Letter to the Editor

Comments on 'dynamic analysis of a vertical plate exposed to breaking wave impact'

The writers wish to congratulate the authors for this important and practical study (Kirkgoz et al., 2004).

Their experimental and numerical work will be of great use to coastal structures designers, specially if one considers the advantages of using a 'dynamic magnification factor'.

On the other hand it would have been extremely useful if the authors had discussed in some detail the boundary conditions of the plate, Eqs. (4) and (5).

For instance, for the vertical ends, one should have

$$\left(\frac{\partial^2 w}{\partial x^2} + \nu \frac{\partial^2 w}{\partial y^2}\right)|_{x=0,a} = 0 \tag{1}$$

and the corresponding Kelvin–Kirchhoff force (Timoshenko and Woinowsky-Krieger, 1959). The second term of Eq. (1) is missing in the authors contribution.

Also, it is not clear if the authors take into account, in their analysis, the coupled plate–beam behavior.

References

Kirkgoz, M.S., Tanrikulu, A.K., Dündar, C., 2004. Dynamic analysis of a vertical plate exposed to breaking wave impact. Ocean Engineering 31, 1623–1635.

Timoshenko, S.P., Woinowsky-Krieger, S., 1959. Theory of Plates and Shells. McGraw-Hill, New York.

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