

**Nardinocchi, Paola; Svaton, Tomas; Teresi, Luciano**

**Mechanical response of helically wound fiber-reinforced incompressible nonlinearly elastic pipes.** (English) [Zbl 1189.74022](#)

Ganghoffer, Jean-François (ed.) et al., Mechanics of microstructured solids 2. Cellular materials, fibre-reinforced solids and soft tissues. Papers based on the presentations at the 11th EUROMECH-MECAMAT conference, Torino, Italy, March 10–14, 2008. Berlin: Springer (ISBN 978-3-642-05170-8/hbk; 978-3-642-05171-5/ebook). Lecture Notes in Applied and Computational Mechanics 50, 79-87 (2010).

Summary: We study the mechanical response of a helically wound fiber-reinforced incompressible axisymmetric structure under torsion and compare it with the response turning out from the classical Rivlin solution of the torsion problem of a neo-Hookean pipe.

For the entire collection see [\[Zbl 1189.74007\]](#).

**MSC:**

[74E30](#) Composite and mixture properties

[74B20](#) Nonlinear elasticity

Cited in **1** Document

**Full Text:** [DOI](#)