



**Welcome to Alang, India, where  
salvage armies use crowbars, torches**

Alang's "shipbreakers" pay \$145 a ton for supertankers that 40,000 swarming workers will have completely stripped within eight weeks; this mother of all scuttling operations processes 400 vessels a year.

An aerial photograph of a ship recycling yard. Several large cargo ships are being dismantled in a body of water. The ships are mostly red and white, with some showing signs of damage and being partially submerged. The background shows a wide river or bay with a green, hilly shoreline. The text is overlaid on the upper part of the image.

and muscle to chew up 50,000-ton ships  
— until not even a bolt remains.

# END OF THE LINE

Story and photographs by Paul Saffo





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Working front to back, laborers first remove the bow from this Russian container ship, cutting through steel hull plates with acetylene torches. Once the interior is exposed, workers relieve the ship of all its pipes, which are sold to brokers waiting below to haul them away.

**THERE ARE CORNERS OF THE WORLD WHERE LOST THINGS GATHER,**

remote shores that receive the castoffs of industrial society. Alang, India, is such a place, a colossal chop shop fronting the Arabian Sea. On 3 miles of hulk-littered coast, 40,000 laborers dismember defunct oceangoing vessels that Western nations and Russia sell to Indian "shipbreaking" companies. About 400 supertankers, container vessels, and bulk carriers – even the occasional cruise liner – end up each year on the oil-stained sands of Alang, stranded and doomed like so many beached whales.

At a time when technologies no larger than dust motes are reshaping the planet, this strange wrecking yard is morbidly compelling. The vessels dismantled at Alang are among the sturdiest workhorses of global business, but when they wash up here, it's their fate to be picked apart by swarms of men wielding acetylene torches and turned into nothing more than ghosts of their dynamic past.

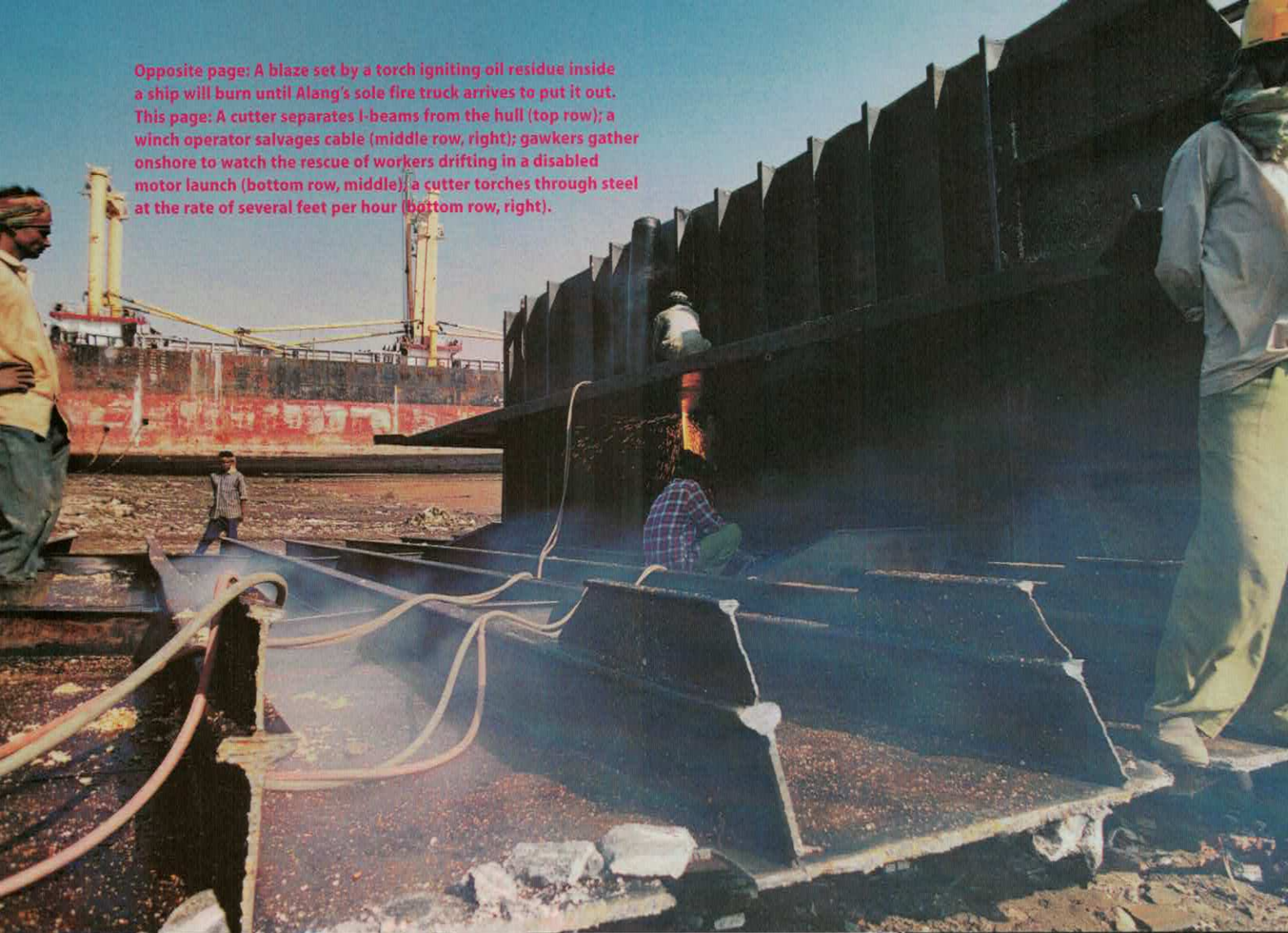
The ships, usually around 30 years old, arrive in waves from all points of the compass. Twice monthly, near the full and new moons – when the tides are highest – pilots drive them onto offshore shoals. At each successive high tide, they are winched closer to the shore and the 190-odd plots, or breaking yards, each 150 feet long and between 100 and 400 feet wide. Alang's shipbreakers lease their plots from the Gujarat state government, buying vessels on the international market through brokers and traders in London, New York, and Hamburg. Ships also arrive from the former Soviet Union, through more unconventional channels that function independently of the West's ship-brokerage system.

The majority of shipbreakers are in Asia – India, Bangladesh, and China – though the US Navy breaks down one or two vessels a year at a site in Texas. Worldwide, about 700 ships a year are sold to these operations, but by 2005, that number is expected to double. There has been a steady increase since 1989, when, after the *Exxon Valdez* ran aground on a reef and disgorged millions of gallons of oil into Alaska's pristine Prince William Sound, Congress mandated that ships sailing in US waters be constructed with double-stepped hulls. As a result, shipyards are now deluged with orders for the more impenetrable vessels; the ships they're replacing likely will be sold for shipbreaking.




Contributing writer Paul Saffo ([psaffo@iftf.org](mailto:psaffo@iftf.org)) is director of the Institute for the Future in Menlo Park, California.

Opposite page: A blaze set by a torch igniting oil residue inside a ship will burn until Alang's sole fire truck arrives to put it out. This page: A cutter separates I-beams from the hull (top row); a winch operator salvages cable (middle row, right); gawkers gather onshore to watch the rescue of workers drifting in a disabled motor launch (bottom row, middle); a cutter torches through steel at the rate of several feet per hour (bottom row, right).





This page: Quickly identified by his trademark safety glasses, the torch man looms large in the aristocracy of the shipbreaking yard, cutting steel into small slabs for shipping to India's rolling mills. Opposite page: A worker armed with a lowly crowbar prepares to tackle a piece of hull.

A large, dark, rectangular piece of ship metal is being hoisted by a crane. The metal is suspended by a thick chain. In the background, a worker in a light-colored uniform and a white hard hat stands on a platform, looking towards the metal. The scene is set outdoors, likely at a shipbreaking yard, with a body of water and another ship visible in the distance under a clear sky.

**ALANG'S PROFIT MARGINS ARE RAZOR-THIN**, so plot owners have become adept at squeezing every last rupee from their businesses. Shipbreakers buy a 52,000-ton supertanker for about \$7.5 million – \$145 per ton. In a typical year, the Alang shipbreakers collectively buy \$500 million worth of old ships and sell the parts for \$700 million. The profit and loss on individual ships can vary widely – some ships are harder to cut up than others, and it's quite possible to lose money on a particular ship if it consumes an unexpectedly large number of man-hours.

Because the plot owners recover their investment only as quickly as they can sell the metal, there's strong incentive for speed. Within four weeks of arriving at Alang, a 700-foot oil tanker will be reduced by a third; within eight weeks, not so much as a bolt will be left on the sand. Once severed from the ship, slabs of metal are systematically cut down into ever smaller and more uniform chunks, which are loaded onto trucks departing nightly for rolling mills and foundries all over India. One day last December, I looked on as a worker burned through a stanchion holding the bulkhead of a 1980s-vintage Russian container vessel. I'll never know which ship it was; by the time I arrived, the bow bearing the vessel's name was long gone. Using little more than torches and crowbars, the cutters swiftly went to work on the rest of the ship, slicing out huge chunks to be lifted shoreside by cranes.

From such a ship, about 13,200 tons of steel (hull, diesel engine, anchor and chain, steam plant, and so on) are recycled and sold. About 100,000 feet of pipe are recovered and recycled, as well as the ship's hydraulic system; its 35-ton propeller of brass-manganese alloy; faucets, mattresses, refrigerators, and cutlery; and every scrap of rubber, glass, plastic, and wood. Inside the ship's condenser, about 5 feet tall and 6 feet long, are 5,000 brass rods. The workers clean each rod by hand, then put them into bundles of 10 to sell to Indian brass dealers. →



## THE POLLUTION GENERATED BY THE WORK AT ALANG IS INESCAPABLE:

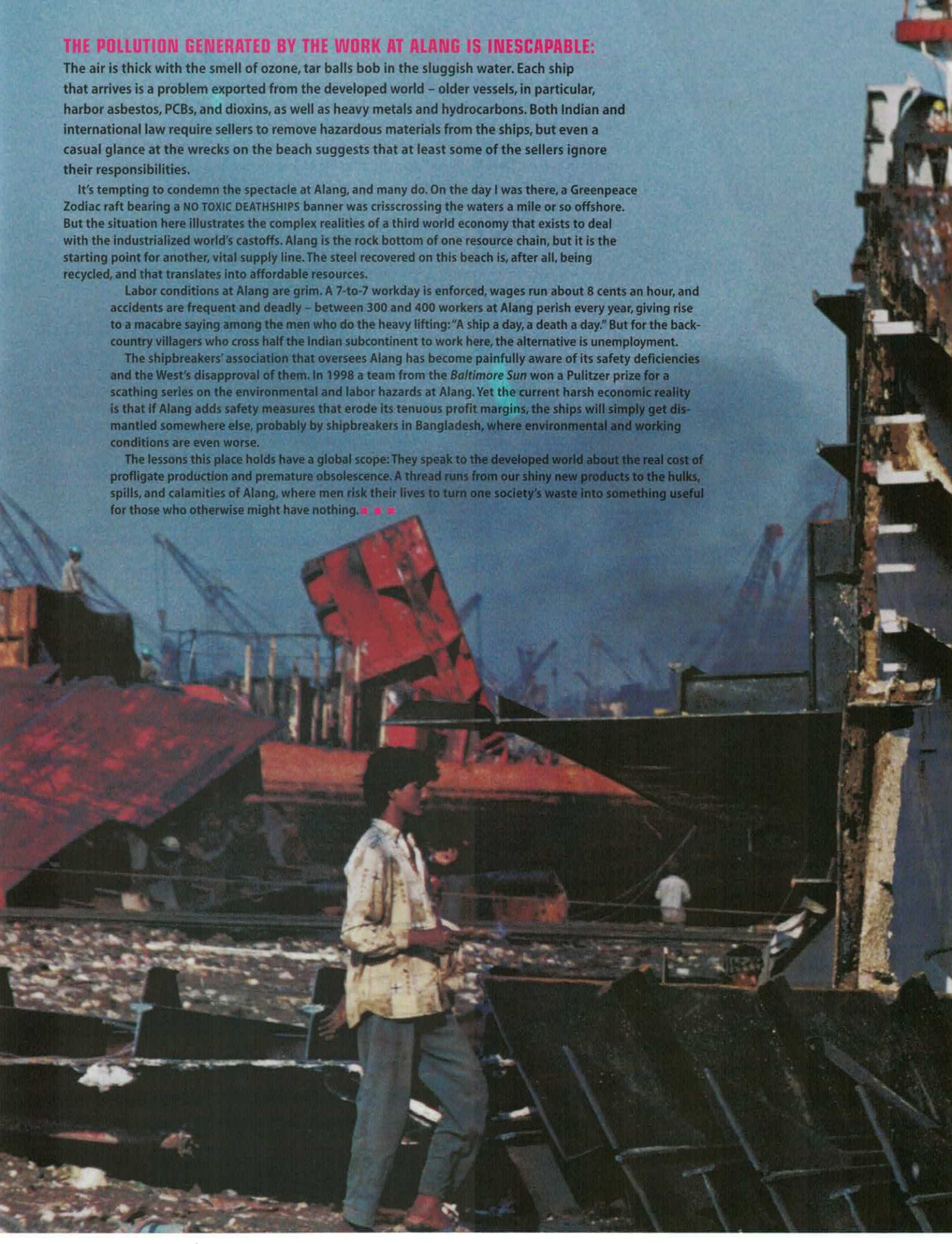
The air is thick with the smell of ozone, tar balls bob in the sluggish water. Each ship that arrives is a problem exported from the developed world – older vessels, in particular, harbor asbestos, PCBs, and dioxins, as well as heavy metals and hydrocarbons. Both Indian and international law require sellers to remove hazardous materials from the ships, but even a casual glance at the wrecks on the beach suggests that at least some of the sellers ignore their responsibilities.

It's tempting to condemn the spectacle at Alang, and many do. On the day I was there, a Greenpeace Zodiac raft bearing a NO TOXIC DEATHSHIPS banner was crisscrossing the waters a mile or so offshore. But the situation here illustrates the complex realities of a third world economy that exists to deal with the industrialized world's castoffs. Alang is the rock bottom of one resource chain, but it is the starting point for another, vital supply line. The steel recovered on this beach is, after all, being recycled, and that translates into affordable resources.

Labor conditions at Alang are grim. A 7-to-7 workday is enforced, wages run about 8 cents an hour, and accidents are frequent and deadly – between 300 and 400 workers at Alang perish every year, giving rise to a macabre saying among the men who do the heavy lifting: "A ship a day, a death a day." But for the back-country villagers who cross half the Indian subcontinent to work here, the alternative is unemployment.

The shipbreakers' association that oversees Alang has become painfully aware of its safety deficiencies and the West's disapproval of them. In 1998 a team from the *Baltimore Sun* won a Pulitzer prize for a scathing series on the environmental and labor hazards at Alang. Yet the current harsh economic reality is that if Alang adds safety measures that erode its tenuous profit margins, the ships will simply get dismantled somewhere else, probably by shipbreakers in Bangladesh, where environmental and working conditions are even worse.

The lessons this place holds have a global scope: They speak to the developed world about the real cost of profligate production and premature obsolescence. A thread runs from our shiny new products to the hulks, spills, and calamities of Alang, where men risk their lives to turn one society's waste into something useful for those who otherwise might have nothing. ■ ■ ■





Laborers cut down struts alongside the hull of a heavily corroded container ship. Plot owners prefer tankers: Oil coats the ship's walls, protecting them from saltwater. This translates into a larger yield of recyclable steel – and greater profits when the scrap is sold.