

Thesis Title                      Static Analysis of Shear Wall-Frame  
Structures by Spline Finite Strip Method

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### Abstract

Static analysis of shear wall - frame structures using spline finite strip method is studied. The strip elements which span the whole height of the structure are used in discretizing the solid shear walls and the frames portion. The structural properties are formulated directly through minimum total potential energy principle in case of solid shear walls and indirectly through the transformation process of the properties of the standard beam element using in finite element method for the frame portion. Representation of displacement fields is the product of B-3 spline functions along the height of the structure and the basic polynomial shape functions in the transverse direction.

Numerical results using spline finite strip method are reliable and in good correlation with those obtained using the theoretical and other finite strip solutions.