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### **Duke 5 Cylinder Valve Less Axial Engine**

Abhishek Kumar Verma and Prachurya Mandal

Abstract - There have been a number of axial engines designed over the years with some similarities between them like Duke Engines which are very impressive with well developed prototypes. The engine has 5 Cylinders, 3 Injectors and Zero Valves. The counter rotating components generate very low vibrations. Only 3 injectors and plugs for 5 cylinders plus no valve train reduces the parts count. It is designed to run on a wide variety of fuels. Lighter and more compact than similar displacement conventional engines is the criteria for these engines.