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Korn's inequality for an arbitrary system of distorted thin rods. (Russian, English)

[Zbl 1150.74485](#)

[Sib. Mat. Zh. 43, No. 6, 1319-1331 \(2002\)](#); translation in [Sib. Math. J. 43, No. 6, 1069-1079 \(2002\)](#).

Summary: We derive a weighted and anisotropic Korn inequality for a system of elastic thin rods and verify its asymptotic accuracy. The structure of the norms at the construction elements (rods and knots) is determined from classifying the elements and assigning them to the following categories: movable, hard-movable, and clamped. This classification was never involved while the constraints on the structure of systems of rods in the preceding research excluded the presence of movable elements.

MSC:

[74K10](#) Rods (beams, columns, shafts, arches, rings, etc.)

Cited in **8** Documents

Keywords:

thin rod; Korn's inequality; weighted and anisotropic norms; classification of elements of elastic constructions; movable and hard-movable rods

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