Investigation of oil burner combustion performance when utilizing palm biodiesel blends

Abstract

Due to renewability, high production rate, technical feasibility and role in reducing greenhouse gases (GHG) emission, palm oil is in the right position to supply the energy needs by the incorporation into the diesel supply. The objective of this study is to investigate the performance of liquid fuel burner system utilizing various biodiesel blends. In this study, the palm oil is from the Refined, Bleached and Deodorized Palm Oil (RBDPO) and the diesel used was the Conventional Diesel Fuel (CDF). The temperature profiles along the combustor and flame length for each fuel have been studied in this study. The results show that biodiesel blends can be used as the alternative fuel to replace CDF.