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Experimental and numerical investigations on the energy absorption of shrink circular tube under quasi-static loading

Jian Li , Guangjun Gao , Weiyuan Guan , Shuai Wang , Yao Yu

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## Highlights

- Quasi-static tests on radial shrink deformation of aluminum alloy circular tubes are performed;
- Deformation process and force response of the tested specimens are analyzed;
- Numerical simulations are conducted and show good accordance with experimental observations;
- Effects of friction coefficient, cone angle, and tube dimension on driving force response and energy absorption efficiency are investigated.
- Shrink circular tube has a higher energy absorption efficiency when compared to expansion circular tube.

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