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Free vibration analysis of rotating cylindrical shells coupled with moderately thick annular plates

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Highlights:

- A unified approach for analysing rotating shell-plate combination is proposed.
- The approach is validated by comparing with literature and FE analysis results.
- Traveling wave motion of the coupled structure in rotating state is investigated.
- Effects of geometry and coupling and boundary conditions are evaluated.
- The approach proposed can be extended to dynamic analysis of disk-drum rotors.

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