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## Shipbuilding

# Tankers That Won't Kill You at the Gas Pump

► Hurt by the strong yen, Japanese boatbuilders stress fuel efficiency

► "It's like buying a Toyota—you know what you're getting," says a shipper

Japanese shipbuilders, leapfrogged by South Korean and Chinese rivals in an industry they once dominated, hope to regain ground by adopting a marketing pitch long used by their country's automakers: fuel economy. A strong yen has made Japanese ships expensive in overseas markets, and "there's a sense of crisis in the medium to long term with the currency," says Hiroshi Minami, president of **Oshima Shipbuilding**, based in Saikai, Nagasaki prefecture. "We need to focus on more fuel-efficient ships to compete."

Oshima, **Imabari Shipbuilding**, Japan's largest shipyard, and other local vessel makers have backed proposals for a global fuel-use standard, similar to cars' mileage ratings, to help persuade shipowners to buy Japan-made ships that can cost about 20 percent more than Chinese ones, thanks to the mighty yen. Given the high oil prices, Japanese ships' greater fuel efficiency means cost savings of about \$2,700 a day for a typical dry-bulk vessel, based on figures from shipowner **Pacific Basin Shipping**. "Fuel consumption is what matters," says Klaus Nyborg, chief executive officer of Pacific Basin, whose dry-bulk fleet, excluding charters, is almost 90 percent made in Japan. "It's the difference between breaking even or making a loss."

A Japanese "handysize" dry-bulk ship typically uses about 24 tons of fuel a day, compared with 28 tons for Chinese-made ones, says Nyborg. A Japan-made ship of that size costs about \$30 million, vs. \$25 million to \$26 million for a Chinese one, according to Rome-based shipowner **d'Amico Società di Navigazione**.

To pare fuel usage, Imabari has developed a hybrid fin for commodity vessels and tankers. The fin is attached behind the propeller and helps channel the flow of water to the rudder, cutting fuel use by up to 6 percent, says Hitoshi Fujita, Imabari's director of ship design. The shipyard is also working on a system to inject bubbles under the bow, which has helped lower energy use by 8 percent in tests. It's trying a new type of paint for ship hulls that reduces friction and has cut fuel consumption by 4 percent in bulk-carrier tests.

Meanwhile, **Tsuneishi Holdings**, with shipyards in Japan, China, and the Philip-

pinas, says its latest bulk carrier will cut fuel use and carbon-dioxide emissions by 12 percent by using fins near the propeller and boosting carrying capacity.

Japanese shipyards are backing the global standards set to be discussed next month by the International Maritime Organization. The UN agency's index will define a minimum efficiency level for various types of ships that will

be raised every five years. "It's a good move to compare the fuel efficiency of our ships with other builders," says Katsushige Kambara, president of Tsuneishi.

Fuel economy could be a potent selling point since the price of marine bunker fuel has jumped 33 percent this year. **Nippon Yusen**, Asia's largest listed shipping line, says higher fuel prices depressed profit by 18 billion yen (\$224 million) in the year ended Mar. 31 from the year before. **Mitsui OSK Lines** says fuel pushed its profits down by 17 billion yen in the same period. Dry-bulk shipping lines also face lower transportation rates as expansion in the global fleet has outpaced China's demand for imports of iron ore and other raw materials. That's one reason the Baltic Dry Index, a benchmark for commodity-shipping costs, has tumbled more than 50 percent in the past year.

Japan's shipbuilders have benefited from a reputation for reliability and on-schedule deliveries, says Frank G. Jensen, CEO of Denmark's **Clipper Group**, which operates more than 200

vessels. The company intends to add Japanese-made ships through orders and charters, he says. Pacific Basin plans the same, Nyborg says. "It's like buying a Toyota—you know what you're getting," he says. "With China, it's more like an unknown."

Japanese shipyards had an order backlog of 71.3 million tons as of May 1, compared with 143.4 million for South Korea and 184.7 million for China, according to ship broker **Clarkson**. China took the top spot in 2009 as the government pumped money into shipbuilders to ensure supplies of imported raw materials. Chinese yards also benefit from lower costs. The average annual wage in urban China was 36,539 yuan (\$5,640) last year, compared with 3.8 million yen (\$47,300) in Japan, according to data from the China Economic Information Network and Japan's Ministry of

Health, Labor and Welfare. **B**  
—Chris Cooper

**71.3**  
MILLION

Japanese shipbuilders' order backlog in deadweight tons as of May 1