Linear Column Buckling - Verification & Validation

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Verification & Validation

Next we must verify and validate our experimental results to insure that ANSYS did not make an error. The easiest way to do this is to compare critical buckling loads.

The theoretical critical buckling load we calculated in our pre-analysis is = 1.51398E+7 N.

The experimental critical buckling load calculated by ANSYS is = 1.5091E+7 N.

We find that our resulting percent error is = ((1.51398-1.5091)/1.51398)*100 = 0.322%

Therefore, our ANSYS analysis is accurate, and there is no need to further refine the mesh.

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