

# Errata

## Some Aspects of Fan Noise Suppression Using High Mach Number Inlets

S.D. Savkar

General Electric Company, Schenectady, N. Y.  
and

S.B. Kazin

General Electric Company, Evendale, Ohio

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THESE Errata originally were published in the October 1975 issue of the *Journal of Aircraft*. All of the symbols were pasted in place but, unfortunately, some of the symbols fell off the mechanical before the Errata were printed. The correct captions for Figs. 2, 8, 9, 10, 11, and 14 are:

**Fig. 2** Evolution of a rotor (cascade) MPT pattern using the nonlinear model of Kurosaka.<sup>6</sup>  $B=53$  blades.  $M_\infty=1.135$ . Blade to blade spacing,  $S=1.09$  in. Incidence for nominal stagger  $=1.05^\circ$ . Nominal stagger  $65^\circ$ .  $x$ =axial distance;  $\bigcirc$ =uniform rotor;  $\diamond$ =25th shaft harmonic;  $\triangle$ =13th shaft harmonic;  $\square$ =BPF;  $\ominus$ =41st shaft harmonic.

**Fig. 8** Aerodynamic behavior of accelerating inlets—total pressure recovery correlated with one-dimensional geometric throat Mach number.  $\triangle$ -inlet 1 (baseline);  $\bigcirc$ -inlet 2;  $\ominus$ -inlet 3;  $\diamond$ -inlet 4. All inlets  $L/d=1$ . Inlet 4 has an extended high Mach number region and the shortest diffuser.

**Fig. 9** Measured radiated sound power vs wheel speed for the GE-Corporate Research & Development tests.  $\triangle$ -inlet 1 (baseline);  $\bigcirc$ -inlet 2;  $\ominus$ -inlet 3;  $\diamond$ -inlet 4. Note the breaks in curves for inlets 2 and 3 which appear to be traceable to effects of unsteady shock boundary layer interaction in the inlet throat.

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Index categories: Aircraft Noise, Aerodynamics (including Sonic Boom); Aircraft Aerodynamics (including Component Aerodynamics); Subsonic and Transonic Flow.

**Fig. 10** Noise reduction for the GE-Corporate Research & Development tests. Peak 200 ft sideline PNL tested for correlation with peak wall Mach number. All data referenced to inlet 1.  $\bigcirc$ -inlet 2;  $\ominus$ -inlet 3;  $\diamond$ -inlet 4.

**Fig. 11** Noise reduction for the GE-Corporate Research & Development tests in terms of peak 200 ft sideline PNL. Correlation with respect to one-dimensional geometric throat Mach number. All data referenced to inlet 1.  $\bigcirc$ -inlet 2;  $\ominus$ -inlet 3;  $\diamond$ -inlet 4.

**Fig. 12** Noise reduction data for the GE-Corporate Research & Development tests (high-speed fan) in terms of radiated sound power level.  $\bigcirc$ -inlet 2;  $\ominus$ -inlet 3;  $\diamond$ -inlet 4. --- calculations using inlet 3 Mach number distribution. All data referenced to inlet 1.

**Fig. 14** Composite of accelerating inlet noise reduction data—influence of wheel tip speed.  $\bigcirc$ - $1/2$  scale fan data;  $\diamond$ -Langley high tip speed;  $\triangle$ -Langley low tip speed;  $\ominus$ -GE-Corporate Research & Development tests (high-speed fan).

## Reply by Authors to P. R. Payne

K. R. Reddy and B. W. Roberts

University of Sydney, Sydney, Australia

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LINES 25 and 26 of the right-hand column should read as follows: "This same filling time notion is also assumed by Payne in Eq. (46) of his Ref. 7."

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Index categories: Aircraft Deceleration Systems; Nonsteady Aerodynamics.