

## **An investigation of air-gas mixer types designed for dual fuel engines: review**

### **ABSTRACT**

Diesel engines produce high emissions of smoke, particulate matter and nitrogen oxide. The challenge today is to reduce exhaust emissions without making any major modifications on engine. Therefore, adding alternative fuel will be the best practical pick to improve the performance and cut down emissions from diesel engines. The air fuel mixer plays an important role to convert diesel engine to work with dual fuel mode (alternative fuel-diesel) without any change in engine. One problem of gaseous mixers is the disability to prepare a homogeneous air-fuel mixture at a specific air-fuel ratio before entering the engine, thereby leading to high brake specific fuel consumption and exhaust emissions. This study offers an overview of air fuel mixer types. According to, overview in the dual-fuel engines, the combustion efficiency, engine performance and the emission reduction of gases are directly proportional to the degree of homogeneous mixing and air fuel ratio, all that depend on the design of mixer (size, shape, number of holes) and control mechanism that control on the mixer.

**Keyword:** Diesel engine; Dual fuel engine; AIR-CNG mixer; Exhaust emissions; Fuel consumption; Combustion