

MODELING THROUGH THE FEA METHOD OF THE BRAIDED ARTIFICIAL MUSCLE

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Abstract: This work focused on the braided artificial muscle treated as an assembly made of a cylindrical elastic membrane and a double-helical network of fibers surrounding it. Using advanced programs of assisted designing, a model is shaped at the same time with the analyzing of the finite element and with the simulation of the muscle functioning. A good conformity between the results of the computerized analysis and the results obtained through experimental tests was found.

Key words: Braided artificial muscle, FEA method.