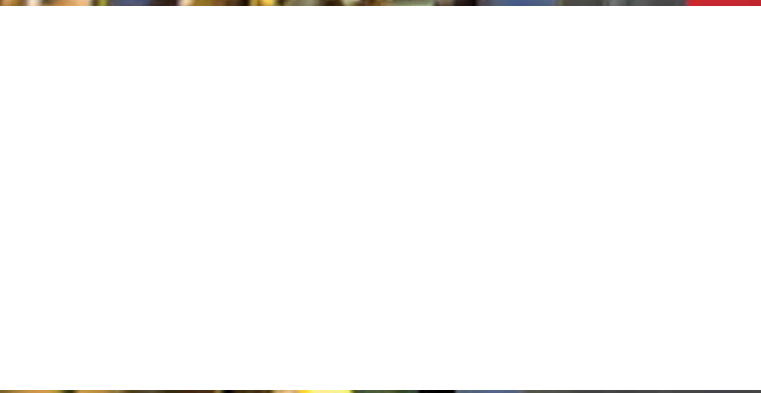


# COILWORLD

Vol 19 | Issue 2

CJL Publishing

March/April 2014



- ***Coil Coater, Break Up, Then Make Up***
- ***Newer New Rules for Repair Costs***
- ***NCCA/ASTM Collaboration***



Target Field, home of the Minnesota Twins Major league baseball team has a champagne metallic canopy metal roof, which was painted on CSI's paint line in Columbia, SC. It is painted with a Versa Clad® 20 proprietary paint formulation of the Metal Dek Group®, a unit of Consolidated Steel Inc.

## Coil Coater, Wet Section Supplier Break Up, Then Make Up

After three years apart, Consolidated Steel Inc. (CSI) and a old supplier are together again, and the results of the renewed partnership have been more than satisfactory in a key area of one plant.

Headquartered in Columbia, SC, CSI manufactures and supplies a variety of painted products—cold rolled steel (CRS), stainless steel, and aluminum. CSI offerings include construction products, exterior roofing and siding panels, trim components, and architectural building panels. The company's materials are also used to make appliances, lighting fixtures, HVAC equipment, and school buses.

Coating options offered by CSI include both hot-dip galvanizing (HDG) and Galvalume. Gauges for steel products range from .010" through .060" and from .014" through .080" for aluminum. The company handles steel coils up to 60" wide and aluminum coil widths up to 62".

Founded in 1954, CSI now operates a total of five manufacturing facilities. The company's Memphis, TN, plant turns out metal- and bridge-deck construction products. This plant is equipped with a paint line that applies water-based primers to decking products. Deck products are also produced at CSI plants at Columbia, SC, Phoenix, AZ, and Terrel, TX, as well as the company's newest facility, located in Harrisburg, VA. All the plants are served by CSI's subsidiary transportation company, Consolidated Cargo Carriers, which makes deliveries to customers and also brings in products from other locations.

Customers for products that come off CSI's Columbia, SC, paint line are "pretty much regional," according to John Spring, the company's director of operations. For the most part, Spring says, the South Carolina facility serves customers dotting the southeastern U.S. from Florida through Mississippi and up into Kentucky, Virginia and West Virginia. However, that the plant's lighting products division also exports to Mexico, he notes.

### Choosing a Supplier

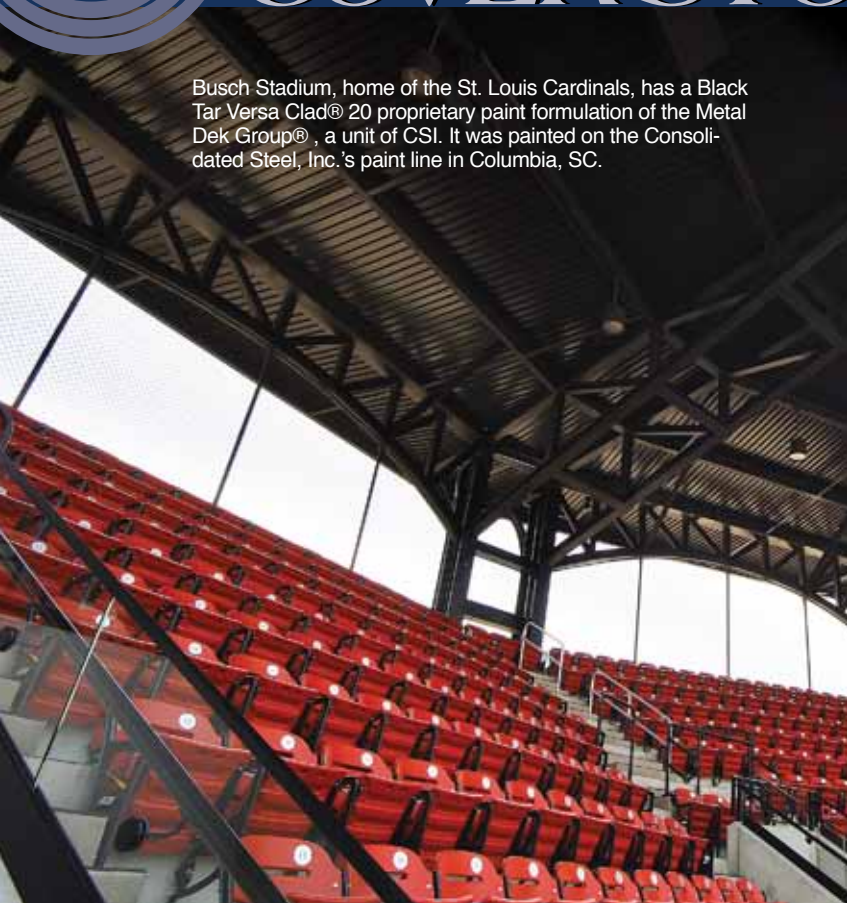
When it came to choosing a supplier for the Columbia plant's "wet" section, CSI considered a number of factors. For one thing, Spring says, "the economics of the entire process was very important." Another important factor in the selection process was the customer service offered by the candidate suppliers. In addition to technical assistance, this includes maintaining chemical inventory levels and the controls for monitoring equipment.

The latter consideration was one of the reasons CSI originally chose Chemetall, which offers a weekly service that monitors chemical consumption and maintains chemical inventories. In 2010, however, the company switched to another pretreatment supplier "because we were getting into some new product lines and new equipment," Spring explains.

But Chemetall didn't give up on its old customer. Shortly after the wet section switch was made, the supplier came back to CSI with another offer, which in-

# COVER STORY

Busch Stadium, home of the St. Louis Cardinals, has a Black Tar Versa Clad® 20 proprietary paint formulation of the Metal Dek Group®, a unit of CSI. It was painted on the Consolidated Steel, Inc.'s paint line in Columbia, SC.



cluded some new measuring and monitoring equipment. CSI accepted the offer, and the Columbia plant switched back to Chemetall last year.

## Along the Paint Line

Today, Chemetall products can be found all along the plant's paint line. Operations here start with a process that cleans off the rust preventative and rolling solutions on most incoming substrates. In this process, CSI uses Chemetall's Low Heat Cleaner 3, an alkaline cleaner for multiple substrates. The cleaner is stored in four tanks that supply the liquid at various spray pressures. In a closed-loop system, strips are sprayed with the cleaner and then rinsed.

After a strip is thoroughly cleaned, it goes through a pretreatment process that varies according to the substrate material. For example, a dip process is used to apply Chemetall's Gardobond 4768 (an iron phosphate) to CRS and Gardobond 2985 (a zinc phosphate) to HDG surfaces.

In addition, the Columbia plant can apply a pretreatment to galvanized products using a dried-in-place chemcoater. Options include hexavalent chrome (Chemetall's Permatreat 1500) and trivalent chrome (Permatreat 1700), as well as a chrome-free pretreatment. The choice depends on the substrate and customer requirements, according to Spring.

The entire wet section process is managed by the Chemetall Original Data Acquisition and Control System, or CODACS. Chemetall describes CODACS as a high-performance data-logging and -acquisition system for industrial operations.



Metal Dek products are rolled formed on form rollers at the company's metal deck facilities in Memphis, TN, Phoenix, AZ, Terrel, TX, and Harrisburg, VA.

In the Columbia plant's wet section, this automated system monitors variables such as the level and conductivity of the solutions in each tank. The system automatically adds solution when the level in a tank reaches a certain preset point. It also maintains the required concentrations of pretreatment ingredients established by Chemetall for each substrate material, Spring notes, saving plant personnel the trouble of checking the solutions.

All in all, Spring reports, we are always looking to our suppliers to enhance our production processes, thus enabling CSI to provide our customers the products they require, while optimizing efficiencies and economics. ☺