Theoretical analysis of thermoelastic damping in bilayered circular plate resonators with two-dimensional heat conduction

Shoubin Liu , Yuxin Sun , Jingxuan Ma , Jialing Yang

PII: S0020-7403(17)30595-7
DOI: 10.1016/j.ijmecsci.2017.11.003
Reference: MS 4019

To appear in: *International Journal of Mechanical Sciences*

Received date: 10 March 2017
Revised date: 26 September 2017
Accepted date: 1 November 2017

Please cite this article as: Shoubin Liu , Yuxin Sun , Jingxuan Ma , Jialing Yang , Theoretical analysis of thermoelastic damping in bilayered circular plate resonators with two-dimensional heat conduction, *International Journal of Mechanical Sciences* (2017), doi: 10.1016/j.ijmecsci.2017.11.003

Highlights

- Thermoelastic damping (TED) in bilayered circular plate resonators is studied.
- 2-dimensional heat conduction model is used.
- Expression of TED is derived analytically.
- Effects of the radius and thickness are evaluated.
- Influence of imperfect thermal contact on the interface was studied.