







































Among various fuel blends, D80B5E15 has shown good performance and emission characteristics when compared to diesel and other fuel blends. Other blends which has good performance, has shown poor emission characteristics and vice versa.

## 7. Acknowledgement

The authors would like to thank the Project Coordinator (Mr.A.Somasundaram), Staff members, Lab technicians and friends for their valuable support and help during the research work. Also he is thankful to Dr.P.Navaneethakrishnan, Professor and Head of the Mechanical Department, Kongu Engineering College for supporting and funding the research.

## Reference

- [1] De-gang Li, Huang Zhen, Lu Xingcai, Zhang Wu-gao, YangJian-guang (2007) 'Physico-chemical properties of ethanol–diesel blend fuel and its effect on performance and emissions of diesel engines'-Renewable energy, Vol 30, pp. 967-976.
- [2] Hu Chen, Shi-Jin Shuai, Jian-Xin Wang (2006) 'Study on combustion characteristics and PM emission of diesel engines using ester–ethanol–diesel blended fuels'-Proceedings of the Combustion Institute , Vol31, pp. 2981–2989.
- [3] IstvanBarabas, Adrian Todorut, Doru Baldean (2010) 'Performance and emission characteristics of an CI engine fueled with diesel–biodiesel–bioethanol blends'-Fuel, Vol 89, pp. 3827–3832.
- [4] JinlinXue, Tony E. Grift and Alan C. Hansen (2010) 'Effect of biodiesel on engine performances and emissions'-Renewable and Sustainable Energy Reviews, Vol 15, pp.1098–1116
- [5] Kraipat Cheenkachorn, Bundit Fung tammasan (2009) 'Biodiesel as an Additive for Diesohol'-International Journal of Green Energy, Vol 6, pp. 57–72.
- [6] Lei Zhu, C.S. Cheung, W.G. Zhang, Zhen Huang (2011) 'Combustion, performance and emission characteristics of a DI diesel engine fueled with ethanol–biodiesel blends'-Fuel, Vol 90, pp.1743–1750.
- [7] MaginLapuerta, Octavio Armas, Reyes Garcia-Contreras (2007) 'Stability of diesel- bioethanol blends for use in diesel engines'-Fuel, Vol 86, pp. 1351–1357.
- [8] PrommesKwanchareon, ApaneeLuengnaruemitchai, Samai Jai-In (2006) 'Solubility of a diesel–biodiesel–ethanol blend, its fuel properties, and its emission characteristics from diesel engine' Fuel, Vol86, pp. 1053–1061.
- [9] Xiaoyan Shi, Xiaobing Pang, Yujing Mu, Hong He, ShijinShuai, Jianxin Wang, Hu Chen, Rulong Li (2005) 'Emission reduction potential of using ethanol–biodiesel–diesel fuel blend on a heavy-duty diesel engine'-Atmospheric Environment, Vol 40, pp. 2567–2574.
- [10] X. Shi, Y. Yu, H. He, S. Shuai, J. Wang, R. Li (2005) 'Emission characteristics using methyl soyate–ethanol–diesel fuel blends on a diesel engine'-Fuel, Vol 84, pp. 1543–49.