

Optimal Diesel Engine Technology Analysis Matching the Platform of the Helicopter

Authors : M. Wendeker, K. Siadkowska, P. Magryta, Z. Czyz, K. Skiba

Abstract : In the paper environmental impact analysis the optimal Diesel engine for a light helicopter was performed. The paper consist an answer to the question of what the optimal Diesel engine for a light helicopter is, taking into consideration its expected performance and design capacity. The use of turbocharged engine with self-ignition and an electronic control system can substantially reduce the negative impact on the environment by decreasing toxic substance emission, fuel consumption and therefore carbon dioxide emission. In order to establish the environmental benefits of the diesel engine technologies, mathematical models were created, providing additional insight on the environmental impact and performance of a classic turboshaft and an advanced diesel engine light helicopter, incorporating technology developments.

Keywords : diesel engine, helicopter, simulation, environmental impact

Conference Title : ICAMAME 2014 : International Conference on Aerospace, Mechanical, Automotive and Materials Engineering

Conference Location : Amsterdam, The Netherlands

Conference Dates : May 15-16, 2014