Mathematical and numerical modelling of large axisymmetric creep strains and damage

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The theoretical model for large creep deformation of the axisymetric elements with the account of ductility and embrittlement of the material under radial pressure in presence of body force is established. The finite strain theory is applied. We assume that microcracking and diminishing of transversal dimensions start from the very beginning of creep process. Additional time factor leads to subsequent complications. To make the model complete, the numerical procedure is proposed. The example shows effectiveness of this procedure.