

STRICT AND APPROXIMATE ANALYSIS OF DYNAMIC BEHAVIOUR OF BEAM STRUCTURES USING FINITE ELEMENT METHOD

Summary – In this paper the dynamic analysis of beam structures was considered. The influence of shear deformation, according to Timoshenko theory, was taken into account. The analysis of higher order natural frequencies was carried out in strict and approximate manner for simply supported beam. Such an evolution shows how complex a discrete model should be to obtain similar results in comparison to the exact ones.