Frictional contact behaviors between beam and cylinder under cyclic loading

Jae Hyung Kim , Yong Hoon Jang

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Highlights

- Frictional beam contact problem under cyclic loading is numerically investigated.
- A rolling contact is captured, showing as $A_{stick}/A_{total} = 1 - T/fF$.
- Maximal frictional energy dissipation is occurred at a certain beam thickness.
- The roller support condition does not cause any frictional energy dissipation.