

Development and Demonstration of Hydrogen Fuelled Multi-Cylinder Spark Ignition Engine-Generator Set for Stationary Power Generation

- Project was funded by Ministry of New & Renewable Energy (MNRE) and Kirloskar Oil Engines Limited (KOEL)
- Research Collaboration with IIT Delhi, Kirloskar Oil Engines Limited and IOCL R&D Centre



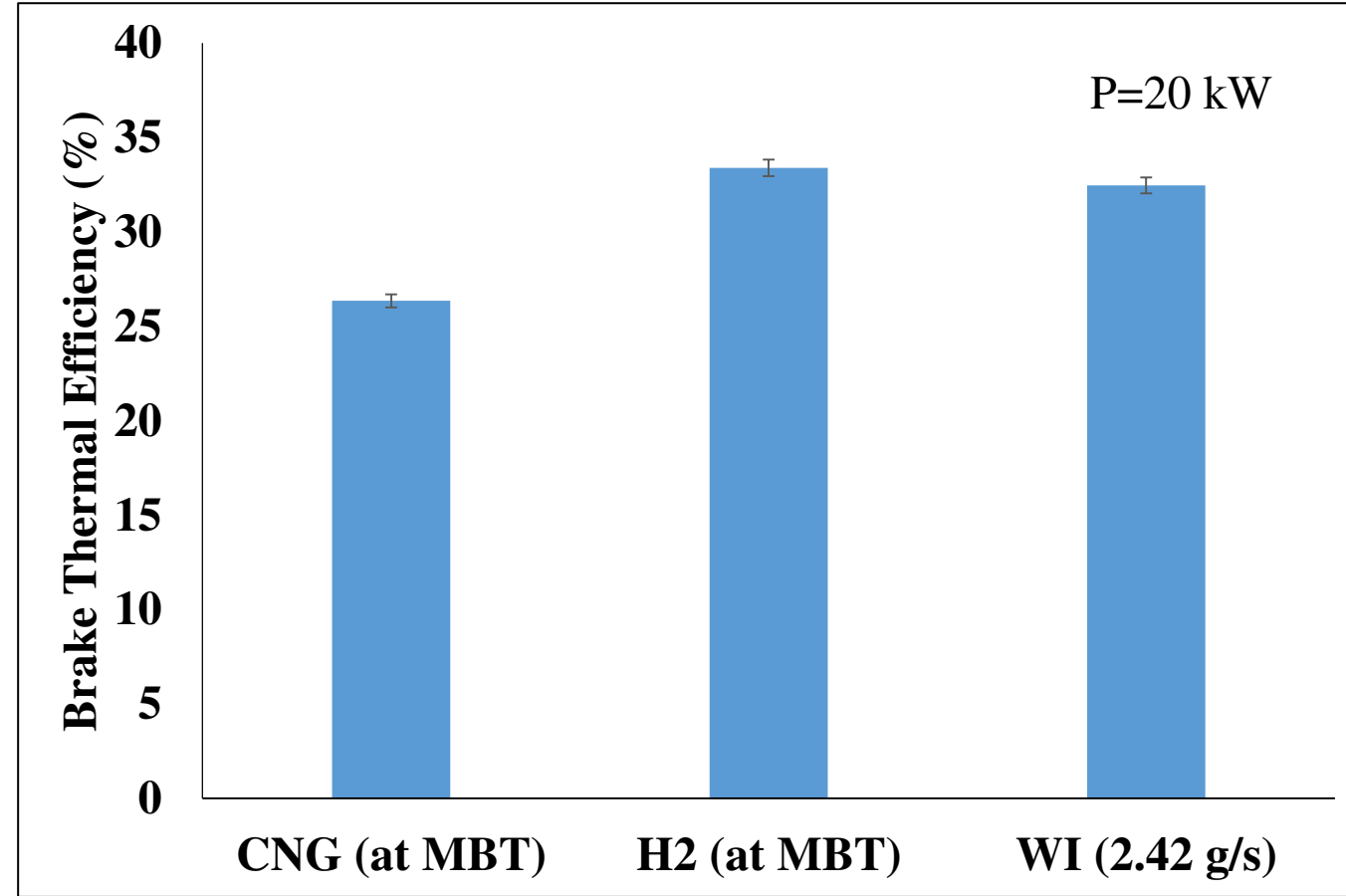
Enriching Lives



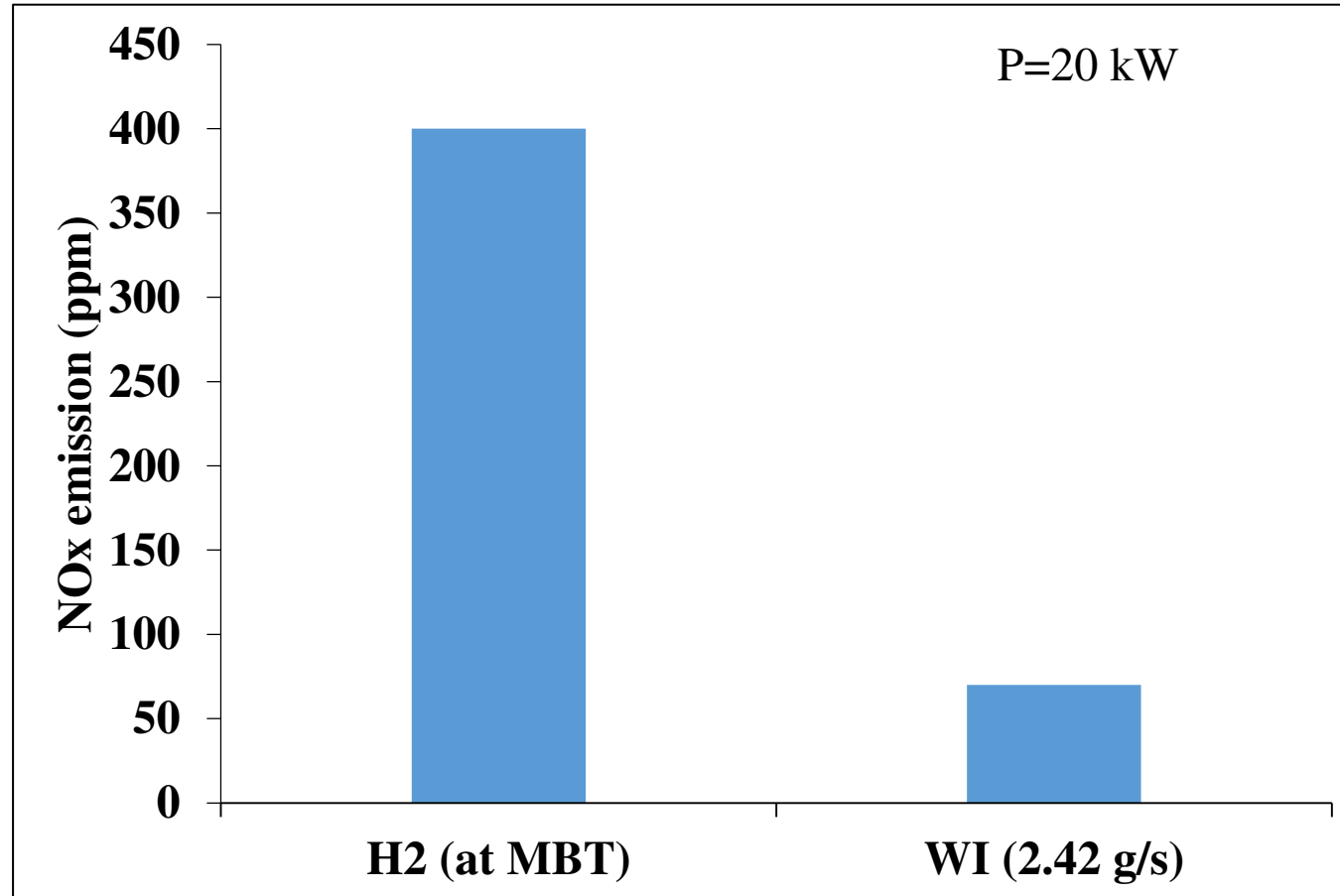
Table 1 Specifications of engine-generator set

Generating set	Power Factor	P.F.	0.8
	Rated output	kW	28
Engine	Rated output	kW	36
	Aspiration	---	NA
	No. of Cylinders		4
	Speed	rpm	1500
	Bore × Stroke	mm	105×120
	Compression Ratio		12:01

Improvement of Brake Thermal Efficiency of the engine with hydrogen



Oxides of Nitrogen (NO_x) emission reduction with water injection (WI):



Effect of hydrogen energy share in a compression ignition engine under dual-fuel mode

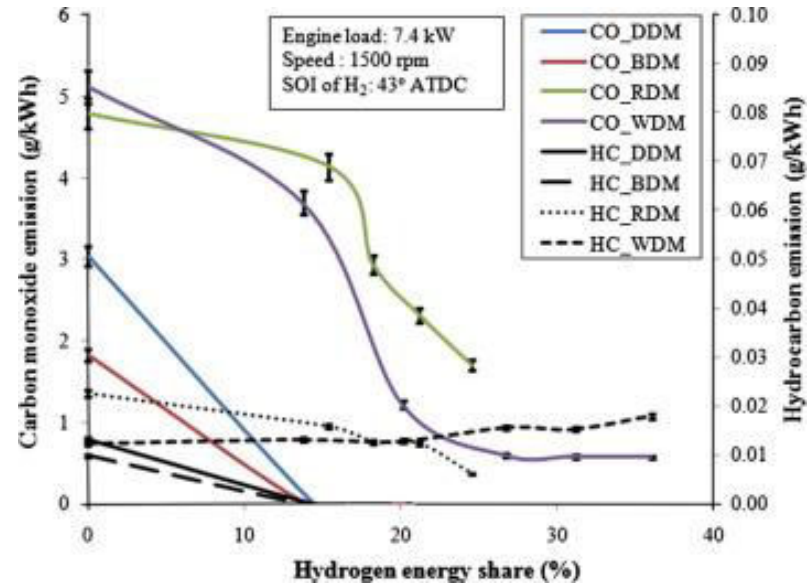
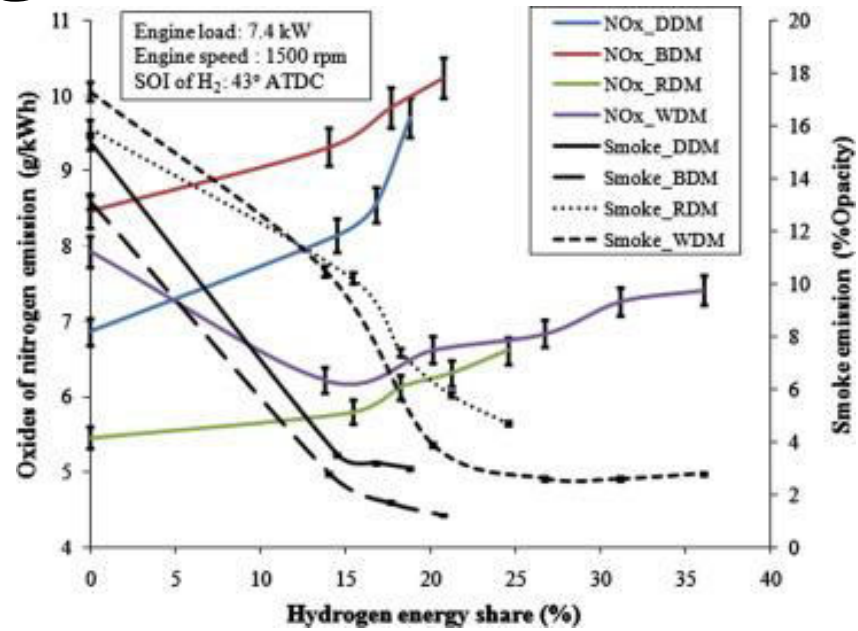


Table 2. Technical specifications of the engine.

S. no.	Parameter	Description
1	Make and model	Kirlosker and EA10
2	Number of cylinders	1
3	Displacement volume, cc	947.4
4	Rated power output, kW	7.4
5	Rated speed, rpm	1500
6	Bore × Stroke, mm	102 × 116
7	Compression ratio	19.5:1
12	Nozzle opening pressure, bar	250