

## Analisa performa sepeda motor 4 langkah 1 silinder fuel injection 125 CC terhadap variasi campuran premium - etanol (E10 - E30) = Analyze performance of motorbike 4 stroke 1 cylinder fuel injection 125 cc with variation of gasoline-ethanol mixture (E10-E30)

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### Abstrak

Harga minyak bumi yang fluktuatif, keterbatasan sumber energi minyak bumi dan timbulnya masalah polusi udara serta *global warming* mengintensifkan pencarian sumber energi baru. Etanol merupakan salah satu sumber energi alternative pengganti minyak bumi yang paling prospektif dikarenakan *Research Octane Number* (RON), kalor penguapan dan *flame speed* lebih tinggi dibandingkan dengan premium serta lebih ramah lingkungan. Pengujian memfokuskan pada analisa performa sepeda motor terhadap campuran premium dan etanol dengan memvariasikan prosentase etanol (10%, 20%, dan 30%), dan kecepatan putaran *engine*. Dengan campuran premium dan etanol ini diharapkan kinerja *engine* lebih baik dan emisi gas buang lebih rendah.

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Increase of oil price, nonrenewable of oil energy and air pollution also global warming issue, make searching of alternative energy more intensively. Ethanol is one of most prospective alternative energy, because of *Research Octane Number* (RON), vapor heat, flame speed are higher than gasoline also friendly environment energy. This testing will be focus on analyze performance of motorbike with ethanol and gasoline mixture with variation of ethanol percentage (10%, 20%, and 30%), and rotation speed of engine. With gasoline and ethanol mixture expected the result will increase performance of engine and decrease gas emission.