**Abstract:**

Experimental dynamic analysis, also known as modal analysis or modal testing, deals with the determination of natural frequencies, damping ratios, and mode shapes through vibration testing. The exhaust muffler in an automobile plays an integral role in reducing the sound of the automobile, as well as the ride itself. In order to maintain a desired noise and comfortable ride, the modes of a muffler need to be analyzed in finite element analysis. THE CAD model designed In SOLID WORKS 2014.and analysis carried out in ansys work bench. The natural frequencies obtained by both the methods agree with each other. This is useful while designing of exhaust muffler to avoid the resonance.