




ALLEVIATING MARKET STRAIN IN THE STEEL INDUSTRY

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Abstract:

Steel shortages are causing significant challenges for manufacturers. With twice the average lead time and soaring costs for heavy zinc coatings, companies are exploring expensive workarounds to obtain the steel they need. However, there are less-costly alternatives for navigating the shortage and making the most out of the available product. Applying dry film lubricants (DFL) and advanced protective coatings, and using EQ coatings are efficient ways to alleviate market strains.



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The recent steel shortages go well beyond many companies' contingency plans for sourcing material. Manufacturers are experiencing unprecedented high lead times and prices. The problem is compounded by the lack of viable alternatives that help to increase steel's performance and functionality that are economically feasible.

Companies reliant on steel must either absorb the increased cost of material sourcing or pass it on to their customers. As American companies increase their cost, this opens the possibility of losing business to competitors overseas or even domestically, who may have access to lower cost steel or who possess other business advantages, such as vertical integration.

Mounting needs and concerns surrounding sourcing and lead times drive the need for alternative solutions to steel sourcing, including products that can enhance performance, repurpose inventory, and reclaim coils. There are both processes and products that allow manufacturers to enhance available material to meet specific production and end-use needs.

ALTERNATIVE SOLUTIONS TO STEEL SOURCING CHALLENGES

>> Steel Reclamation

One solution to shortages is reclamation of steel. Chemcoaters can engage in-line brushes to remove undesired stains, smut, or even white rust, breathing new life back into coils and other steel that may otherwise have been destined for scrap. Reclaimed coils can have their functionality or performance enhanced further through the subsequent application of a performance-enhancing coating, such as products that inhibit corrosion or improve drawability.

>> Steel Repurposing

Steel is often purchased with specific properties, oils, or treatments. Chemcoaters can aid in repurposing that steel for new sales avenues by performing services such as the cleaning and removal of oils, followed by the addition of a different oil if required, or even cleaning with the intent to send out the coil dry. After cleaning or the removal of an unwanted oil, a coating can also be applied to add additional properties to the repurposed substrate, including the addition of a standard mill coating, such as a passivation or pre-phos treatment. This flexibility in repurposing existing material can allow a mill, service center, or OEM with available inventory to repurpose their materials.

>> Utilizing Alternative Grades and Inventories

During a steel shortage, the availability and prices of lower-grade steels and lighter galvanized coating weights are often not as heavily impacted as specialty grades and higher levels of galvanized coating weights (i.e. G115+). Some companies still have access to G90 and other lower grades steels, either from their own inventories or from other suppliers. Chemcoaters can make these lighter grades and metallic coating weights perform to the necessary specifications.

>> Dry Film Lubricants Allow For Grade Flexibility and Maximum Piece Count

Dry film lubricants work to further open the forming window during the stamping process by eliminating metal-to-metal contact, allowing for more pristine parts per campaign and resulting in less scrap. These lubricants can be applied to almost any substrate, and in some cases can even allow for grade reduction (ex: the use of DDS on a part requiring EDDS).

Because dry film lubricants reduce friction during forming and open the forming window, customers have more options when it comes to material sourcing. Customers using specialty materials in demanding stamping applications, such as aluminized, aluminum, copper, or other specialty metals, see an increased value proposition through the elimination of scrap and a subsequent increase to piece count.

Chemcoaters expertise in application and chemistries, combined with economic application, makes them a leading supplier of advanced dry film lube technologies.

>> InterCoat® ChemGuard Improves the Performance and Life Span of Lighter Grade Steels

InterCoat® ChemGuard is Chemcoaters' solution for enhancing performance and extending the life of zinc-coated substrates. This corrosion-inhibiting coating reacts with metallic-zinc substrates such as HDG, GA, EG, or even ZAM, and extends the life of the substrate by delaying the formation of white rust and red rust in corrosive weathering conditions.

Furthermore, OEMs can build long-term programs under the assumption that G40 will always be readily available even when other grades are not. And because InterCoat® ChemGuard not only extends the life of lighter metallic weights but also enhances their corrosion protection, a HDG G40 with InterCoat® ChemGuard can often replace—and outperform—pricier heavy weights like G235, making it the ideal equivalent (EQ) coating.

This ability to extend the life of a lower metallic weight substrate while boosting its performance is extremely valuable during times of materials shortages when the availability of heavier grade steels is strained. InterCoat® ChemGuard formulations are also engineered to provide other value-added properties, such as lubricity for roll-forming and stamping operations, or adhesion-enhancing properties for the application of a subsequent material, such as adhesives or paint.

CASE STUDY

>> **Solar Industry Supplier Navigates Shortage Disruptions with InterCoat® ChemGuard**

The pandemic created long lead times and low availability of materials for many Chemcoaters customers. One of the most significant impacts was felt by customers sourcing HDG G90 and thicker metallic coatings all the way up to G235.

Some Chemcoaters customers who service the solar industry were running into repeated shortages and extending lead times for steel to manufacture solar racking components, such as brackets. But within a few weeks of coming to us for a solution, one supplier adopted InterCoat® ChemGuard on G40 as an EQ coating and alternative source for their G235 material for the solar industry.

The supplier was able to provide their client with a product that performs better in corrosion testing – as well as providing a built-in lubricity package for forming and more robust performance near edges and perforations. The customer moved quickly and was able to get the coating performance approved and written into the specification, allowing them to service their end clients with a higher performing product in a considerably faster amount of time.

CONCLUSION

In markets where sourcing of specific steel substrates can be difficult, there are viable methods to alleviate the strains of steel shortages throughout the affected industries. From repurposing accessible materials to allow for sale into other markets, or maximizing the performance of lighter grade steels and lower metallic zinc coatings –Chemcoaters can collaborate with customers to navigate both current COVID-related shortages and future shortages within the steel industry.

>> **About Chemcoaters**

Chemcoaters is a major service provider to steel mills and service centers, along with OEMs in automotive, construction, transportation and other industries. We pride ourselves on fast lead times and a philosophy of being a full-solution provider for our customers. Even during shortages customers know they can reach out to us for expedited solutions to their sourcing and production problems. We're a team of innovators who are proactive about our environmental approach and carbon footprint, using far less energy than many other service providers with more traditional approaches to coil coating.

LET'S CONNECT



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