations of change are solved by finite differences in steps of time using a high-speed digital computer. The steady-state solution is approached asymptotically at large values of time. Figure 1 shows various transient positions of the shock wave during the solution for the flowfield about a cylinder-wedge as well as the final steady-state shock wave and sonic line (obtained after 500 time steps). Figure 2 shows the steady-state results for a sphere-cone (again, obtained after 500 time steps). In each case, the agreement with Billig's correlation[6] is quite good. These results at $M_\infty = 4$ and 8 provide additional evidence that Billig's correlation, which is very simple to apply, is accurate as well.

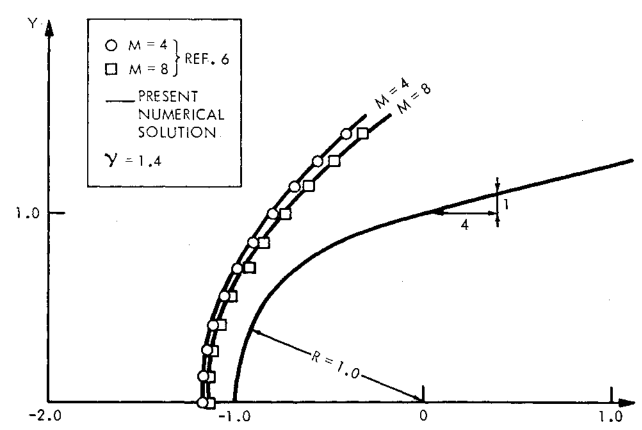

Fig. 2 Steady-state shock-wave shapes for a sphere-cone.

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Errata: "Thermal Stresses in Temperature-Dependent Isotropic Plates"

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1) Both D_3's in the last term of Eq. (13) should be h_3's.

2) The last two terms in the bracket{ } on the left-hand side of Eq. (14) should read

$$\left[\frac{H_1(h_1H_1 - h_2H_2) + H_2(h_1H_2 - h_2H_1)}{h_1^2 - h_2^2} - D_1\right]\frac{\partial^2 w}{\partial y^2} - \bar{M}_T$$

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