

## **DESIGN AND DEVELOPMENT OF ADVANCED JET ENGINE.**

This project deals with researching, designing and building jet engines. A simple turbojet engine was designed and construction was begun. The design was made by studying the work done by industry and researchers over the course of the history of jet engines. The methods were then discussed and chosen in a way that would simplify the design work as well as the construction of the engine. The goal was to create a self-sustaining combustion within the engine. The design settled upon consists of a radial compressor, an annular combustion chamber and an axial turbine. Since the compressor would have been the most difficult part to machine the decision was made early on to use the compressor from a turbocharger out of an automotive engine. Upon further study it was discovered that the characteristics of this compressor was not compatible with the rest of the design, as the compressor was made for an RPM range outside of what we could achieve and the compression ratio was too low. Most of the rest of the engine had already been built, and there was not enough time to design and build another compressor so work was aborted on the engine.