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EXPERIMENTAL AND NUMERICAL INVESTIGATION OF DIESEL ENGINE TURBOCHARGER

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ABSTRACT

This research work was carried out to investigate performance of turbocharger and parameters affecting performance of turbocharger. Experimental set up is developed to study the performance turbocharger at various temperature and pressure of exhaust gas of the engine. To study the effect of exit angle of turbine blade on turbocharger performance Workbench platform of Ansys CFX is used. Experimental results shows that as the engine load increases the speed of turbine shaft increases at certain level and after that it will remain constant. As per the requirement of the vehicle it is observed that we can also start the working of turbocharger when engine is running at low speed by using the proper exit angle of turbine blade.

KEYWORDS: Ansys CFX, Performance, Simulation, Turbine, Turbocharger

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