



On the multiple solution of axisymmetric minimum surfaces

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The optimum condition for the unloaded shape of prestressed tents is met by minimum surfaces. The simplest type of such structures is a rotationally symmetric catenary surface. In this paper, the authors present an analysis which shows that catenary surfaces cannot fit arbitrarily chosen boundary circles of the tent, and also that if a solution of the problem exists, also a dual solution can be found.

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