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Effects of Hydrogen Addition to the Intake Air on Performance and Emissions of Common Rail Diesel Engine

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#### **ACCEPTED MANUSCRIPT**

### **Highlights:**

- Effects of hydrogen on performance and emissions of a CI engine were investigated.
- Peak cylinder pressures increased and moved closer to TDC with hydrogen addition.
- ROHRs raised at the pilot injection stage but decreased at the main injection.
- Hydrogen improves engine performance especially at low engine loads.
- HC and CO<sub>2</sub> emissions decreased while there were no substantial changes on NO<sub>x</sub>.

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