



Predicted Inert Percentage by Using the Developed Model vs Actual Inert Percentage

ADVANTAGES

- ▶ The sensor is non-invasive, rugged and small in size allowing the ability to overcome limitations and bulkiness of conventional measurement technologies.
- ▶ Wobbe Index, Methane Index and Inert Gas Content of the fuel mixture can be measured in real time (within 5% accuracy) using advanced data analytics (multivariate analysis and/or artificial neural network).
- ▶ The technology will enable the increased use of RNG as a transportation fuel resulting in significant reductions in GHG emissions.

APPLICATIONS

- ▶ The sensor may be used to estimate the Wobbe Index of gaseous fuel in real time.
- ▶ The sensor may be used to measure the methane number, which is analogous to the octane number (the amount of compression a gas can take before igniting).
- ▶ The data from the sensor may be used to adjust certain control parameters to maximize fuel efficiency in vehicles, gas appliances such as pool heaters, boilers etc.
- ▶ The data from the sensor may be used to utilize the renewable natural gas from landfills into an alternative power source.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,132,251	11/20/2018	2016-026

RELATED MATERIALS

- ▶ [Park, C, et al. Development of a Fuel Sensor Technology for a Variable-Blend Natural Gas Vehicle, J Nat Gas Sci Eng Volume 31, April 2016, Pages 149-155. - 03/08/2016](#)
- ▶ [Development of Key-Enabling Technologies for a Variable-Blend Natural Gas Vehicle](#)

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