**Abstract:**

In an internal combustion engine, the cylinderhead (often informally abbreviated to just head) sits above the cylinders on top of the cylinder block. It closes in the top of the cylinder, forming the combustion chamber. This joint is sealed by a head gasket. In most engines, the head also provides space for the passages that feed air and fuel to the cylinder, and that allow the exhaust to escape. The head can also be a place to mount the valves, spark plugs, and fuel injectors. Due to combustion process huge heat is generated the cylinder heads has possibility to effect by the thermal loads.

The objective of the project is to perform thermal analysis on cylinder head gasket to determine effective heat transfer due to combustion gases in cylinder combustion chamber. And analysis is carried out on different materials to choose appropriate material for cylinder head.

Engine cylinder head cad model is designed in solid works 2014 and analysis is carried out in solid works simulation.