NUMERICAL-AND-ARALYTICALMETHODS OF DEFORMATION CALCULATION AND EVALUATION OF STRUCTURALMEMBER STRENGTH IN MECHANICAL ENGINEERING

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The paper deals with various approaches to calculating deformation fields in plastic deformation localization areas (deformation concentrators), including those based on rigid plastic analysis. Algorithms of incorporating rigid plastic super elements into familiar program packages like MSC,ANSYS are proposed. Limiting values of deformation tensor field are calculated. An approach to evaluating structural member strength is proposed.