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Frictional Receding Contact Problem for a Graded Bilayer System
Indented by a Rigid Punch

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Highlights

- Both analytical formulation and finite element analysis are used in the solution of the frictional receding contact problem.
- A gradation of the finite elements are realized at the centroid of each element in ANSYS APDL code environment.
- The effect of coefficient of friction between the rigid punch and the upper layer is more pronounced than at the interface between layers.
- As the layers gets stiffer in the depth direction the magnitude of the contact pressures decrease and the resulting contact width increase.
- The stiffness mismatch at the interface causes the resulting contact pressure to increase and the contact widths to decrease.

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