**VIBRATION ANALYSIS OF A ROTARY COMPRESSOR**

**ABSTRACT**

By theoretically analyzing dynamic behavior of the crankshaft, the rolling piston and the blade in rolling-piston rotary compressors, constraint forces and sliding speed at each pair of movable machine elements were obtained, and unbalanced inertia forces and compressor vibrations were evaluated. It was concluded that theoretical results have a good agreement with experimental ones. Moreover, it was revealed that one of major factors which cause compressor vibrations is speed variation of the crank-shaft and compressor vibrations are not affected by rolling behavior of the piston

The main objective of this project is to design rotary compressor head and performing the vibration analysis to find out the natural resonance frequencies. The cad model of cr head is designed in solid works and vibration analysis is carried out in solid works simulation.