A Snapshot of the Railcar Lining Business: A Slow Train Coming?

By Daryl Fleming, Assistant Editor, JPCL

The state of the railcar lining market can be seen as a reflection of the contraction or slow growth of the economy in general. That is, a less-than robust economy can crudely be measured by railcar traffic; fewer goods being produced and sold mean fewer goods are transported by rail, and fewer railcars are needed to move them. And, by definition, fewer new railcars means fewer new linings are applied to new railcars. This is, broadly speaking, the impression gathered by speaking with representatives from several manufacturers of linings for railcars. These same representatives also report few significant developments in the formulation of new coatings for lining railcars, citing the effectiveness of the existing coatings and decreased funds for research and development. This article offers a brief update on the status of the railcar lining business.

According to E.J. Johnson, sales manager at Carboline Company (St. Louis, MO), the number of new railcars manufactured in 2009 is roughly one-third the amount made just three years ago. Carboline makes several coatings, typically epoxies, for a variety of railcar lining applications, including tank car linings for acid and alkali ladings, and linings for open gondola cars carrying such loads as coke coal, gluten (animal feed), and sulfur. As fewer railcars are being manufactured, Johnson reports orders for maintenance lining of existing railcars are also down. One reason behind the decrease in lining maintenance work, Johnson says, is that, instead of applying new linings to existing cars, in-use railcars in need of lining replacement are being swapped out with new or unused railcars that have been sitting idle (but with linings that have service life remaining).

Art Weiss, technical services supervisor at Kansas City, Kansas-based Versaflex, describes the market for maintenance lining of railcars as “at a standstill,” and that, related to this, inspection intervals for linings have lengthened. Versaflex makes polyurea linings for food grade cargoes, as well as linings for hydrocarbons and crude oils. Although the market for railcar linings has suffered, Weiss says the market share of polyureas for railcar lining has increased. One reason for this increase, according to Weiss: polyureas are inher-
ently in step with these “green” times—their chemistry is low in volatile organic compounds (VOCs), and no component is restricted by the Environmental Protection Agency or similar regional bodies.

“Dramatically lower business” are the words used by Doug Schmidt of Heresite to describe the railcar lining market. Schmidt is a sales manager for the Manitowoc, WI-based Heresite, which makes heat-cured linings, including epoxies and baked phenolics, for a variety of applications, including the transport of sulfuric acid and sodium hydroxide. According to Schmidt, there was a spike in the production of new railcars in 2005/2006 that he relates to the concurrent growth of the ethanol business (a good also transported by rail). The economy-wide recession has slowed new railcar manufacturing and has had an “adverse effect” on lining maintenance as well, Schmidt says.

Schmidt voices an assessment similar to that of Weiss on railcar lining maintenance: customers (in this case, railcar owners and owners of railcar ladings) are looking to reduce costs, and are thus delaying maintenance and relining work, often performing spot repairs instead of replacing worn linings.

Michael Burkholder commercial manager of Seville, OH-based Blair Rubber Company, also cites a slowdown in the manufacture of new rail cars, but reports that the market for rubber linings for railcars has “stayed somewhat consistent.” Blair manufactures rubber linings for a variety of railcar applications, including tanks and vessels for transporting chemicals such as hydrochloric acid, phosphoric acid, and bleach. Burkholder gives at least two reasons for the stability of his company’s business in the slow economy. First, a majority of his company’s customers lease railcars instead of owning them. According to Burkholder, because the railcar leasing company usually pays for lining replacement or maintenance, the lessee is more likely than an owner to have a railcar lining replaced at predetermined intervals of time (often 10 years), regardless of the condition or viability of the lining. (The lessee often will stipulate for new lining installation before it signs on to lease a railcar; whereas an owner will
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Tank car that transports hydrochloric acid as it awaits cleanout and inspection. Photo by Danny Lee. Courtesy of Blair Rubber Company

wait until the end of a lining’s service life before replacing it.)

The second reason Burkholder gives for his company’s ability to maintain business is related to the hazards of chlorine gas. Burkholder cites several spills and leaks from railcars transporting chlorine gas in the past decade. Because the material is in gaseous form, no lining is used in railcars transporting chlorine gas. But, according to Burkholder, several companies are converting chlorine gas into its liquid form — bleach — for safer transport. The conversion of chlorine gas into bleach has helped the company’s sales. Nonetheless, Burkholder finds the railcar lining business, as a whole, to be slower than a year ago.

On the product development front, Schmidt reports his company is working on developing higher solids/lower VOC formulations, with the goal of producing a coating system of fewer coats, but with higher applied dry film thicknesses per coat. But none of the railcar lining company representatives interviewed report significant advances in the chemistry of railcar lining formulations. Burkholder does relate that his company is developing a solvent-free (low-VOC) adhesion system that binds the rubber lining to the interior steel of a tank car.

In an article in the December 2004 JPCL (p. 39), Paul Lovett, founder of P.D. Lovett & Company, a marketing and business consultancy, describes the market for railcar coatings and linings as varying cyclically and dependent, in general, on the overall economy. As the economy recovers, new construction of railcars will increase, according to Lovett. Similarly, he adds, the advance of new coatings technology is also “dampened or enhanced” by the economic cycle.

For those in the railcar lining business, there may be hope that this slow train is, indeed, coming around the bend.

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