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Insight into Elastic-Plastic Bifurcation of Pressurized Cylinders:  
Transition between Bulging and Necking; The Line of Catastrophic  
Failure

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**Highlights**

- Axisymmetric bifurcation of pressurized thick cylinders is investigated.
- Bifurcation is delayed past the instability limit, occurs at decreasing loads
- A transition line separates bulging from necking bifurcation modes
- The delay in bifurcation diminishes when loading along the transition line.
- The transition line is designated as the “Line of Catastrophic Failure”.

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