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On the influence of elasticity on the large deflections response of circular plates to uniform quasi-static pressure

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Highlights

- A theoretical model of the elastic-plastic pate response to uniform pressure is proposed
- The elastic spring-back of a plate after removing the load is obtained analytically
- The limit of the elastic deformation energy is obtained
- A comparison of the current model with an idealised rigid-plastic model is discussed
- The theoretical model is validated by finite element simulations

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