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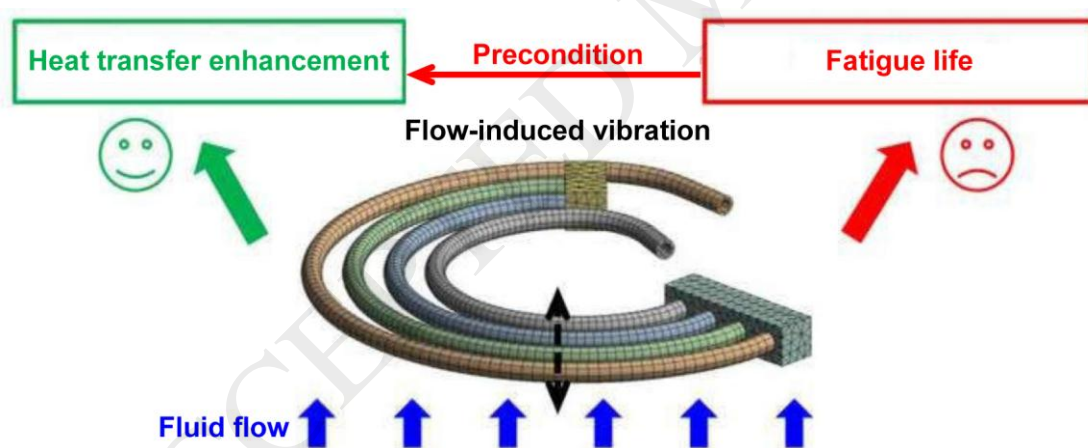
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Graphical abstract



Highlights

- Flow-induced vibration can be solved by two-way FSI calculation correctly.
- The amplitude is more susceptible to structural parameter compared to frequency.
- The vibrational Reynolds number (Re_v) dominates the heat transfer enhancement.
- The Re_v range 147-780 satisfies the requirement of heat transfer and fatigue life.

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