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CORRIGENDUM

Fahy, F. J. 1998 *Journal of Sound and Vibration* **214**, 261–267. An alternative to the SEA coupling loss factor: rationale and method for experimental determination.

I am obliged to Dr Svante Finnveden for pointing out in a personal communication a misleading assumption in this paper, namely that of uniform spectral density of the excitation force.

The time- and frequency-average power input to a resonant, multi-mode structure by a broad band excitation force of *uniform spectral density*, applied at any point, is independent of the dissipation loss factor of the structure, as, of course, is the dissipated power. On the other hand, the mean square velocity response of the structure, and hence its time-averaged, stored energy, are inversely proportional to the loss factor. Hence, equation (7) of the cited paper is not correct under the assumption of uniform spectral density of excitation force.

Theoretical and computational analysis shows that the frequency-averaged real part of the inverse of the driving point mobility of resonant, multi-mode structures, $\mathrm{Re}\,\{(1/Y)\}$, generally lies within a few per cent of the inverse of the frequency-averaged value of $\mathrm{Re}\,\{Y\}$, over a range of modal overlap factor from $0 \cdot 001$ to $5 \cdot 0$. Therefore, equation (7) is a good approximation for uniform spectral density of driving point *velocity*.

The proposed technique eVectively involves the measurement of the ratios of response autospectra to driving point autospectra. Hence, the procedure may be correctly implemented by normalizing response velocity spectra by the associated driving point velocity autospectrum. Alternatively, the frequency average of the square of the modulus of the velocity transfer functions may be derived using either continuous or repeated impact excitations.

It is also worth mentioning that this experimental procedure can be used to estimate power dissipation coefficients, M_i, directly from the reduced matrix equation, by expressing the equality of input and dissipated power for sequential excitation of each of the subsystems, as in the SEA Power Injection Method. This avoids the error-prone procedure suggested in the paper of subtracting the estimated power transfer coefficients from the estimated diagonal terms of the power coefficient matrix.

I apologize for any inconvenience caused by the misleading assumptions made in the paper.

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