



RailwayAge

Making paper a priority

Railroads are trying to reclaim paper traffic from trucks with improved service and equipment. Progress is slow but promising.

By Marybeth Luczak, Managing Editor

Cutting costs may be cutting railroads out of the paper business. While "the boxcar is the most cost-effective vehicle to deliver paper products," says W. Henson Moore, president and CEO of the American Forest & Paper Association (AF&PA), "there are fewer cars available for a growing volume of work, which forces us to use trucks."

"Most railroads don't view the boxcar business as highly profitable," adds Norm Langberg, director-supply chain management for Georgia-Pacific, which produces some 2 1/2 million tons of printing paper annually. There has not been a significant reinvestment in boxcars, he says—only 3,500 were delivered last year—and individual car trips for the forest products industry remain at 12 to 13 per year due to poor service.

Railroads spent years downgrading paper business. "During the 1980s and '90s, newsprint migrated to trucks," says Jim Howarth, vice president-manufactured products, marketing, and sales for CSX Transportation. "We [railroads] didn't have the right equipment and we didn't have proactive service monitoring."

But that's changing. Today, among the railroads working to grow the top line

with paper products are CSXT, which shipped 15 million tons of paper in 2000 (the equivalent of 600,000 truckloads), and Wisconsin Central, which earned \$167.4 million in revenues from paper shipments last year (paper represented more than 40% of its total revenues). To increase paper-hauling capacity from 757,620 loads posted for all railroads in 2000—a 1.1% increase over 1999 figures—both railroads are providing shippers with improved equipment, loading techniques, and service.

Ride quality issues

If damage-sensitive rolls of newsprint or coated paper incur flat spots or crushed edges during transit, a publishing company's multi-million-dollar, high-speed printing presses can go off balance and break down. Not only is printing delayed, but the expensive paper roll must be removed and discarded. So choosing the right equipment to protect paper lading is important. A blend of end-of-car cushioning, high-tech suspension systems, smooth interiors, load-securement systems, and dunnage help shippers offer a damage-free ride.

CSXT has 11,500 boxcars dedicated to paper transport and recently invested in 220 60-foot, Plate F "Big Blue" cars from Gunderson at the request of shippers. The 100-ton, low center of gravity cars maximize loading capacity: Just one Big Blue equals 4.2 truckloads. For protection, the cars have smooth-wall interiors with reduced weld beads. Generally, boxcars have raised welds that hold wall sidesheets together, which can form impressions on paper rolls, says Jim Sharp, vice president-marketing and operations for Gunderson. Big Blues are equipped with ABC-NACO Swing Motion trucks to reduce the forces transferred from the wheel/rail interface through the suspension system into the car and into the lading. The Swing Motion incorporates a transom to maximize lateral stability and warp stiffness. Vertical forces are also abated due to the "soft" response of Swing Motion's optimized, two-stage, long-travel load springs.

The new cars, says CSXT's Howarth, have helped the Class I generate additional business, giving it double-digit growth in newsprint service. The Baltimore Sun, which consumes 65,000 tons of newsprint each year, is one of many publications receiving shipments in Big Blue cars. Railroads deliver 85% of The Sun's paper rolls,

and according to Glenn Davis, newsprint manager, the new cars are "fantastic." "The major problem we had in the past when shipping by rail was flat spots, which hurt production time since they caused paper breaks," he says. "The new cars have eliminated that problem." They also eliminated water damage.

"One major industry problem is moisture seeping into cars," says Trinity Industries President-Railcar Division John Nussrallah. So plug doors are often used to seal out moisture. Rain gutters deflect water or snow from the top of the car.

"We make 50- and 60-foot paper-hauling boxcars in all different configurations," says Nick Matthews, general manager-Boxcar Business Unit for Trinity. All cars have smooth side walls and ends, where damage occurs most often during switching and humping. Additionally, Trinity's paper cars have flat floors with tight tolerances. "Anything on the floor that is not level can catch or tear the paper roll surface," says Matthews, "so while The Washington Post, for example, may not see any damage, the rolls could cause a press to stop."



To protect paper lading during transport, CSXT recently purchased 220 60-foot, Plate F "Big Blue" boxcars from Gunderson.

Photo by John Bartley/CSX Transportation

Securement systems

For added protection, many shippers use securement straps to keep paper rolls—especially jumbo, three-meter rolls that can weigh up to 13,000 pounds—stable in less-than-full cars.

Holland Co., Portec Rail Products, Inc., and IRECO rent or sell such systems to shippers. Railroads or railcar leasing companies install anchors into car sideposts or corners to hold straps in place. Straps are tightened with a ratchet for a custom fit.

"The reusable web-strap system from Portec Rail Products, Inc., is adjustable and can accommodate partial, multi-tiered, and into-doorway loading arrangements," says Cook Sieja, president of the company's Shipping System Division. The high-strength, polyester straps are "a great improvement over disposable steel or plastic banding," he says. They are safer, too, since steel bands can snap back and injure workers when cut under tension.

Shippers frequently employ disposable, inflatable dunnage bags and void fillers in between rolls as buffers. An additional buffer, Foam Rub Rail from Holland, offsets the effects of a boxcar's bowed sidewalls. The product conforms to a paper roll's shape to eliminate flat spots. End pads are also available.

Loading techniques

Improved equipment alone will not prevent damage. Railroad loss and damage prevention teams follow paper-loading guidelines developed in 1996 by AAR's Quality Lead Team for Prevention of Damage to Paper. The guidelines, slated for update later this year, offer information and diagrams on safety, car condition and type, general packaging, loading and securement, doorway protection, load patterns, and product vendor lists. "They provide loading options and answers to questions about how to overcome almost every situation," says John Green, one of the guidelines' authors, a Quality Lead Team member, and manager-freight damage prevention for WC.

WC uses the guidelines to help it maintain a claim ratio consistently lower than the industry average. In 1999, its total freight claims represented 20 cents per \$100 of revenues, while the industry posted 39 cents per \$100. WC serves 52 paper mills with its fleet of 5,000 paper boxcars, 1,000 of which are 100-ton capacity. The regional received 100 new Plate F paper boxcars from Gunderson last year. "Since the paper business is our core competency," says Vincent A. Greco, assistant vice president-marketing for WC, "the transportation department works with field forces to ensure that car handling techniques are compatible with minimizing damage." WC pre-qualifies almost every car before it is sent to a shipper: cleaning, checking interior walls for tears, and lubricating doors to ensure they are free moving. It also works with customers, performing impact tests before a new paper product is shipped.

Service quality

A load of damage-free paper must arrive on schedule to meet printing deadlines, since many companies prefer just-in-time service over just-in-case. That preference can be problematic, however. Despite much-improved equipment, "our service has been horrendous at times," says The Baltimore Sun's Davis. "We have difficulty getting railcars placed in a timely manner."

International Paper has measured railroads' ontime performance to be 50% to 54% over the last 10 years. "While we ended 2000 at 68.6%," says Charlie McHugh, director-North American distribution operations, "it is still disturbing." International Paper fills some 130,000 boxcars and 600,000 truck trailers each year, approximately a 38:62 rail-to-truck ratio.

To improve fleet velocity, AF&PA and AAR formed the Boxcar Task Force in the early 1990s with the goal of increasing revenue turns from 12 to 18 per year. While that goal was never reached, a new group was formed in August 2000 to try a new approach.

AF&PA teamed up with GE Capital Rail, such railroads as CSXT, Norfolk Southern, and Burlington Northern and Santa Fe, and paper manufacturers Georgia-Pacific, International Paper, Weyerhaeuser, Westvaco, and Rayonier to initiate a six-month boxcar tracking pilot. "We realized we needed outside intervention to help manage shipments no matter which shipper or railroad was handling them," Georgia-Pacific's Langberg says. "We felt that if we really worked at it, we could improve revenue turns and rail service consistency, which had been detriments to shipping by rail." The group set out to provide a 90% ontime performance standard and hopes to reach 13-15 turns annually. In November, IntelliTrans, Inc., an Atlanta, Ga.-based consulting company, began tracking a fleet of 400 boxcars assigned to eight paper mills. The cars run over 16 traffic lanes selected because of their poor service records. Half of the fleet is managed by IntelliTrans and the other half is a control for existing service. (The mills do not know which cars are tracked.)

How is the pilot going so far? "Officially, it's too early to tell," says Langberg, "but the managed fleet is moving more efficiently." If the pilot is successful, the group plans to expand it. But failure,

Langberg says, could indicate that the boxcar paper business "will be going out of business on an installment plan."

Railroads and suppliers are not willing to let that happen. "Supplier-wide, we are looking to build 4,500 new boxcars in 2001," says Trinity's Nussrallah. "Boxcars will be one of the strongest car types for the next calendar year, and well over half will be paper cars." The cars' weight capacity gives rail a leg up over truck when carrying dense products like paper rolls. "We can fit three to four truckloads into each railcar," says WC's Greco.

The future of the forest products business seems bright for WC. The regional, which is being acquired by Canadian National, "will have the ability to effectively extend its reach and establish rates on a single-line basis," says Greco. The merger is expected to generate \$60 million in earnings improvements, half of which is to come from revenue growth, particularly in paper and forest products.

"If carriers are indeed able to respond to shipper needs with cars that protect the quality and integrity of paper rolls," says Gunderson's Sharp, "and provide those cars on time, at a price that enables shippers to contrast favorably with trucks, shippers will choose rail."

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