

Trial Shows 5% Fuel Savings with Emulsified Fuel

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New trials by an **Australian** ferry owner suggest emulsified fuel could reduce fuel use by 5 percent at high loads while cutting nitrogen oxides (NOX) and particulate (PM) emissions, industry news site The Motorship [reports](#).

While the emulsion system, developed by **Alternative Petroleum Technology** (APT), water in the emulsified fuel transforms into steam in the combustion chamber, breaking the petroleum around it into smaller droplets that can combust more efficiently.

The process also reduces peak combustion temperatures, creating less NOx, while the more complete combustion results in less PM in the exhaust gas.

Tests have demonstrated that emulsified fuel can reduce emissions of NOx by 10 to 30 percent, carbon monoxide (CO) by 10 to 60 percent, PM by 60 percent, and carbon dioxide (CO2) by 2 to 8 percent.

APT's technology blends water into diesel, naphtha, heavy fuel oil (HFO), or biodiesel.

The company's standard fuel for diesel engines contains about 10 percent water.

APT offers blending units in a variety of sizes and can be installed and operated inexpensively, according to **Leigh Ramsey**, director of **Blended Fuel Solutions New Zealand**, who distributes the technology in Australia.

"Shipboard operations is very easy," Ramsey said.

"You've got large tanks and you can blend on board to a day tank."

Other companies using emulsion technology include [Neftech Pte Ltd.](#), a subsidiary of **China Auto Corporation** (CAC), and **Quadrise Fuels International Plc** (Quadrise), which is working to [commercialise a synthetic fuel](#) based on emulsion.