Erratum

Erratum to "A novel predicting method of vibration and acoustic radiation for rectangular plate with particle dampers" [30 (3) (2016) 1021~1035][†]

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There are two corrections to make to the original article.

1) Page 1026, Section 3, line 11: "11.60×10^3 kg 20" should read "11.60×10^{-3} kg".

2) Equation (16) in the original article,

$$C_{eq} = \frac{3\pi^3 d^2 h \rho_m}{4}\left(\frac{K_1}{\pi d^2 \rho_m}\right)^{1/2} f^{1/2} |\dot{x}|^{1/2} + \frac{3\pi^3 d^2 h \rho_m}{4}\left(\frac{K_1}{\pi d^2 \rho_m}\right)|\dot{x}| - \frac{3\pi^3 d^2 h \rho_m}{16}\left(\frac{K_1}{\pi d^2 \rho_m}\right)^{3/2} f^{-1/2} |\dot{x}|^{2/3} +$$
$$\frac{3\pi^3 d^2 h \rho_m}{4}\left(\frac{K_2}{\pi d^2 \rho_m}\right)^{1/2} |\dot{x}| + \frac{3\pi^3 d^2 h \rho_m}{4}\left(\frac{K_2}{\pi d^2 \rho_m}\right)|\dot{x}|^2 - \frac{3\pi^3 d^2 h \rho_m}{16}\left(\frac{K_2}{\pi d^2 \rho_m}\right)^{3/2} f^{-1/2} |\dot{x}|^3$$

was erroneously given. The Eq. (16) should read as follows:

$$C_{eq} = \frac{3\pi^3 d^2 h \rho_m}{4}\left(\frac{K_1 |\dot{x}| + K_2 |\dot{x}|^2}{\pi d^2 \rho_m}\right)^{1/2} f^{1/2} + \frac{3\pi^3 d^2 h \rho_m}{4}\left(\frac{K_1}{\pi d^2 \rho_m}\right)|\dot{x}| + \frac{3\pi^3 d^2 h \rho_m}{4}\left(\frac{K_2}{\pi d^2 \rho_m}\right)|\dot{x}|^2 -$$
$$\frac{3\pi^3 d^2 h \rho_m}{16}\left(\frac{K_1 |\dot{x}| + K_2 |\dot{x}|^2}{\pi d^2 \rho_m}\right)^{3/2} f^{-1/2}$$

It is pertinent to mention here that the error in the Eq. (16) has almost no effect for governing the frequency response functions (FRFs) on the rectangular plate with PDs. The points 2, 6, 8 and 11 on the rectangular plate are still used as observation points to display the vibration response of the whole plate. The simulation result comparisons of the frequency response functions (FRFs) on the rectangular plate with PDs are made when the revised and original Eq. (16) are used for simulation computation, respectively (see the Figs. 1 - 4). Sketch of the cantilever plate dimension, PDs arrangement, measurement points position and relevant simulation calculation parameters see the original article [1].
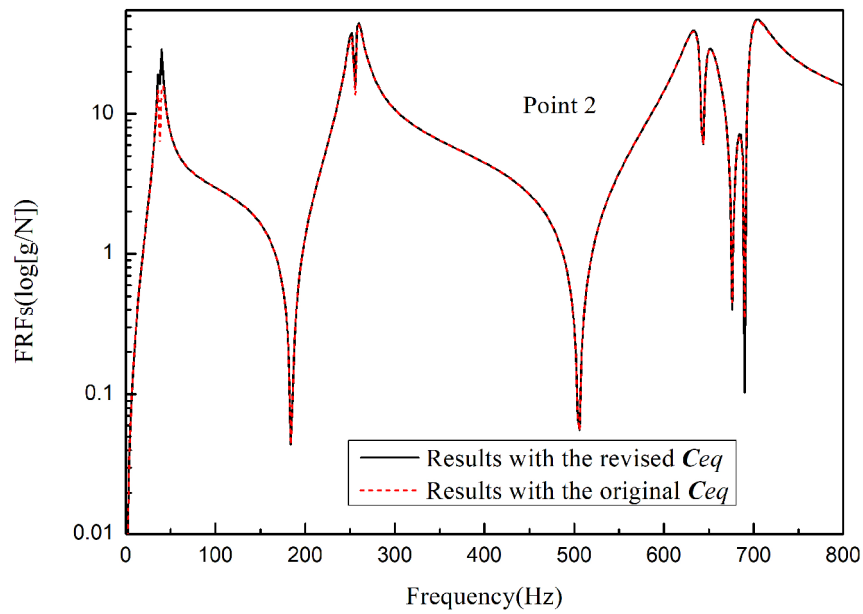
Fig. 1. Comparison of the frequency response functions (FRFs) on point 2 for the rectangular plate with PDs, simulation using the revised and original Eq. (16), respectively.
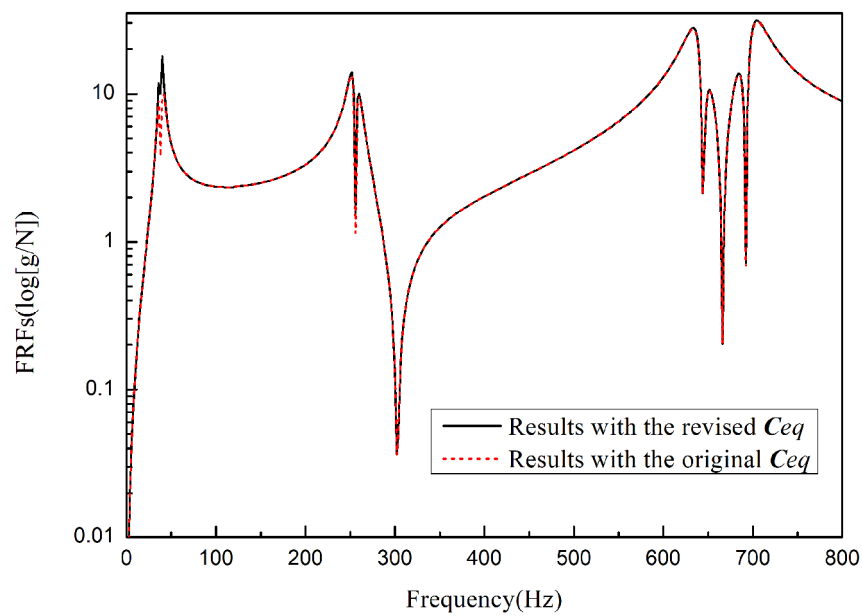

Fig. 2. Comparison of the frequency response functions (FRFs) on point 6 for the rectangular plate with PDs, simulation using the revised and original Eq. (16), respectively.
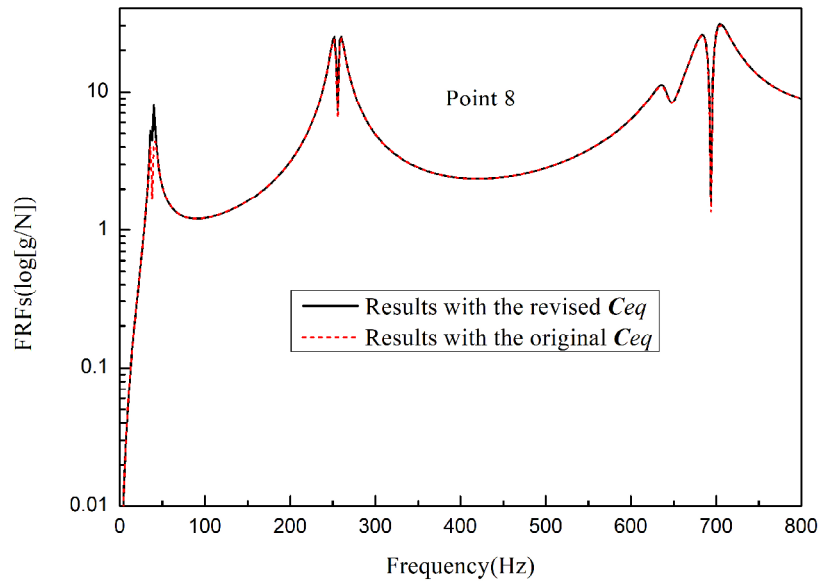
Fig. 3. Comparison of the frequency response functions (FRFs) on point 8 for the rectangular plate with PDs, simulation using the revised and original Eq. (16), respectively.
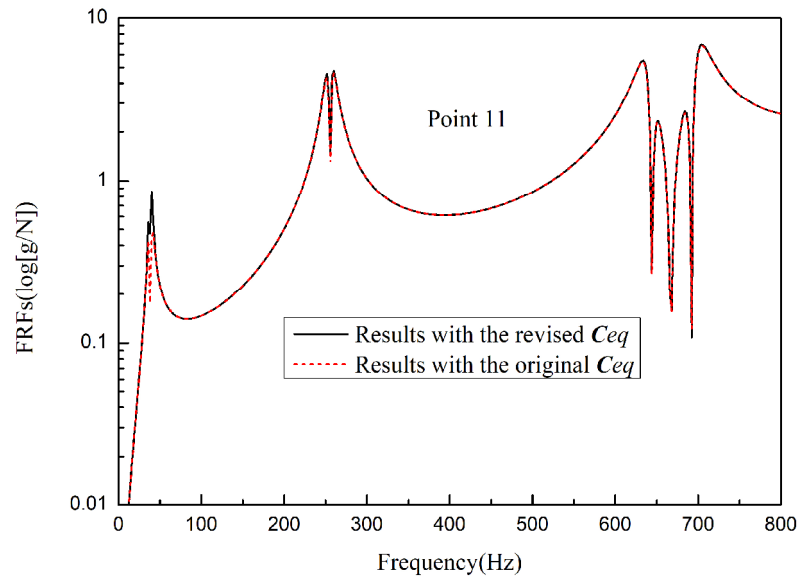

Fig. 4. Comparison of the frequency response functions (FRFs) on point 11 for the rectangular plate with PDs, simulation using the revised and original Eq. (16), respectively.