

Shipping giant to test new fuel

Pilot program will test the effectiveness of a procedure that mixes water and gas

By Paul T. Rosynsky, STAFF WRITER
Inside Bay Area

[Article Last Updated:](#)

The shipping industry's recent push to show California residents it's serious about reducing air pollution continued Monday as shipping giant APL announced changes to the way it burns fuel.

Prompted by new state regulations that will mandate what fuel can be burned while traversing California waterways, the Oakland-based company said it now has low-sulfur fuel aboard all 23 of its ships that dock at state ports.

But in hopes of jumping ahead of future regulations, and to show that the "industry needs to be responsible," the company also launched a pilot project to test three other technologies it says will reduce ship emissions.

Together, the announcements mark a new trend in an industry that long has opposed regulations that would reduce air pollution at ports.

The mostly foreign-based companies constantly have argued the regulations would be too costly.

Recent public awareness of the environmental damage caused by state ports, coupled with government mandates to curb it, now has shipping companies fighting to find the next new technology.

"The industry needs to be responsible for its impact on the communities where it does business," said Mike Zampa, spokesman for APL, a unit of Singapore-based Neptune Orient Lines.

APL's pilot program will test the effectiveness of water-in-fuel emulsification, a procedure that mixes water and fuel.

If done properly, the water reduces the ship's engine temperature, which then reduces the amount of nitrogen oxide and particulate matter released into the atmosphere, Zampa said.

Reducing those two emissions is vital in attempts to reduce air pollution. Nitrogen oxide contributes toward smog and particulate matter is responsible for tiny particles of soot that end up in people's lungs, causing asthma and other lung diseases.

APL will test the procedure on one ship that sails between Asia and the ports of Los Angeles, Long Beach and Oakland. The \$1.3-million program was paid for in part through a partnership the company reached with the California Air Resources Board, the federal Environmental Protection Agency, the ports of Los Angeles and Long Beach and four local air resources boards.

Researchers from the University of California, Riverside, will monitor the ship's emissions to see if the procedure works.

It will be used in the ship's main engines when the vessel sails within 30 miles of the state's coast.

Although the procedure is already used on many ships in Europe and in some power plants in the United States, its benefits to the environment are still in question.

Some experts wonder if it can reduce particulate matter, and others believe using different fuels could do a better job.

Large container ships currently use a fuel that contains large amounts of sulfur. Known as bunker fuel, it is made by using the leftovers of refined crude oil. It is relatively inexpensive compared to other fuels but causes much more pollution.

"If they had said they are announcing an initiative to reduce sulfur content, I would be more encouraged," said Swati Prankash, program director at the Pacific Institute, an Oakland-based think tank that conducts studies and proposes solutions for environmental protection issues. "It's an important step, but there is a whole lot more that can be done."

Others agreed.

"I wouldn't say it is the gold standard, but it is an important step to take," said Diane Bailey, a scientist with the Natural Resources Defense Council. "I am happy to hear when shipping lines go beyond current regulations and search for new technologies, but we really want to see this adopted throughout the industry and in a timely manner."

APL believes nitrogen oxide will be reduced by 20 percent when using the water-fuel combination in its tanks. It also believes particulate matter

could be reduced by as much as 50percent.

"This is an alternative. It may be a better alternative," Zampa said. "There is not one silver bullet to solve the challenges."

In addition to the water-in-fuel emulsification, APL also outfitted some ships with slide valves in the engine's cylinders. The slide valves prevent fuel from leaking during the combustion process. That, the company says, ensures a "complete burn" of the fuel in an engine, which results in cleaner emissions.

The company also said it will meet or exceed new state regulations that call for the burning of lower-sulfur fuel while berthed at state ports.

Maersk Inc. made a similar announcement in October.

Steve Stallone, spokesman for the International Longshore and Warehouse Union, which represents more than 3,000 dock workers, said the recent announcements show progress but cautioned that shipping lines should not be congratulated yet.

"They are starting to realize that they have to do something, which is good," Stallone said. "But this is just a test. They could have started moving faster on these things. ... We still have a lot more to do."