

# Los Angeles Times

# BUSINESS

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## Entrepreneur Is Shipping Scrap Metal by the Box

**Nathan Frankel devised a machine that could revolutionize the way the material is transported overseas. Now he has to sell it.**

By Evelyn Iritani  
Times Staff Writer

**L**ike many entrepreneurs, Nathan Frankel sees money where others see nothing. In the last five years, he has built a \$15-million-a-year business selling scrap metal from abandoned appliances, assembly line discards and used car parts.

So when Chinese companies offered to pay a 30% premium a few years ago for scrap to feed their booming factories, Frankel jumped at the opportunity. But loading bulky metal pieces into shipping containers was time-consuming and difficult to do without damaging the containers. So Frankel, the 31-year-old president of Fontana-based Advanced Steel Recovery, developed a machine that can fill a container with scrap metal in less than 15 minutes, compared with four hours with a backhoe. In addition to reducing labor costs, the machine significantly reduced potential container damage.

If successful, Frankel's machine could revolutionize the overseas transport of scrap metal. Scrap and other lower-value bulk products such as waste paper and farm products traditionally have been loaded directly into giant "break-bulk" ships that carry 40,000 tons of material. Containerized shipping offers the potential of significant cost savings.

Greater use of containers also would alleviate a big headache: the pileup of empty containers on U.S. shores, the result of China shipping more products here than the U.S. sends back.

Officials at the ports of Los Angeles and Long Beach estimate that they shipped more than 1.2 million empty containers to China last year.



Gina Ferazzi Los Angeles Times

**PRECIOUS METALS:** Since Nathan Frankel began operating the loading machine at his Fontana scrap yard, he has shipped 400 containers of scrap metal to South Korea and China.

By taking advantage of low U.S.-to-China container rates, Frankel said he could ship scrap to China for half the cost of traditional methods: \$10 to \$25 a metric ton, versus about \$40 at the break-bulk rate.

"I'm getting to take advantage of economies of scale. The other guy who is loading manually can't do that," said Frankel, a classically trained violinist who followed his father into the scrap business five years ago.

He thinks his machine also could load other bulk commodities, such as agricultural goods and waste paper, into containers.

The Frankel Advanced Shipping Technologies machine, known as FASTek, isn't being sold commercially yet. Since Frankel began operating the device at his Fontana scrap yard, he has shipped 400 containers to South Korea and China. He hopes to have a second unit in place by September. Mechtronic Solutions Inc., an Albuquerque-based firm specializing in prototype development, manufactured the machine.

Roman Cheng, a broker working for Chinese steel companies, said China's demand for scrap metal would remain strong. He has sent more than 100 containers to China in the last two months using Frankel's machine, and has gotten

executives from China Shipping Group, a large state-owned shipping company, to visit Frankel's yard to see the device in operation.

Shipping industry executives are intrigued. Mike Zampa, a spokesman for APL, a subsidiary of Singapore-based Neptune Orient Lines, said his company transports only small amounts of bundled scrap metal because of the potential for damage to the containers.

"Conceptually, it's a good idea," Zampa said of Frankel's machine, which he hasn't seen in operation.

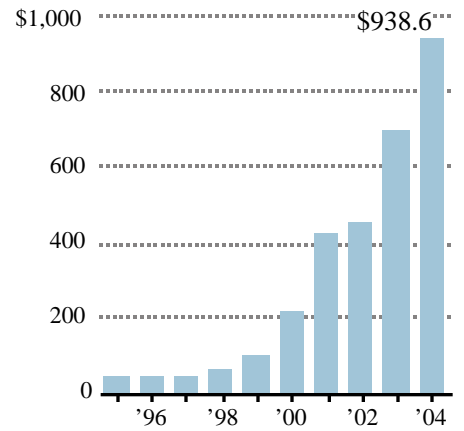
Anything that shifts more cargo to containers would be a boon for the Ports of Los Angeles-Long Beach, the nation's top container handler and the world's third-busiest port. Containers are easier to load, transport and secure, and take up less space in crowded terminals.

Jim MacLellan, director of marketing for the Port of Los Angeles, said "there is great upside potential" for such a machine. He said shipping bulky products by container, rather than in bulk, would be particularly attractive for foreign customers operating far from a port.

"[The container] could be taken directly to the factory rather than having to re-handle it at the port," he said. "That's what tends to be expensive."

## Piling up sales

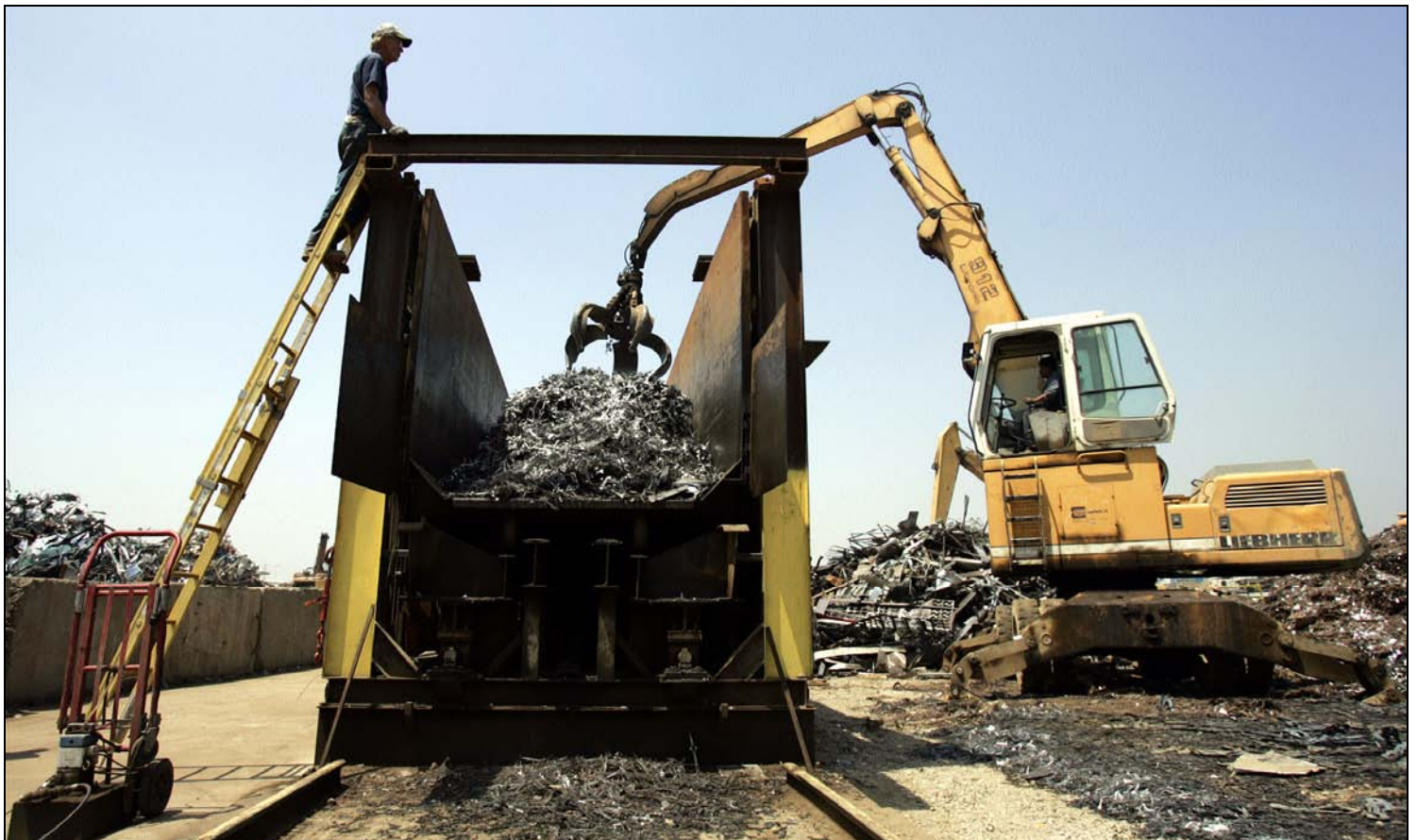
U.S. exports of scrap iron and steel to China (In millions)



Source: Global Trade Information Services

Los Angeles Times

A visit to Frankel's scrap yard helps illustrate the problem he hopes to solve. When he first tried to ship scrap overseas, it took three



Gina Ferazzi Los Angeles Time

**INNOVATION:** Scrap metal at Advanced Steel Recovery is loaded into a machine that will slide it into a shipping container for transport overseas. The device has improved efficiency at the firm.