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Elastic-plastic modelling of metallic strands and wire ropes under axial tension and torsion loads

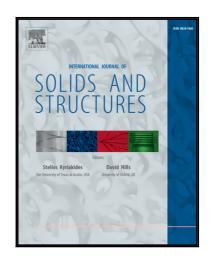
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Highlights

- An analytical model characterizing elastic-plastic behavior is proposed for strands and ropes, especially for multi-strands structures.
- The contact status within multilayered strands is carefully studied.

• The different yielding and failure behaviors of wire strands under varying loading conditions are analyzed.

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