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*Mathematical model of coupled elasto plastic membranes*

We present the partial differential equations of a model of two flat elastoplastic membranes, of different material, coupled, with tensions and deformations parallel to the plane. The variational formulation of the coupled problem uses the development of Matthias Liero and Alexander Mielke on elasto plastic plates. The existence and uniqueness of solutions is demonstrated by the Lax-Milgram theorem.