

# **ANALYSIS OF FLUID FLOW OF AIR INTO THE NEEDS OF DIESEL ENGINE COMBUSTION AIR**

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## **ABSTRAK**

In the method of reverse engineering a new engine performance is analyzed. One of them is about the analysis of air and gas flow on the intake cone and exhaust manifold. By using CFD pressure and fluid velocity of the combustion air system 93.2 Kw diesel engine has been analyzed by using CFD. The data of diesel engine performance prediction obtained from engine simulation. The result obtained from the simulation flow fluid pressure of air on intake cone of 1.12 bar, 1.14 bar, 1.16 bar, 1.15 bar. While the pressure in exhaust manifold is equal to 1.6 bar, 1.3 bar, 1.2 bar, 1.24 bar. In the simulation result in the intake cone velocity data obtained at 33.5 m/s, 32.9 m/s, 34.5 m/s, and 34.29 m/s. Whereas for the velocity of the exhaust manifold is equal to 93.8 m/s, 117.42 m/s, 122.77 m/s, and 202 m/s. Then the result of the analysis of fluid flow of air and gas in accordance with the needs of the engine for combustion air and gas to rotate the turbin turbocharger diesel engine.

**Key word** : CFD, Intake cone, Exhaust Manifold, Flow Analysis



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