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COMPARISONS OF INTEGRATION RULES WITH MIDSIDE POINTS FOR QUADRILATERALS

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Abstract. In this work we present some results obtained with different integration rules with midside integration points on bilinear quadrilaterals for stress analisys. The use of these points have some advantages with respect to conventional Gauss points. A better prediction of high gradients can be obtained. Also an efficient implementation can be done in the stiffness matrix is assembled by side by side computations instead of the conventional element by element computations. Some comparisons with conventional approaches are shown.