

STRESS RECOVERY PROCEDURE FOR FOUR NODE QUADRILATERALS

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Abstract. In this work we present a stress recovery procedure for four node quadrilaterals based on a non-conforming interpolation. We use a quadratic interpolation with normal derivatives at midside points and function values at vertices as variables. Midside values are averaged from adjacent elements at interior sides. At the boundary the appropriate boundary condition can be imposed to the recovered field. If function values are imposed at the element boundary then we use the midside function value instead of its normal derivative to define the interpolation. A comparison with other procedures and error estimations are shown.