**Modal Analysis Of Refrigerator Compressor Cylinder Head**

**Abstract**

The project aims at determination of optimum shell design by the consideration of the natural frequencies of different modified shells. The choice of selecting the compressor shell for low noise is based on the natural frequencies obtained. This is because the noise level of the compressor is basically dependent on its natural frequencies. The finite element reveals that, the natural frequencies are a function of material and stiffness of the body. Hence with the material remaining the same, the geometric of the shell is changed to have different modifications. The natural frequencies of each modification are determined by the modal analysis. This project discusses the process in which the reduction of compressor noise can be achieved by restructuring the compressor shell and decreasing the amplitude of vibration.

Keywords: Optimization, Reciprocating